

# Horley Business Park

## Design Principles and Options

Prepared on behalf of **Reigate & Banstead Borough Council**

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March 2021



# contents

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<b>1. Introduction</b>	<b>p.4</b>	<b>2. Baseline Assessment</b>	<b>p.12</b>
Overview	4	Site Opportunities and Constraints	12
Policy Context	5	Concept Plan	14
Business Park Design Trends	7		
Sustainable Public Transport Oriented Development (PTOD)	10		
Horley Business Park Vision	11		
<b>3. Design Principles</b>	<b>p.16</b>	<b>4. Design Options</b>	<b>p.40</b>
Overview	16	Overview	40
Water	18	Methodology	42
Open Space	20	Building Typologies	43
Green Infrastructure	22	Design Option 1: Balanced Development Scenario	44
Sustainable Movement	24	Design Option 1a: Incorporating B8 Uses	52
Vehicle Access and Parking	27	Design Option 2: Maximising Employment Floorspace	62
Location of Key Uses	30		
Urban Design	32		
Grain and Massing	34		
Building Heights	36		
Sustainable Design and Construction	38		
<b>5. Conclusions</b>	<b>p.67</b>		

## FIGURES

Figure 1: Annotated aerial view of the site  
 Figure 2: Extract from RBBC DMP Policies Map showing HOR9 allocation  
 Figure 3: Site opportunities and constraints plan  
 Figure 4: Concept Plan based on opportunities and constraints  
 Figure 5: Concept artist's impression of main focal point space  
 Figure 6: Water principles diagram  
 Figure 7: Oxford Science Park, Oxfordshire: Integration of water channel, walking route and green infrastructure amongst development  
 Figure 8: Watercolour, Redhill: Integration of a variety of SuDS features throughout this development  
 Figure 9: Open space principles diagram  
 Figure 10: Pebble Mill, Birmingham: Use of water, planting and movement networks within open space to provide a multi-functional setting for development  
 Figure 11: Green Infrastructure principles diagram  
 Figure 12: Pebble Mill, Birmingham: Planting integrated within a 'hard' landscaped environment  
 Figure 13: Pebble Mill: Birmingham: Existing mature trees can provide a strong backdrop, setting and structure to development  
 Figure 14: Corby Enterprise Centre, Northants: Smaller spaces framed with green infrastructure  
 Figure 15: Sustainable movement principles diagram  
 Figure 16: Potential approach to establishing a new pedestrian connection to Gatwick Airport railway station under A23 embankment  
 Figure 17: Milton Park, Oxfordshire: Shuttle buses or other public transport links should run through HBP  
 Figure 18: Cambourne Business Park, Cambridgeshire: Sheltered and secure bicycle parking conveniently located adjacent to employment floorspace and supporting mixed uses should be provided to enhance cycling as a mode of choice  
 Figure 19: Chiswick Park, West London & Corby Enterprise Centre: Streets and public spaces should be vehicle-free wherever possible  
 Figure 20: Vehicle access principles diagram  
 Figure 21: Appropriate parking typologies and design considerations  
 Figure 22: Castle Boulevard, Nottingham: Example of a segregated on road cycle route  
 Figure 23: Location of key uses principles diagram  
 Figure 24: Milton Park, Oxfordshire & Alconbury Weald, Cambridgeshire: A co-working hub or 'Innovation Centre' with flexible workspaces and facilities can create activity and a sense of place near the centre of a business park  
 Figure 25: Urban design principles diagram  
 Figure 26: Media City Salford: Locating more active uses such as cafes adjacent key streets and spaces to activate the public realm  
 Figure 27: Brooklands, Milton Keynes & Corby Enterprise Centre, Northants: Varied and interesting frontages to buildings create an attractive and memorable environment to walk through  
 Figure 28: Grain and massing principles diagram  
 Figure 29: Breaking up the bulk of buildings and using built form to enclose and activate public space  
 Figure 30: Clustering of buildings to provide variety of accommodation and public spaces

Figure 31: Rugby Radio Station, Rugby: 'Breaking up' the mass of a building with architectural articulation, building arrangement around a public space and an attractive and context-sensitive roofscape  
 Figure 32: Building heights principles diagram  
 Figure 33: Roofscape options  
 Figure 34: Alconbury Weald, Cambridgeshire: A taller landmark building at a key corner can aid legibility and wayfinding  
 Figure 35: District heating network principles  
 Figure 36: Concept artist's impression of design option at night, looking southwest  
 Figure 37: Typical building typologies used within the illustrative masterplanning process  
 Figure 38: Illustrative masterplan for Design Option 1  
 Figure 39: Aerial view of illustrative masterplan from southwest  
 Figure 40: Aerial view of illustrative masterplan from north  
 Figure 41: Aerial view of illustrative masterplan from the east (Balcombe Road)  
 Figure 42: Development quanta for Design Option 1  
 Figure 43: Movement network for Design Option 1  
 Figure 44: Illustrative profile of Main Street typology  
 Figure 45: Illustrative profile of Formal Pedestrian Route typology  
 Figure 46: Illustrative profile of Green Finger typology  
 Figure 47: Indicative public transport routing and stops  
 Figure 48: Indicative plan of servicing and parking access  
 Figure 49: Indicative plan of green and blue infrastructure within the site  
 Figure 50: Potential character of northern 'parkland'-style open space  
 Figure 51: Landscape character precedents for public realm  
 Figure 52: Indicative plan of building heights  
 Figure 53: Indicative plan of character areas within the site  
 Figure 54: Built form character precedents  
 Figure 55: View from A23 looking east showing distinctive southern frontage  
 Figure 56: View from Horley Rail Station bridge showing glimpsed view of roofscape and landmark tower  
 Figure 57: View from Horley town centre ground level showing very small glimpses of landmark tower  
 Figure 58: View from Balcombe Road along Bayhorne Lane  
 Figure 59: View from north (Limes Avenue entrance) across 'parkland' open space to mixed-use facility  
 Figure 60: View from The Crescent looking southeast  
 Figure 61: View from The Crescent looking northeast  
 Figure 62: Illustrative configuration of district heat network  
 Figure 63: Design option 1a, showing potential locations and considerations for B8 uses  
 Figure 64: Illustrative masterplan for Design Option 2, with changes from option 1  
 Figure 65: Development quanta for Design Option 2  
 Figure 66: Building heights for Design Option 2  
 Figure 67: View from east showing visibility of car parks and green walls from Design Option 2  
 Figure 68: View from north showing increase in mass and heights of buildings from Design Option 2  
 Figure 69: View from Horley rail station bridge showing increased visibility from Design Option 2  
 Figure 70: View from The Crescent showing increased visibility from Design Option 2

## TABLES

Table 1: Car parking provision for Design Option 1  
 Table 2: Environmental sustainability measures

# 1. Introduction

## Overview

- 1.1 The site of Horley Business Park, allocated in Reigate and Banstead Borough Council's (RBBC) adopted Development Management Plan (DMP), presents an exceptional opportunity to provide exemplary employment space in a highly-connected, sustainable location, contributing to economic growth, placemaking and prosperity in the local area. It has the potential to create a regionally-significant employment area with high levels of sustainable transport built in from the start.
- 1.2 This report sets out Design Principles and Design and Massing Options to support the allocation of this land, exploring how the site might be best developed to achieve sustainable, well-planned growth that contributes to the local area and maximises the opportunity present.
- 1.3 The findings of this report will inform a Supplementary Planning Document (SPD) which will provide guidance for the development of the site..



Figure 1: Annotated aerial view of the site

## Policy Context

- 1.4 This Design Principles and Design and Massing Options Report has been prepared to inform the preparation of a SPD which will provide guidance to implement the site allocation in Policy HOR9 of the adopted DMP, which was adopted in September 2019. The allocation supports the Core Strategy, its vision and relevant Core Objectives.
- 1.5 The policy allocates 31ha of land at the southern edge of Horley on the western side of Balcombe Road to the south of Horley Town Centre and to the north of J9A of the M23 Airport Spur which provides access to Gatwick Airport terminals to the south of the site.

### Growing a prosperous economy

- Employment Areas (EMP1);
- Town Centre Boundaries (RET2)
- Primary Shopping Areas
- Primary Retail Frontage (RET1)

### Building self reliant communities

- Residential Areas of Special Character
- Urban Open Space (OSR1)
- Area of Outstanding Natural Beauty (CS2; NHE1)
- Area of Great Landscape Value (CS2; NHE1)
- Gatwick Open Setting (NHE1)
- Special Area of Conservation
- Sites of Special Scientific Interest (CS2; NHE2)
- Sites of Nature Conservation Importance (NHE2)

### Place shaping

- Gypsy, Traveller and Travelling Showpeople Site Allocations (GTT1)
- Urban Site Allocations (BAN3; RTC4&5; RED1-9; HOR8&10)
- Opportunity Site Allocations (BAN1; RE11; RE13; HOR6; HOR7)
- Secondary Retail Frontage (RET1)
- Local Centre Boundaries (RET3)
- Retail Warehouse Areas (RET6)
- Potential Sites of Nature Conservation Importance (NHE2)
- Local Nature Reserves (CS2; NHE2; NHE4)
- Ancient Woodlands (CS2; NHE3)
- Regionally Important Geological Sites (NHE2)
- Riverside Green Chain (NHE4)
- Metropolitan Green Belt (CS3; NHE5)
- Rural Surrounds of Horley (NHE6; NHE7)
- Conservation Areas (CS4; NHE3;
- East Surrey Hospital (RED9)
- Sustainable Urban Extension Allocations (ERM1; ERM2/3; ERM4a; ERM4b; ERM5; SSW2; SSW6; SSW7; SSW9; NWH1; NWH2; SEH4)
- Strategic Employment Site (HOR9)

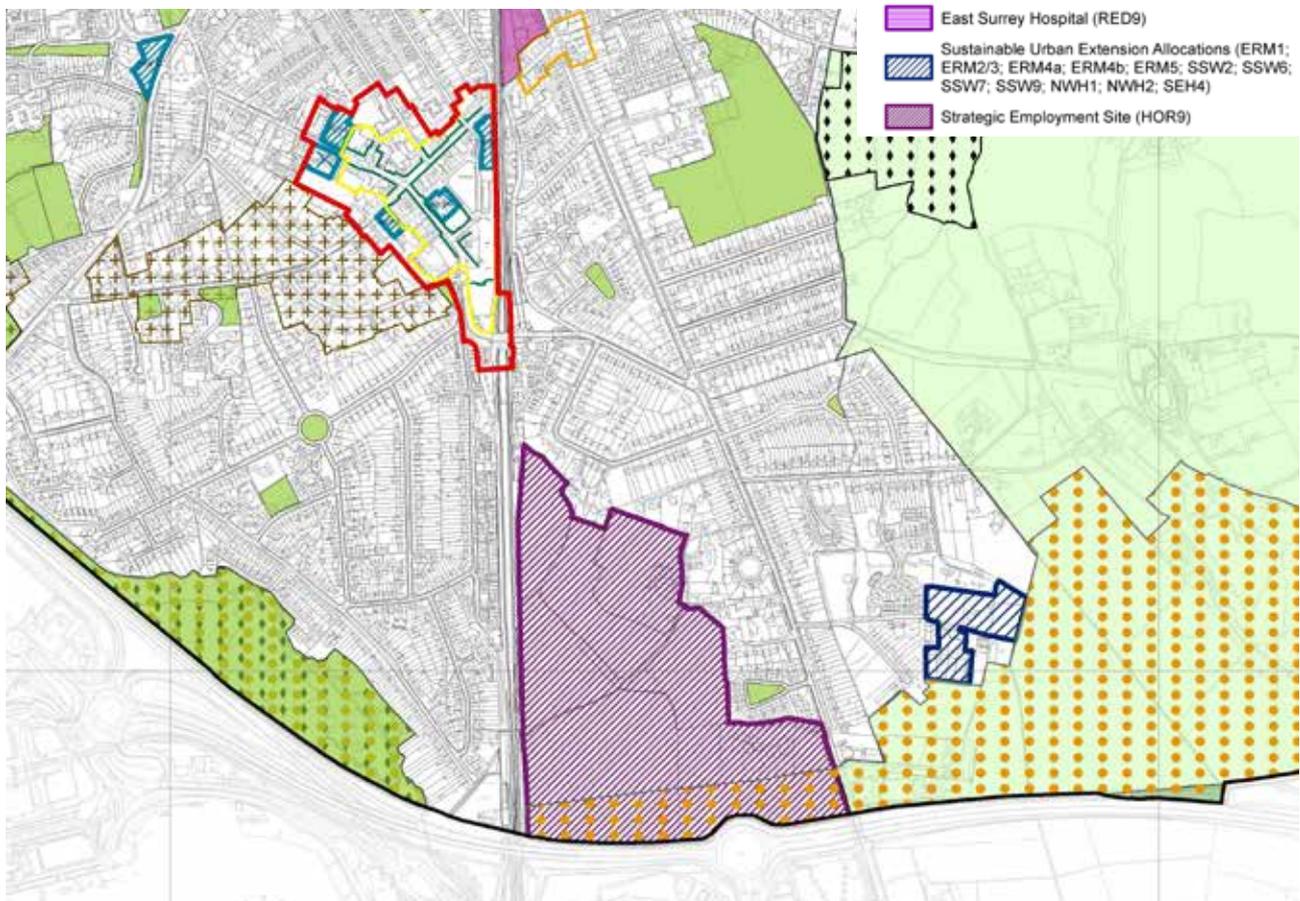


Figure 2: Extract from RBBC DMP Policies Map showing HOR9 allocation

- 1.6 The allocation seeks to provide:
- A strategic business park of predominantly B1(a) use with limited B1(b), B1(c), B8 and non-B use classes including appropriate airport-related Sui Generis uses;
  - A complementary range of commercial, retail and leisure facilities to serve and facilitate the main business use of the site; and
  - At least 5ha of new high quality public open space, including parkland and outdoor sports facilities.
- 1.7 Further detailed requirements and policy considerations are set out in the policy that relate to movement and accessibility, drainage, design, uses and developability, which have been taken into account to inform key design principles and design and massing options. They are explored in the analysis of Opportunities and Constraints to inform the Concept, Design Principles and Design Options.
- 1.8 An overview of the evidence base supporting the site allocation underpins requirements for development to provide for a mix of employment provision, although this is mainly to comprise office space for incubator/start-ups, expanding/stable businesses and major/anchor occupiers, as well as provision of shared specialist facilities and shared meeting and conference space.
- 1.9 In the context of Policy HOR9 and brief for exploring the Design Principles and Massing Options, the design of development is required to create a coherent business community, where people are able to interact as much as possible, supporting facilities including, catering, limited retail, gym, crèche, medical services and on-site pharmacy or a holistic wellness centre.
- 1.10 Indicative quanta supporting the allocation (set out on paragraph 3.167 of the explanation to Policy HOR9) suggest that the site could potentially provide for the following identified demand:
- Up to 200,000sqm of B1 floorspace, predominantly focussing on B1(a), B1(b) and B1(c) including floorspace for new incubator/start up units/Small Medium Enterprise.
  - Up to 10,500sqm of community facilities, including A1 (predominantly convenience shops); A3 (Food and Drink); D1 (Children’s Nursery) and/or D2 (Gymnasium).
- 1.11 The need for this amount of floorspace is also identified in the Council’s Strategic Employment Provision Opportunity Study (June 2016), which is informed by data on locally generated need and unmet needs from adjoining Gatwick Diamond boroughs.
- 1.12 From September 2020 Use Classes B1, A1, A3, D1 and D2 were superseded with the new Use Class E. As the site allocation is based on identified need and demand, it is likely that any planning permission for predominantly office development would need to be subject to a planning condition to restrict the use to offices.

- 1.13 Accommodating this scale of development equates to a relatively high density of employment at a plot ratio of 0.65. When taking into account site constraints and identifying net developable areas, the final ratio, as calculated in the Design Options is much higher, influenced by:
- The desirability to retain, enhance and integrate existing landscape and watercourse features to provide a positive setting for development and support biodiversity.
  - The Gatwick Open Setting at the southern edge of the site, designated under DMP Policy NHE1(3), prevents any built development except for access to ensure that Horley remains separate from Gatwick Airport and Crawley.
  - Maintaining adequate amenity buffers from the existing developed residential edges, protecting trees including those that are subject to Tree Preservation Orders at the northern and eastern boundaries and protecting and where possible enhancing the setting of the statutory and locally Listed Buildings.
  - Areas of the site that are in Flood Zone 2 where no buildings other than car parking is to be permitted, and other areas where flood and surface water mitigation will be required.
  - The southern part of the site being affected by a 57dB airport noise corridor.

## Business Park Design Trends

- 1.14 The HOR9 Strategic Employment Site: Economic Assessment, by Chilmark Consulting (September, 2017) highlights important design considerations that are specific to Horley. A review of relevant best practice research has also been undertaken and this centres on research by the British Council for Offices (BCO) on The Future of Business Parks (March, 2019) to highlight the changing trends in business parks and highlight important urban design features.
- 1.15 The HOR9 Strategic Employment Site: Economic Assessment, by Chilmark Consulting (September, 2017) sets out a number of key considerations which are important for informing the masterplanning of HBP:
- Worker experience will be important in design and functionality of workspace.
  - Different types of workspace will likely be required, including within the same building (e.g. co-working, hot desking, serviced accommodation).
  - Key drivers of occupiers will be proximity to public transport options, pedestrian and cycle friendly environments.
  - Access to leisure facilities and a range of local amenities, are vital to attracting future employees and occupiers.
  - Office location, the organisation of workspace and the built/local environment is essential to help differentiate workspace locations.
  - Workspace provision will need to be fully integrated into the vision and character of development, including the development of intelligent buildings to support occupier and employee expectations for a healthy working environment.

1.16 As such the assessment recommends that the mix of employment uses includes:

- Business incubator facilities;
- Move-on space;
- Specialist space and equipment;
- Shared meeting and conference space; shared communal facilities;
- Business support services;
- Environmental enhancement; and
- Sustainable transport initiatives.

1.17 The proportion of tenants (but not necessarily floorspace) is recommended by the assessment to be within the following ranges:

- Incubator/Start-ups: 20-30%.
- Expanding/Stable businesses: 30-40%.
- Major/Anchor occupiers: 30-40%.

1.18 To make the business park a community of businesses rather than simply a collection of individual premises, the Assessment recommends that design and management must ensure as much interaction as possible between the people working within the business park – this is reflected in the explanatory text supporting Policy HOR9 in the DMP. The range of community facilities reflects the trend in business park design in providing a range of amenities, with the Assessment recommending:

- On-site catering;
- Limited retail provision;
- Gym;
- Crèche; and
- Medical services.

1.19 The recommendations of the Assessment are representative of research by the BCO which finds that business parks are evolving significantly to maintain their role and relevance in meeting employment needs. Business parks are changing with a greater focus on lifestyles by providing a diverse mix in the offer of employment space and supporting amenity provision.

1.21 The overall trend essentially describes a significant shift in business park design thinking. Typically business parks are thought of as single use office parks often in isolated and out of town locations that prioritise access for the car, are dominated with individual large scale buildings accessed by loop roads separated from each other with generous parking and landscaping footprints. Appetites for more urban lifestyles, interaction and networking, coupled with a government urban renaissance agenda, has led to a focus on creating employment clusters in city centre locations. The urban centres approach is being weakened by the costs and complexities of developing urban sites, and being undermined further by a housing growth agenda and permitted development rights that allow the change of use of employment space to residential use.

1.22 The current context provides an opportunity for new and repurposed business parks to compete with urban centres by being more place focussed to create more diverse, attractive environments. The BCO research identifies four types of business parks that are emerging, including:

- Parks developed to be linked to higher education institutions to become university led science and technology parks;
- Urban edge parks that are being repurposed and intensified to create a mixed use offer and be more accessible. This includes the urbanisation of low density research parks to include leisure, retail and residential uses and compete with urban centre offers;
- Regional international interchange parks that are closely related to regional and international airports to take advantage of international trade and small scale businesses operating with an international reach; and
- Urban business parks, developed in new locations to support accessible mixed use developments.

1.23 The research highlights several examples in the UK and internationally to demonstrate how the design of business park environments is evolving. Additional proposals for new development have emerged that reflect the latest design thinking. Those of interest and relevant to Horley include:

- **Edinburgh Park, Edinburgh** – featured in the BCO research, was originally planned as a conventional office-based business park. A new masterplan and vision seeks to increase the intensity of development with a greater mix and intensity of uses. The masterplan seeks to provide a wide amenities offer, high quality public spaces and include a residential component of

up to 1,800 dwellings. Edinburgh Park also benefits from good public transport connections, proximity to the strategic road network and Edinburgh Airport. Development is planned to be based on a grid structure with connections maximised with the surrounding existing urban fabric with the intention of the development becoming a new urban quarter.

- **Milton Park, Oxford** – although referred to in the BCO research, proposals have emerged subsequently for a 2040 Vision - a masterplan that seeks to increase the working population from 9,000 to 20,000 with 370,000sqm of development on a 121ha site. The masterplan seeks to intensify development on the site with buildings that are adaptable to the types and growth of companies and how they will use space, create spaces that are the focus for people and businesses, maintain and extend green spaces and support a wider range of travel choices.
- **Oxford North, Oxford** – is a proposal that has been submitted for a new urban district at the northern edge of Oxford. The masterplan seeks to provide 87,000sqm of workspace and create 4,500 jobs and 480 new homes. The employment offer intends to include offices, labs and shared space. The amenities offer is proposed to include retail, restaurants, cafes, bars, nursery, hotel and performance space to enhance Oxford North, both as a working and living environment. Although the site is located at the edge of Oxford, it is well linked to public transport routes. Connections with Oxford and neighbouring areas will be enhanced with investment in a central boulevard 'gateway' and upgrades to walking and cycle routes. Sustainability is also a promoted feature of the development through building orientation and proposals including a ground source energy loop system to serve the development.

## Sustainable Public Transport Oriented Development (PTOD)

- 1.24 The design objectives of new and repurposed business parks can be considered overall to be aimed at providing a more flexible and adaptable offer of accommodation that is able to support a wider offer of types of spaces, including start up organisations. A wider choice of amenities with a mix of supporting retail, cafes, child care, leisure facilities and hotels aim to promote better lifestyle features and increase their attractiveness, alongside wider accessibility options with public transport connections and walking and cycling options. Some examples also seek to widen the mix of uses, with residential uses, essentially to provide an offer that is competitive with urban centre environments.
- 1.25 Residential development is not a land use component of the site allocation at Horley. In response to the Economic Assessment by Chilmark Consulting, the site allocation in DMP Policy HOR9 is focussed on delivering employment development at a capacity that can meet the identified employment demands with an appropriate mix of supporting uses that intend to create an attractive employment destination in the Gatwick Diamond.
- 1.26 The evidence base and wider research underpins the development and design aspirations, which are conveyed in the Vision for Horley Business Park and, together with an analysis of site opportunities and constraints, have informed the concept and design principles.
- 1.28 Horley Business Park presents a clear opportunity for a public transport oriented development (PTOD), known internationally as a transit-oriented development (TOD). The site is located within a few minutes' walk of Gatwick Airport railway station, one of the best-connected rail and bus stations in the south-east of England. Horley railway station is also located some 10 minutes north of the site, adjacent to a public transport interchange and the edge of Horley town centre. Proximity to these transport hubs and the town centre demonstrate how Horley Business Park can be superbly connected by sustainable modes of travel with enhanced cycle and pedestrian links, which could be further enhanced with public transport services. This potential to maximise accessibility via sustainable travel connections, rather than the site's adjacency to the strategic road network, should be considered its major locational attribute.
- 1.29 PTOD is an approach to development that maximises the accessibility of uses by public transport, walking and cycling. It is not just any development near public transport. It should have characteristics that:
- Increases 'location efficiency' so people can walk, cycle and take public transport;
  - Boosts public transport patronage and thereby minimises the impact of traffic;
  - Provides a rich mix of uses, jobs, and recreational choices within close proximity, accessible to the widest possible population by sustainable modes;
  - Provides value for the public and private sectors, and for both new and existing residents.
- 1.30 The principles of PTOD are embedded throughout the design principles and design options presented in this report.

## Horley Business Park Vision

“The Horley Business Park will be a thriving, exemplary, cutting edge strategic business park that is functionally, visually and physically integrated into the wider Horley area. This will include an inspiring biodiverse green environment with high quality public open space.

The business park will offer high value jobs for residents from the local and wider area in sustainably designed and constructed, flexible Grade A quality accommodation. It will capitalise on its key strategic location, attracting local, national and international businesses to assist in the long term sustainable economic growth of Horley, the borough and the wider region.

Employment, training, and supply chain opportunities and accommodation will be provided for local residents and for small and medium sized businesses. The business park will also provide a range of complementary facilities for employees and local residents.

Ultra-modern infrastructure including telecommunications, power and transport will be provided. Flood alleviation interventions will reduce flooding on the site and surrounding areas.

Attractive and safe pedestrian and cycle links will encourage sustainable journeys between the site and Horley, Crawley and Gatwick Airport, and across the site, minimising car use.”

# 2. Baseline Assessment

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## Site Opportunities and Constraints

### MANAGING DRAINAGE AND FLOOD RISK

2.1 The north and north eastern areas of the site are in Flood Zone 2 and therefore, form the parts of the site where built development is to be avoided. Although Policy HOR9, in flood risk terms, considers land in Flood Zone 2 to be acceptable for car parking and related infrastructure, the parts of the site in Flood Zone 2, in proximity to residential areas, creates a valuable opportunity for green infrastructure to extend from the Gatwick Open Setting to accommodate a landscaped buffer between built development and existing adjacent residential development.

### RETAINING THE GATWICK OPEN SETTING

2.2 The Gatwick Open Setting is designated in DMP Policy NHE1(3) to maintain physical visual separation between Horley and Gatwick Airport and forms a green corridor that connects the Riverside Garden Park to the wider countryside to the east, underscoring an opportunity for green infrastructure to extend from this corridor into the site.

### IDENTIFYING HEIGHT CONSTRAINTS

2.3 Drawing on advice from Gatwick Airport, buildings should as a broad guide, be no higher than buildings at Gatwick Airport. Existing buildings at Gatwick Airport include hotels, such as Premier Inn, which suggests that buildings in this context could be as high as some 12 storeys. A key consideration is how tall buildings and structures could affect flight paths and radar scanning. The site flanks and does not conflict with the airport flight paths. However, the potential effects of the height and mass of buildings on airport radar scanning must be considered. Although, modest heights that are lower than existing buildings should not present any major

conflict with scanning radar, Gatwick Airport should be given the opportunity to respond to proposed building heights at an early stage of the masterplanning process. A further key influence on building heights is the proximity of neighbouring residential development and their character and outlook. Overall, this existing context suggests a design approach that locates lower built forms closer towards existing residential development and higher built forms towards the southern edge of the site, creating a similar scale in outlook across the Gatwick Open Setting to other existing larger scale forms.

### RESPECTING THE CHARACTER AND AMENITY OF SURROUNDING DEVELOPMENT

2.4 Existing mainly residential areas on Limes Avenue and off Balcombe Road directly overlook existing fields within the site. Two Grade II Listed Buildings (Fishers Farm House & Fishers Cottage/The Barn) overlook the site from the north. Being in Flood Zone 2, a retained and enhanced green corridor would respect the character of these edges, protect amenity and the setting of the Listed Buildings.

### OPPORTUNITIES FOR CREATING POSITIVE SETTINGS FOR NEW DEVELOPMENT

2.5 Existing landscape features, including hedgerows, trees and woodland copses, are attractive elements that would be desirable to retain where possible. They provide a positive influence in structuring development and have the potential to create a positive setting for the development and individual built forms. There is also an opportunity for landscape enhancements, being mindful of the potential effects of landscaping on the risk of bird strike in such close proximity to Gatwick Airport.

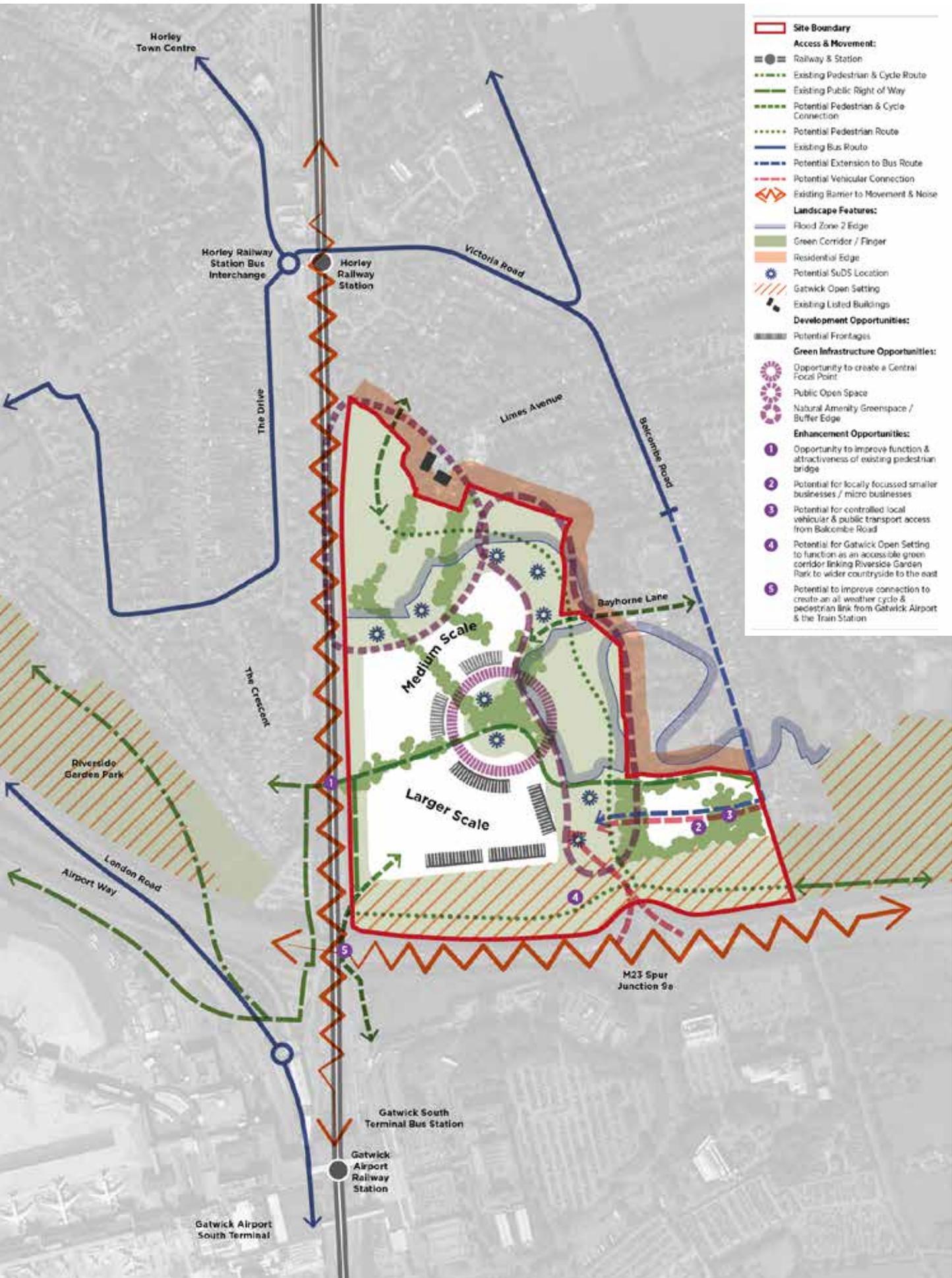


Figure 3: Site opportunities and constraints plan

## OPPORTUNITIES FOR RECREATION

2.6 A retained and enhanced green corridor provides an opportunity to structure greenspaces within the site to include a public park towards the north of the site close to Horley Town Centre, a focal point around the retained central woodland and natural greenspace corridors along the eastern edge and within the Gatwick Retained Open Setting

## OPPORTUNITIES FOR MAXIMISING ACCESSIBILITY BY SUSTAINABLE MODES

2.7 Policy HOR9 sets out a key requirement for a cap on the number of vehicles accessing the site per hour from the strategic road network M23 J9A spur, which is to be determined at the planning application stage if needed. The policy also requires a suitable monitoring regime to be proposed and sets out measures that could be implemented if the determined cap is breached. This key requirement underscores the importance of fully exploiting existing and potential walking and cycling connections into the site from the railway stations and Horley town centre and providing access for existing and new public transport services.

2.8 Maximising access for these sustainable modes is critical for reducing the need for private vehicles to access the site to residual levels. In turn, this will reduce the need for car parking and allow for development areas to be used more effectively for creating space for employment and supporting mixed uses. Legible, convenient attractive and safe connections to Horley Town Centre, Horley Train Station and Bus Interchange and also Gatwick Airport Train and Bus Stations are particularly paramount. In this context particular opportunities for focussing new and enhanced connections include:

- The scope to improve the quality of the pedestrian link underneath the A23 to Gatwick Airport South Terminal and railway station;
- A new pedestrian and cycle between Limes Avenue and the site to create a shorter and more attractive link to Horley Railway Station and town centre;
- Improving the quality of the pedestrian footbridge link from the site to The Crescent to improve the existing route to Horley railway station and town centre and increase the potential cycle and pedestrian catchment;
- A cycle and pedestrian link to the site from Bayhorne Lane to increase the potential cycle and pedestrian catchment.
- A cycle and pedestrian connection to provide access to the site direct from Balcombe Road.

2.9 Potential also exists for new and enhanced connections to be complemented with wayfinding which could become part of a strategy to support navigation to the site from these key connection points.

## IDENTIFYING DEVELOPABLE AREAS FROM POLICY, OPERATIONAL AND PHYSICAL CONSTRAINTS

2.10 The combination of constraints and opportunities as summarised above, all play a key role in beginning to shape and define potential developable areas and begins to inform early thoughts on how development parcels key movement routes and spaces, might be developed. Key considerations include the scale, grain and height of built forms. Generally, the approach envisages the scale and intensity of development rising from the north to the south.

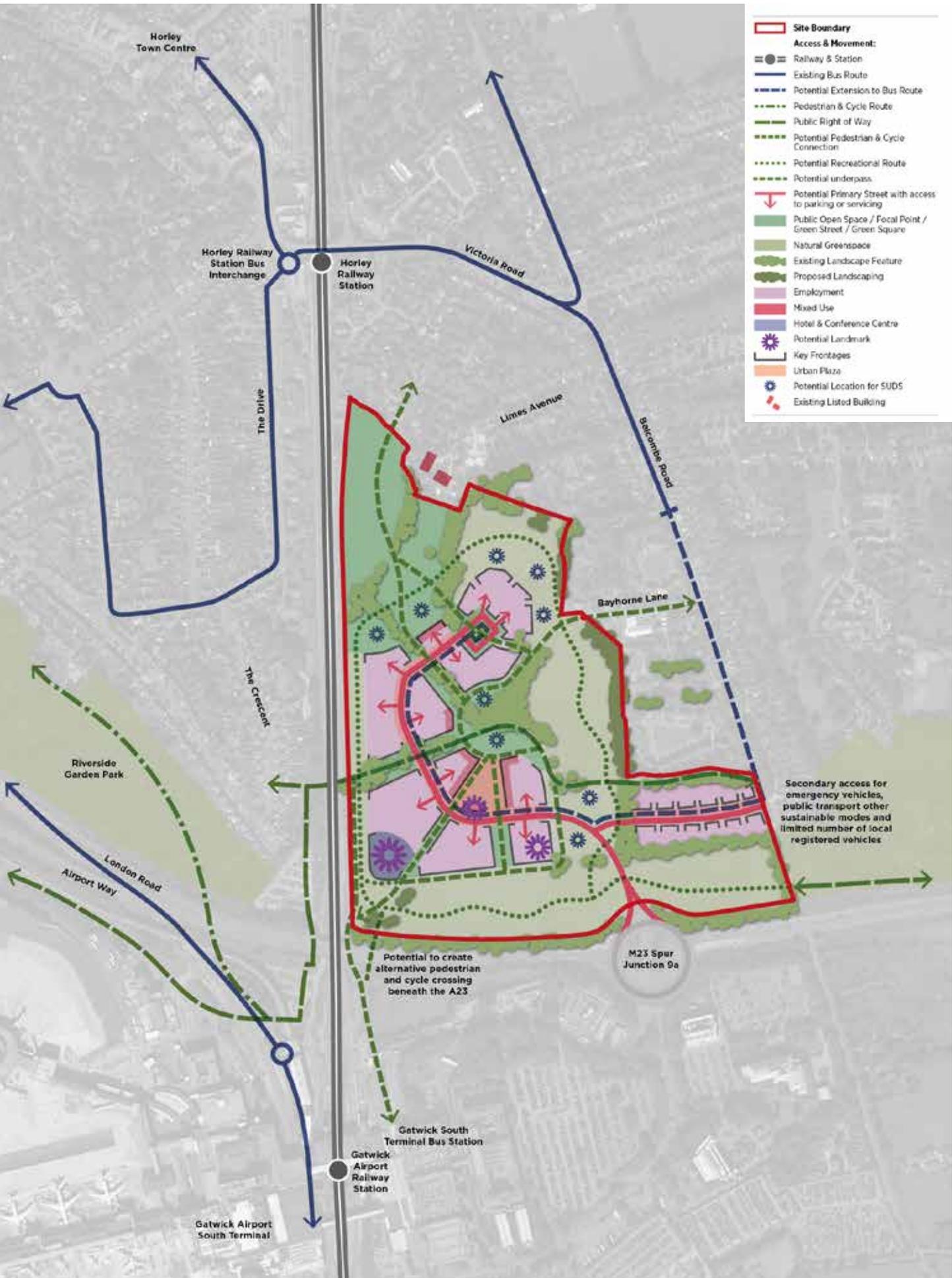


Figure 4: Concept Plan based on opportunities and constraints

# 3. Design Principles

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Figure 5: Concept artist's impression of main focal point space

## Overview

- 3.1 To deliver on this ambitious vision and realise the opportunity present on the site, masterplanning and detailed design at HBP should follow the design principles set out in this section.
- 3.2 The design principle themes are set out in order of scale, beginning at site-wide water and landscape issues, refining down to detailed design principles for urban grain and built form. They are intended to be applied as a whole in an iterative design process.
- 3.3 Each of the design principle themes is illustrated with a plan showing application at the HBP site, with supporting explanatory text on aims, objectives and implementation. Where necessary, supporting diagrams are included, and each theme includes a range of exemplar precedents to demonstrate how they can be applied in practice. Where available, links to further best practice guidance are provided.



## Water

3.4 Although no rivers or streams cross the site, there is water present throughout, particularly to the north and east where the site is identified within Food Zone 2. In the wider context, water features include a large pond to the south of the A23 adjacent to the Gatwick Airport South Terminal and Riverside Garden Park to the west of the site. A successful water management strategy has the potential to create an attractive and biodiverse place within the new business park and to help alleviate flooding in the surrounding developed areas to the north and west.

3.5 An appropriate strategy should be prepared with consideration given to:

- [Reigate & Banstead Level 2 Strategic Flood Risk Assessment \(October 2017\)](#)
- [Surrey Wildlife Trust's River Mole Biodiversity Opportunity Area](#)



Figure 6: Water principles diagram (As others enlarge to fill the page)

### AIMS AND OBJECTIVES

- Managing surface water runoff using natural drainage approaches where possible.
- Maintaining or improving on greenfield runoff rates from the site.
- Protecting the quality of water that enters local watercourses
- Minimising the risk of fluvial flooding & surface water flooding to new and existing development.
- Preventing an increased risk of bird strike at Gatwick Airport.

## IMPLEMENTATION

### Location-Specific

- No buildings except car parking and supporting infrastructure on land within Flood Zone 2 at the east and north of the site.
- Upgrade Stafford's Place culvert to the north of the site allocation.
- Flow of surface water to follow existing topography and channels towards the north, with attenuation within or adjacent to plots.
- Strategic attenuation at the north of the site to use wetland habitat creation to slow flow of surface water out of the site.

### General Principles

- Use of permeable surfaces and planting within surface car parking and 'hard' areas of public realm to absorb surface water.
- Use of swales within street verges and open spaces, and rills within hard paving surfaces to channel water towards swales.
- Street trees and tree pits within all streets and public spaces.
- Use of appropriately-design Green Roofs designed to absorb and filter rainwater and be uninviting to birds coupled with appropriate rainwater harvesting techniques.
- Wetland habitat within the northern open space area as a strategic SuDS.
- No permanent large open bodies of water on the site that could attract birds that would become a hazard to the adjacent airport.
- All proposals to be compliant with Surrey County Council's SuDS Design Guidance.

## GUIDANCE

- [Ciria, The SuDS Manual 2015](#)
- [Surrey County Council, SuDS Design Guidance](#)
- [Urban Design London, Designing Rain Gardens: A Practical Guide](#)

## PRECEDENTS



Figure 7: Oxford Science Park, Oxfordshire: Integration of water channel, walking route and green infrastructure amongst development



Figure 8: Watercolour, Redhill: Integration of a variety of SuDS features throughout this development

## Open Space

3.6 Attractive and varied open space is essential for a stimulating, healthy and enjoyable environment. At HBP, open space provision should include a combination of formal provision, in the form of a new public open space and well landscaped green corridors, enhanced with additional landscaping. This range of open spaces will add to the overall offer of facilities that will attract businesses to Horley, but importantly it will become a valued resource to future employees, surrounding residents and the wider living and working population of Horley.

3.7 This extensive open space network will seek to retain and enhance and create new natural habitats to enhance biodiversity. All open space should be multifunctional and make good use of land and offer varied and interesting character.



Figure 9: Open space principles diagram

### AIMS AND OBJECTIVES

- Providing high quality recreational open space for the living and working population of Horley and future businesses and employees based at HBP.
- Creating a central focal point for activity within HBP.
- Making efficient use of land through multi-functional use of open space.
- Maintaining the Gatwick Open Setting area as a physical visual break between Horley and Gatwick Airport.
- Providing a buffer between existing residents and new development.
- Enhancing natural habitats.

## IMPLEMENTATION

### Location-Specific

- Enhancing land within the Gatwick Open Setting as a natural green space corridor with landscaping and integrating a footpath link between Balcombe Road and the pedestrian footbridge across the railway.
- Linking the Gatwick Open Setting to the north of the site with an additional natural corridor, adjacent to existing development at the eastern edge of the site.
- At the north of the new natural corridor - a new public open space in the north-west apex of the site, closest to Limes Avenue and the town centre, providing small-scale recreational facilities for local residents, employees and opportunities for rest and recreation.
- An 'urban plaza' style space to the south of the central copse of trees, terminating the walking route to Gatwick railway station providing a focus for mixed uses and space for indoor activities to spill outdoors.
- A smaller 'green square' to the north of the central copse of trees, to provide an attractive setting for development and provide turning facilities for buses and vehicles.

### General Principles

- Open spaces should be multi-functional, providing recreational amenity for employees and local residents, natural habitats for wildlife, an attractive and characterful setting for development, and strategic surface and fluvial water management.

## GUIDANCE

- [Sport England, Active Design Guide](#)

## PRECEDENTS



Figure 10: Pebble Mill, Birmingham: Use of water, planting and movement networks within open space to provide a multi-functional setting for development

## Green Infrastructure

3.8 The environment at HBP contains significant mature green infrastructure, based around field boundaries that date back beyond the 1600s. This structure and maturity should be used to structure and enhance the new development created within its framework. New green infrastructure within streets and 'hard' public spaces can enhance surface water drainage, create attractive and distinctive environments, and provide a habitat for insects, small reptiles and mammals and small birds.



Figure 11: Green Infrastructure principles diagram

### AIMS AND OBJECTIVES

- Protecting existing mature green infrastructure.
- Providing habitats and corridors for nature and biodiversity.
- Creating an attractive, mature and varied setting for development.
- Enhancing an environment for healthy recreation for employees and local residents.

## IMPLEMENTATION

### Location-Specific

- Adopt an approach of screening development from Balcombe Road with generous landscaping and mitigate the impact of recent tree removal.
- Retention of hedgerows and mature trees on the site, in particular those running along field boundaries seen on historic maps going back to the early 1600s.
- Retention of the central woodland copse to provide a green focal point to the site.
- Consider the type and location of trees in order to support a reduction in carbon emissions – deciduous trees can shade buildings help to keep them cool during summer whilst allowing for sunlight to penetrate and solar gain during winter.
- Planting of new screening vegetation and trees at the eastern edge of the site.

### General Principles

- Street trees and planting throughout ‘hard’ landscaped areas to improve surface water retention and soften the environment.
- Use of green infrastructure, particularly by retaining and enhancing existing features on site to structure the form of development, provide a pleasant mature green setting for streets and spaces whilst providing welcoming shade for pedestrians and cyclists.

## GUIDANCE

- [Natural England’s Green Infrastructure Guidance \(NE176\)](#)
- [UK Green Building Council: Demystifying Green Infrastructure](#)
- [Trees and Design Action Group: Trees in Hard Landscapes](#)

## PRECEDENTS



Figure 12: Pebble Mill, Birmingham: Planting integrated within a ‘hard’ landscaped environment



Figure 13: Pebble Mill: Birmingham: Existing mature trees can provide a strong backdrop, setting and structure to development



Figure 14: Corby Enterprise Centre, Northants: Smaller spaces framed with green infrastructure

## Sustainable Movement

- 3.9 Key to the success of HBP will be capitalising on its excellent sustainable mobility connectivity, allowing it to prosper and create employment opportunities into the future, whilst minimising impact on traffic flows and local roads and on air quality.
- 3.10 Maximising accessibility to Gatwick Airport railway and bus station is likely to provide the most sustainable mobility access, as it has the highest levels of service, connectivity and accessibility to the wider region by sustainable modes. Secondary connectivity to Horley town centre and railway station and bus interchange will secure additional sustainable mobility benefits, along with pedestrian connectivity to the surrounding built-up area.
- 3.11 As the site is compact and walkable, movement between uses on the site should be as easy and attractive as possible on foot and by cycle, without making pedestrians navigate significant highway infrastructure.



Figure 15: Sustainable movement principles diagram

### AIMS AND OBJECTIVES

- Making sustainable travel to work the easiest option for employees at HBP, capitalising on its exemplary sustainable mobility links.
- Creating good walking and cycling routes to Horley town centre, train station and bus interchange, residential areas and Gatwick Airport rail and bus stations.
- Provide direct and attractive bus routing.
- Reducing the carbon footprint and air quality impact of the new development.
- Limiting the impact on the strategic highways network, in particular at M23 J9.
- Retain existing public rights of way, although allow for diversions if good connectivity can be maintained.

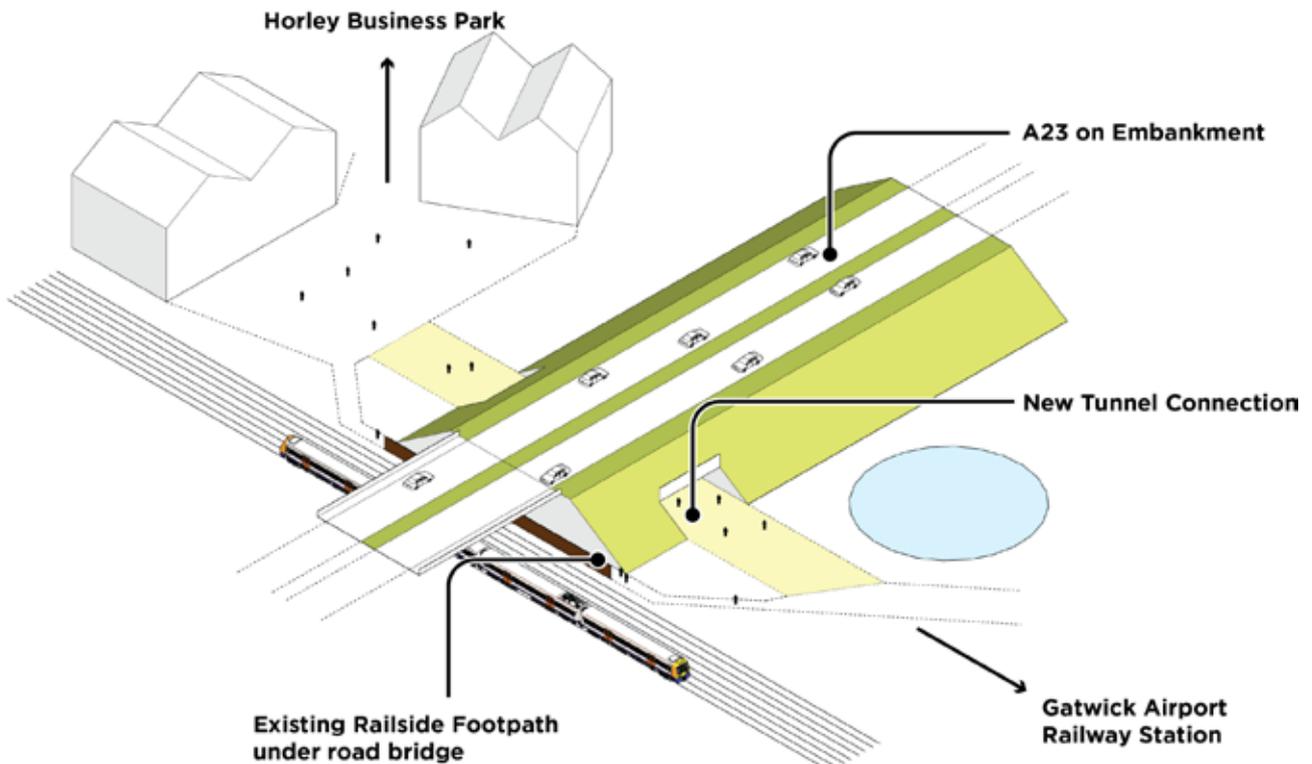


Figure 16: Potential approach to establishing a new pedestrian connection to Gatwick Airport railway station under A23 embankment

## IMPLEMENTATION

### Location-Specific

- Improved pedestrian access points at the edges of the site:
  - Gatwick Airport: Clear wayfinding and landscaping improvements on the airport side, and lighting, security and environmental improvements in the A23 underpass adjacent to the railway line. An alternative solution, although more costly, could be to create a new cycle and pedestrian tunnel under the A23 separate to the railway. A new crossing could be designed, potentially as an artwork, with lighting to create a feature gateway entrance from Gatwick Airport South Terminal and Gatwick Airport railway station. Although, this was not considered as part of the costed infrastructure for the site allocation, it represents an opportunity to create a unique gateway feature when entering the site from Gatwick Airport South Terminal and the railway station. Further work on design, cost and viability would be needed.
  - Railway footbridge: clear wayfinding and environmental improvements to the footbridge, along with provision for bicycle access such as a bicycle groove.
  - Bayhorne Lane: clear wayfinding and gateway improvements to open space.
  - Limes Avenue: clear wayfinding and gateway improvements to open space.
- Walking routes converging on a central focal point, following existing green infrastructure.
- A key corridor between the entrance at the southwestern corner of the site (to Gatwick Airport) and the central plaza adjacent to the woodland copse.
- Public transport corridor running through the site from Balcombe Road, serving the central plaza and focal point of the site. As recommended by guidance for Buses in Urban Developments (CIHT, 2018) carriageway widths should be a minimum of 6.5m and bus stops located at key locations or nodes within the walking network. All development should be within a maximum 400m walking distance of a bus stop, and a large majority of development should be within 250m walking distance of a bus stop.
- A leisure circuit around the site taking in the public open space, natural environment to the east, and the southern “Gatwick Open Setting” open space, which could be used, for example, for a ‘Parkrun’ style event or similar.

### General Principles

- Highly permeable and attractive walking networks throughout the site, minimising detours for pedestrians.
- A presumption in favour of pedestrian and cyclist-only streets, with general vehicle traffic restricted to the main ‘boulevard’ route and plot or car park accesses.
- Pedestrian and cyclist-only streets will allow access for authorised service vehicles and emergency vehicles.
- Maximising walking connectivity to Gatwick Airport railway and bus stations.
- Provision of public/visitor cycle parking spaces within the main public spaces and at the southern edge of the new public open space, as well as employee cycling spaces provided securely within buildings or on plots.
- Maximising the provision of infrastructure and supporting facilities to enable cycling to be a mode of choice. As such, cycle parking provision should be generous, exceeding the DMP’s minimum standards (of 1 space per 125sqm).

### GUIDANCE

- [Reigate & Banstead Local Plan Development Management Plan, Annex 4: Parking standards](#)
- [Sport England, Active Design](#)
- [NHS England, Putting Health into Place](#)
- [DfT Local Transport Note 1/20 – Cycle Infrastructure Design](#)
- [TfL: Healthy Streets, Living Streets](#)

### PRECEDENTS



Figure 17: Milton Park, Oxfordshire: Shuttle buses or other public transport links should run through HBP



Figure 18: Cambourne Business Park, Cambridgeshire: Sheltered and secure bicycle parking conveniently located adjacent to employment floorspace and supporting mixed uses should be provided to enhance cycling as a mode of choice



Figure 19: Chiswick Park, West London & Corby Enterprise Centre: Streets and public spaces should be vehicle-free wherever possible

## Vehicle Access and Parking

3.12 Carefully-designed and integrated vehicle movement networks and car parking can ensure that access by car is simple and possible for business park users. Carefully considered, these networks can minimise the negative environmental effects on the site and context that significant levels of traffic can otherwise bring. Efficient use of land, by employing more compact car parking forms, can ensure that HBP can maximise floorspace to realise the opportunity for job creation. The approach avoids sacrificing land for extensive and unsightly surface car parking and allows for generous green infrastructure provision.



Figure 20: Vehicle access principles diagram

### AIMS AND OBJECTIVES

- Provide necessary car parking to support employment provision in a space-efficient manner that does not compromise the public realm or open space.
- Ensure vehicle movement does not conflict with sustainable and active modes.
- Minimise vehicle movements so that they do not becoming a constraining factor on employment growth at HBP in the long-term.

## IMPLEMENTATION

### Location-Specific

- Primary vehicle access to be provided with a new spur road from M23 J9A with a cap on the number of vehicles accessing the site per hour from this junction should it be needed (to be determined at the planning application stage).
- Secondary vehicle access from Balcombe Road, for use by emergency vehicles, public transport and other sustainable transport modes. A limited number of registered vehicles of local employees will be permitted to use this access with the amount to be agreed at the planning application stage.
- A central 'boulevard'-style corridor running from the two access points through the main development area of the site. The boulevard should be equipped with walking and cycling provision, and provide access to plots and parking facilities.
- A 'green square' terminating the boulevard at the northern end of the site.

### General Principles

- Use of the following parking typologies:
  - Undercroft / podium parking integrated within buildings at the ground floor or below ground, subject to flooding constraints and alignment with wider design principles. Active ground floor frontages must be retained on key pedestrian routes and public spaces.
  - Centralised/shared multi-storey car parks (MSCP), wrapped by development or clad at upper levels to become a feature building. An active ground floor frontage must be retained on key pedestrian routes and public spaces.
  - Limited surface car parking towards the edges of the site, appropriately landscaped to visually soften the appearance. Disabled car parking spaces will be located closest to building entrances.

- Cycle parking provision to meet or exceed minimum standards with opportunities for secure storage and for supporting facilities such as changing, shower and locker facilities.
- Ensure that car parking provision is co-ordinated with a identified cap on hourly vehicle access from J9a of the M23 and agreed limit on access for local employees from Balcombe Road.
- Phasing of development to be carefully planned with appropriate provision. Should early phases or intermediate phases bring forth requirements for parking that would not necessitate a full MSCP, temporary surface parking may be provided on a future development plot until development reaches a threshold where an MSCP is required.
- In line with planning policy, most vehicle access should be via M23 J9A up to an agreed hourly cap. A limited number of registered vehicles for employees of the business park will be permitted to access the site from Balcombe Road. Both the hourly cap and local access limit will be determined and agreed at the planning application stage.

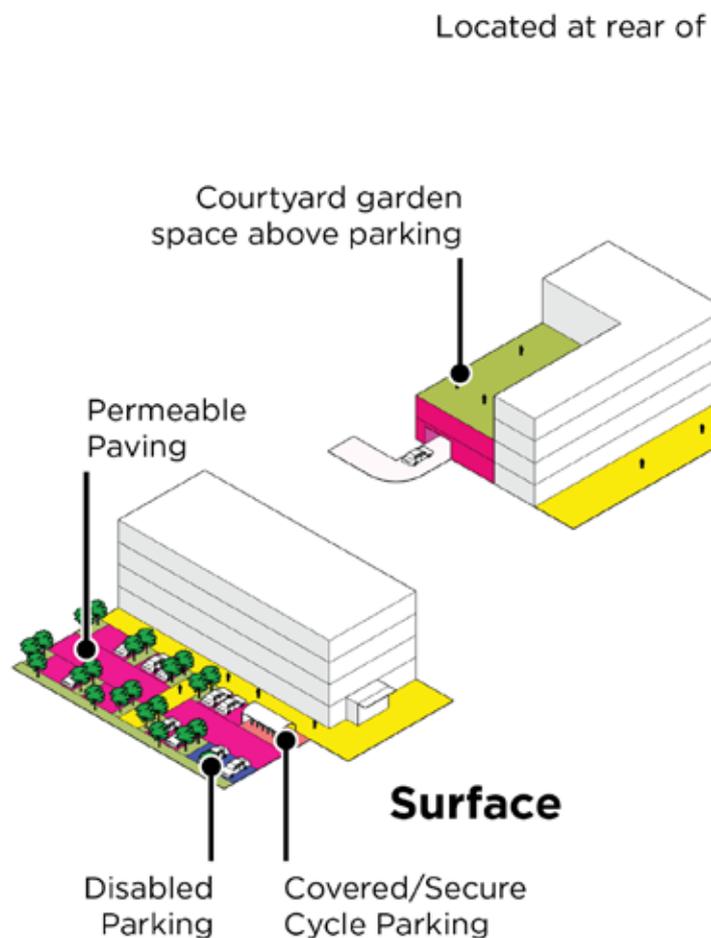


Figure 21: Appropriate parking typologies and design considerations

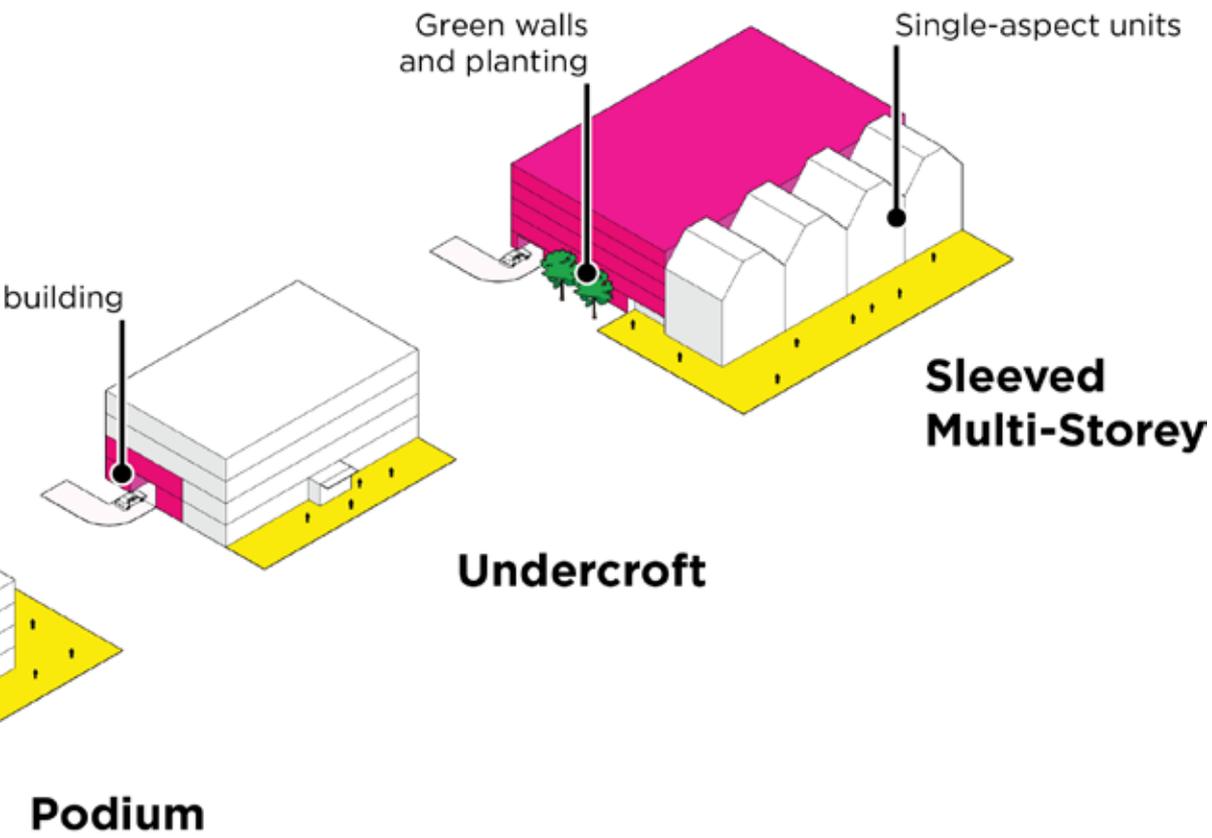
## GUIDANCE

- [DfT Local Transport Note 1/20 – Cycle Infrastructure Design](#)
- [Manual for Streets, \(DfT, 2007\)](#)

## PRECEDENTS



Figure 22: Castle Boulevard, Nottingham: Example of a segregated on road cycle route



## Location of Key Uses

- 3.13 Concentration of activity-generating uses around key focal points can create interesting and vibrant environments, encouraging business park users to use the open spaces and recreation opportunities available. Consideration of movement patterns and wider connectivity can help inform where these uses would be best located.
- 3.14 A flexible approach to uses on site should be taken, within the aims and objectives outlined in these design principles.



Figure 23: Location of key uses principles diagram

### AIMS AND OBJECTIVES

- Co-locate key uses to create a central focal point for HBP.
- Create gateway locations through the placement of key uses.
- Ensure a good mix of uses to provide for daily needs of employees on HBP.

## IMPLEMENTATION

### Location-Specific

- Concentrating complementary mixed uses such as local retail, cafes and restaurants around the southern central plaza, to concentrate public realm activity and convenience for employees
- Some mixed-use (e.g. a café) adjacent to the new public open space.
- Potential for a combined hotel and conference facility located close to the southwestern entrance to HBP, nearest to Gatwick Airport railway station to maximise national and regional sustainable connectivity.
- Locally-oriented employment uses, located in the south-east of the site close to the Balcombe Road entrance. This may include small offices, incubator spaces and co-working hubs, research and development spaces, light industrial workshops and small scale logistics and warehousing.
- Should it be proposed, limited logistics or warehouse space should be located close to the M23 J9A access point. They should be small in scale, to serve local distribution (for example sustainable local consolidation centres) and be appropriately designed to contribute to the street environment. Where possible, they should be 'sleeved' by partially surrounding them with other finer-grain uses on key frontages.

## PRECEDENTS



Figure 24: Milton Park, Oxfordshire & Alconbury Weald, Cambridgeshire: A co-working hub or 'Innovation Centre' with flexible workspaces and facilities can create activity and a sense of place near the centre of a business park

## Urban Design

3.15 A strong urban design framework to govern the design of buildings and spaces can create an environment that is easy to navigate (legible), interesting and varied, and with respect for surrounding areas and residents. Use of landmarks, sightlines, active frontages and public spaces with distinctive characters potentially including moving water and/or outdoor art features can create a 'sense of place' within the development, significantly enhancing its attractiveness to business and prospective employees.



Figure 25: Urban design principles diagram

### AIMS AND OBJECTIVES

- Create a legible, easily navigable environment for all users.
- Create safe, active and vibrant public spaces and streets between buildings and along movement corridors.
- Respect and reflect the context of the surrounding environment.
- Make an active and healthy environment for employees and local residents.

## IMPLEMENTATION

### Location-Specific

- Landmarks at key locations:
  - At the south-west - where visible from the railway line, the A23 and as pedestrians enter the site from Gatwick rail station, potentially also via a new gateway underpass feature, if viable.
  - At the south as the main vehicle access from M23 J9A enters the site.
  - At the central plaza to the south of the woodland copse.
- Clear sightlines along the main routes towards the central focal point and plaza.
- Active frontages at ground level facing onto key walking routes.
- Identification of key nodes within the movement network with a clear articulation of their distinctive character – e.g. ‘urban plaza’, ‘green square’ or pedestrian entrances to the new public open space as identified in the concept plan.

### General Principles

- Identification of clear views within the site, ensuring that pedestrians unfamiliar with the site can clearly understand how to move through using cues such as scale, enclosure and visibility of key buildings.
- Consideration given to giving each main street a distinctive and recognisable character through scale, enclosure, street furniture and planting schemes.
- Buildings should have a contextually-sensitive and interesting roofscape to create a distinctive new development with attractive, fine-grained architecture.
- Reference to the character of neighbouring buildings, particularly along the northern and eastern edge of the site, is encouraged.
- A wayfinding strategy, with clear signposts and maps of the site posted at key locations.

## GUIDANCE

- [Horley Design Guide SPD \(2006\)](#)
- [Sign Design Society, Sign Design Guide](#)

## PRECEDENTS



Figure 26: Media City Salford: Locating more active uses such as cafes adjacent key streets and spaces to activate the public realm



Figure 27: Brooklands, Milton Keynes & Corby Enterprise Centre, Northants: Varied and interesting frontages to buildings create an attractive and memorable environment to walk through

## Grain and Massing

3.16 Consideration of the scale or 'grain' of development within plots and along key streets is an important part of making a place more walkable and attractive and can make land use more efficient. HBP should aim towards including finer-grain buildings, or articulation of larger buildings to break up massing.



Figure 28: Grain and massing principles diagram

### AIMS AND OBJECTIVES

- Locate buildings of different sizes in appropriate locations across HBP.
- Ensure an active and vibrant public realm through concentration of people and variety at key locations.
- Create variety in the built form along key streets to add interest to the walking experience.

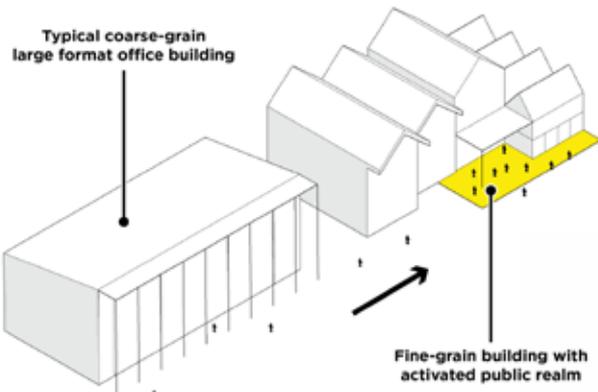


Figure 29: Breaking up the bulk of buildings and using built form to enclose and activate public space

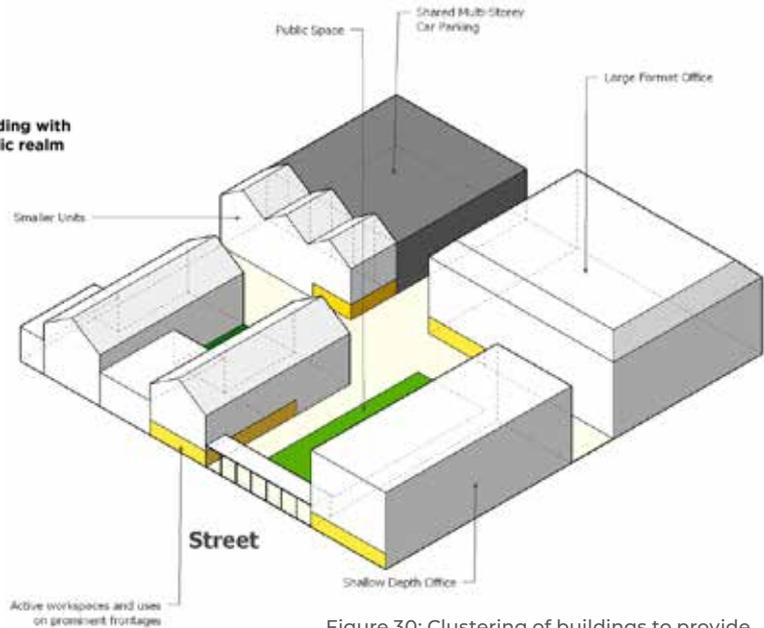


Figure 30: Clustering of buildings to provide variety of accommodation and public spaces

**IMPLEMENTATION**

**Location-Specific**

- Finer-grain buildings located in the south-eastern corner of the site, near the Balcombe Road entrance.
- Large format, coarse grain office buildings located closer to the southern edges of the site, overlooking the open space towards the A23.
- Buildings around the central plaza, and other key spaces and streets, to be visually fine-grained through architectural treatment, or to include fine-grained ground-floor uses such as cafes, food takeaways, meeting spaces, co-working hubs or maker spaces, to ensure the spaces and streets have activity and interest along them.

**General Principles**

- Frequent vertical articulation of facades, especially at ground floor level.
- ‘Breaking up’ of larger buildings to be conveyed visually as groups of smaller units.
- Larger format buildings to present active short edges towards main pedestrian routes and public spaces to create a visually finer grain.
- Use of clusters of buildings around varied public spaces to provide a variety of accommodation types around attractive outdoor spaces.

**PRECEDENTS**



Figure 31: Rugby Radio Station, Rugby: ‘Breaking up’ the mass of a building with architectural articulation, building arrangement around a public space and an attractive and context-sensitive roofscape

## Building Heights

- 3.17 To maximise development opportunities, building heights should be within an envelope defined by sunlight access to existing residents, airport safeguarding requirements, amenity of existing residential areas and a strong urban design framework. Different heights across the site will respond to their context.
- 3.18 An interesting roofscape can mitigate some of the scale of taller buildings and create a more distinctive looking place that more closely reflects the local context.

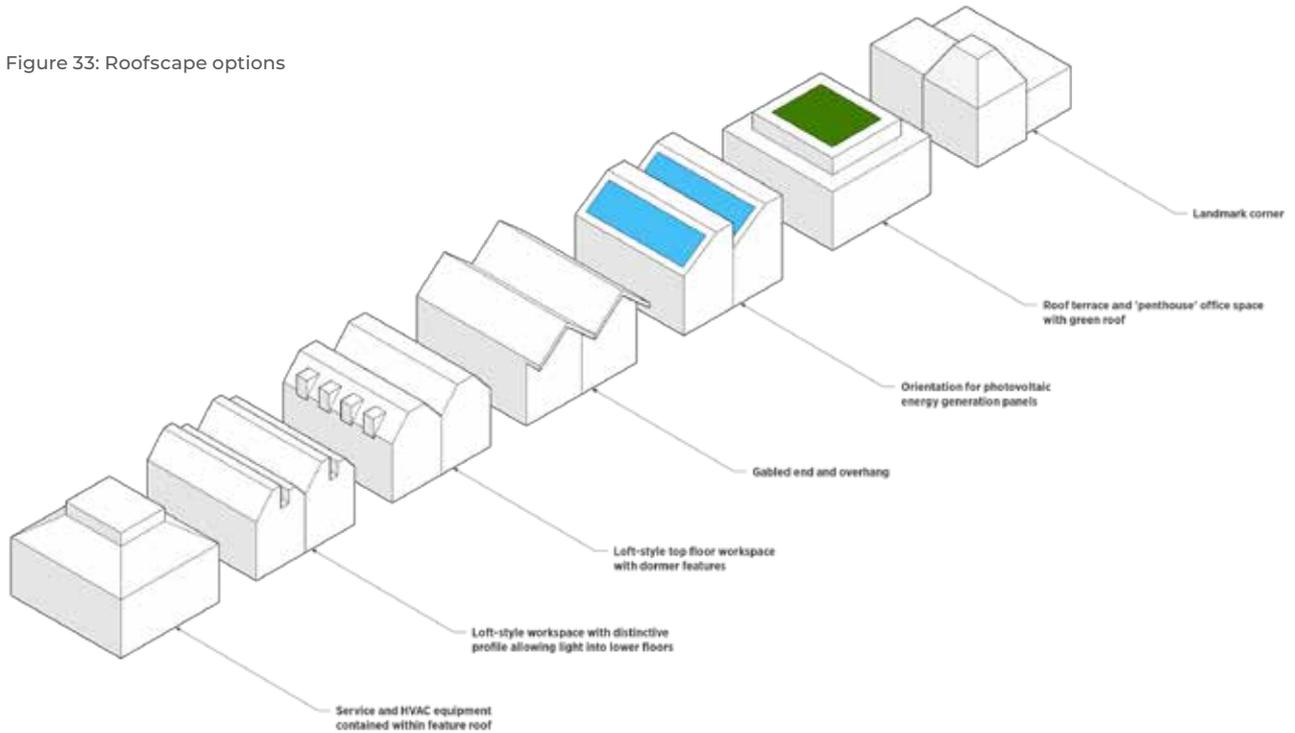


Figure 32: Building heights principles diagram

### AIMS AND OBJECTIVES

- Respect existing area by ensuring sunlight access to surrounding homes.
- Locate different building heights at appropriate locations within HBP.
- Use scale and height to create a more legible and interesting environment.

Figure 33: Roofscape options



## IMPLEMENTATION

### Location-Specific

- Building heights should be lower at the northern edge, to the north of the 'green square' bordering the open space, reaching up to 2 storeys (9m).
- Building heights rise towards the western edge near the railway and northern side of the central 'crescent park' focal point and along key movement routes up to 3 storeys (13m).
- Building heights rise around the central 'crescent park' focal point and 'urban plaza' spaces and along key movement routes, up to 4 storeys (16m) in key locations.
- Building heights rise at the southern edge, bordering the Gatwick Open Setting, up to 4 storeys (16m) and with a taller landmark building of up to 5 storeys (21m).
- Building heights within the south eastern parcel of development adjacent to Balcombe Road should be up to 2 storeys (9m).

### General Principles

- Buildings should have a contextually-sensitive and interesting roofscape, to create a distinctive new development with attractive, fine-grained architecture.
- Building heights must consider the aerodrome safeguarding requirements of Gatwick Airport – emerging proposals must be presented to Gatwick Airport for ensure there are no conflicts with safeguarding requirements.

## PRECEDENTS

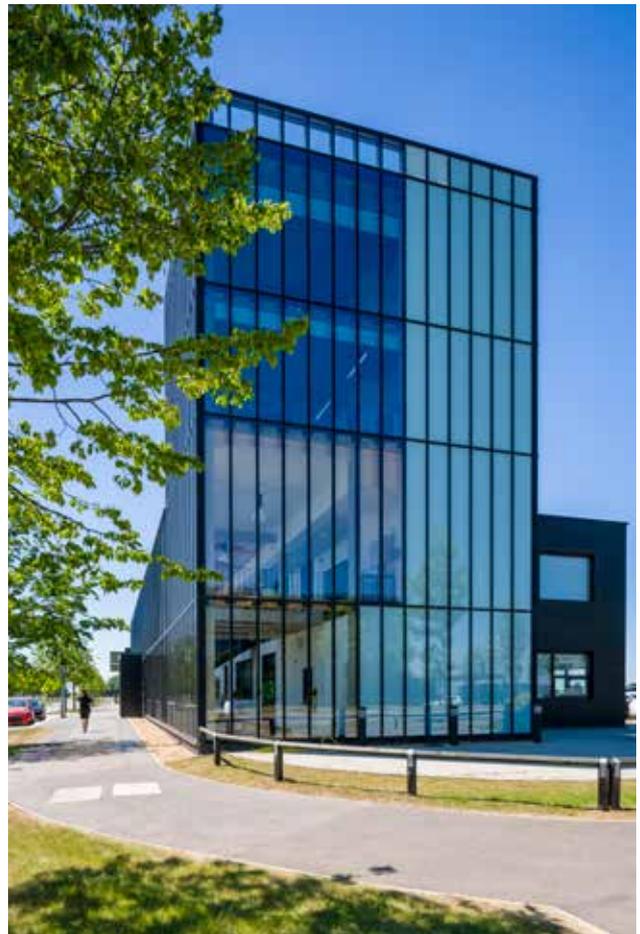


Figure 34: Alconbury Weald, Cambridgeshire: A taller landmark building at a key corner can aid legibility and wayfinding

## Sustainable Design and Construction

3.19 HBP is located in a highly sustainable location, accessible by a variety of public transport and other sustainable transport solutions. To help tackle the climate emergency caused by carbon emissions, as well as reducing transport emissions the role of construction, building operation and energy consumption must be addressed through a range of measures.

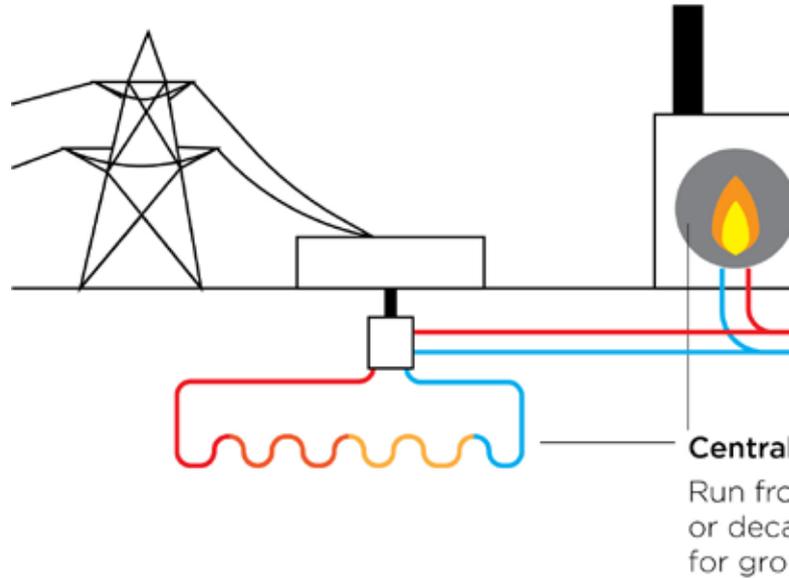


Figure 35: District heating network principles

### AIMS AND OBJECTIVES

- Reduce carbon footprint of development by maximising energy efficiency of buildings.
- Maximise possibilities for on-site sustainable energy generation, taking into account potential impact of installations.
- Consider ‘full-cycle’ impact of development through sustainable construction and re-use practices.

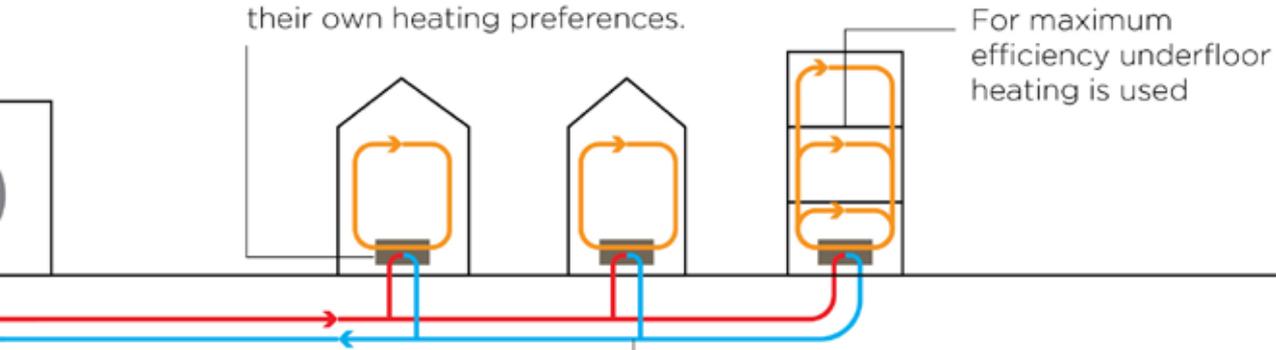
### IMPLEMENTATION

#### General Principles

- On-site energy generation should be maximised where possible:
  - Use of wind turbines is not permitted due to the adjacent airport.
  - Use of solar panels on buildings and roofs is permitted, provided they are assessed by Gatwick Airport to not provide a dazzling hazard for pilots on approach to the airport.
- The site offers potential to deliver a district heating solution, through a heat exchange loop from a ground source heat pump (GSHP), or centralised CHP energy generation facility using low or zero-emission technologies. If using biomass, local emission impacts on air quality must be considered as the site lies in an air quality management area (AQMA).

**Heat Interface Unit (HIU)**

Transfers heat from external distribution network to low-temp internal building system. Individual buildings can manage their own heating preferences.



**Boiler or Heat Pump**  
 from gas or biomass (interim)  
 carbonised grid electricity  
 and source heat pump

**Distribution Network**  
 Insulated pipes running to all  
 buildings. Sealed system - hot out  
 and cold return

- Green roofs to improve building energy conservation are encouraged, provided they are made unattractive to birds to avoid creating a bird strike issue at the adjacent airport. Techniques to create such roofs, which remain friendly to insects and other biodiversity, have been employed in the vicinity of other international airports.
- Built form should be oriented to consider and maximise solar gain and make use of passive ventilation from prevailing winds, so minimising carbon emissions. Narrower floorplates should be considered to maximise access to natural sunlight and ensure passive ventilation is possible.
- Commercial buildings should be constructed to exceed BREEAM “very good” standards.

- Buildings should be designed to be flexible and adaptable to future uses and circumstances, to minimise the need for demolition and carbon-intensive reconstruction.
- Sustainable construction techniques, using recyclable materials where possible, should be adopted.
- A full-cycle zero-carbon approach should be adopted to analyse the carbon emissions through the construction, operation and adaptation of a building through its life cycle.

**GUIDANCE**

- [BREEAM: Technical Manual](#)
- [UK Green Building Council: Zero Carbon Non-Domestic Buildings](#)
- [Carbon Trust: Combined heat and power for buildings](#)

# 4. Design Options

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Figure 36: Concept artist's impression of design option at night, looking southwest

## Overview

4.1 This chapter presents illustrative design and massing options for Horley Business Park, testing the policy allocation and design principles. It presents illustrative layouts, massing, movement, green and

blue infrastructure and other placemaking considerations, and discusses the effects on development quanta and the surrounding environs.



## Methodology

- 4.2 The design options take the design principles established in Chapter 3 and apply them to the concept plan presented in an illustrative layout and massing. This testing process aims to balance the principles and objectives set out previously to deliver the vision and seeks to understand the quantum and form of development that may be appropriately developed on the site.
- 4.3 A sub-option is presented with a subtly different mix of uses (incorporating limited B8), along with discussion on the implications of including this form of development.
- 4.4 A second option is presented, intensifying the development quantum to be as close as possible to the policy maximum of 200,000sqm of commercial floorspace. The implications of this scale of development on policy objectives and deliverability of the design principles are then presented and discussed.
- 4.5 This approach provides a robust test for the RBBC Local Plan policy, which is flexible in its allocation, subject to masterplanning. It does not determine a final layout for the site, and is not prescriptive or restrictive upon development options, but seeks to provide a design output that successfully balances the council's policy objectives and the need for sustainable and commercially viable development of the site. It also seeks to demonstrate clearly the implications of more intensive development on the site, to inform a future Supplementary Planning Document.
- 4.6 The results of the report are not prescriptive in terms of design (as policy states that this will be for the masterplan submitted by the developer), but a number of different options have been undertaken for different quantum of accommodation to determine if they would be appropriate and fulfil the design principles and vision for the site. The overall design/ quantum will depend on a mix of viability, car parking/transport issues and design. This report does set out a preferred design option.

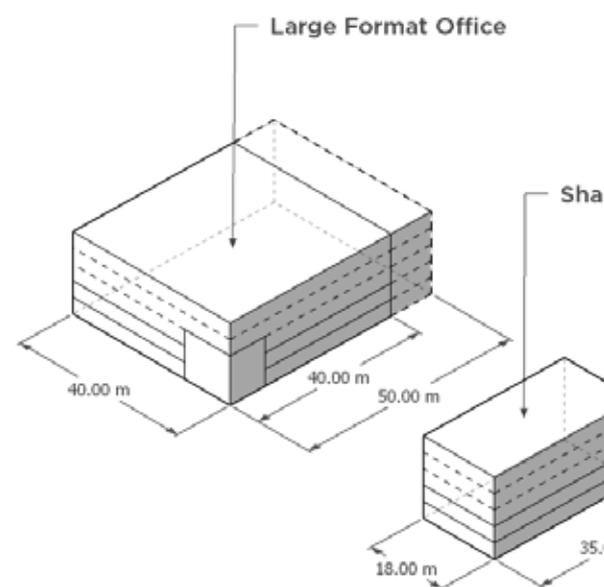


Figure 37: Typical building typologies used within the illustrative

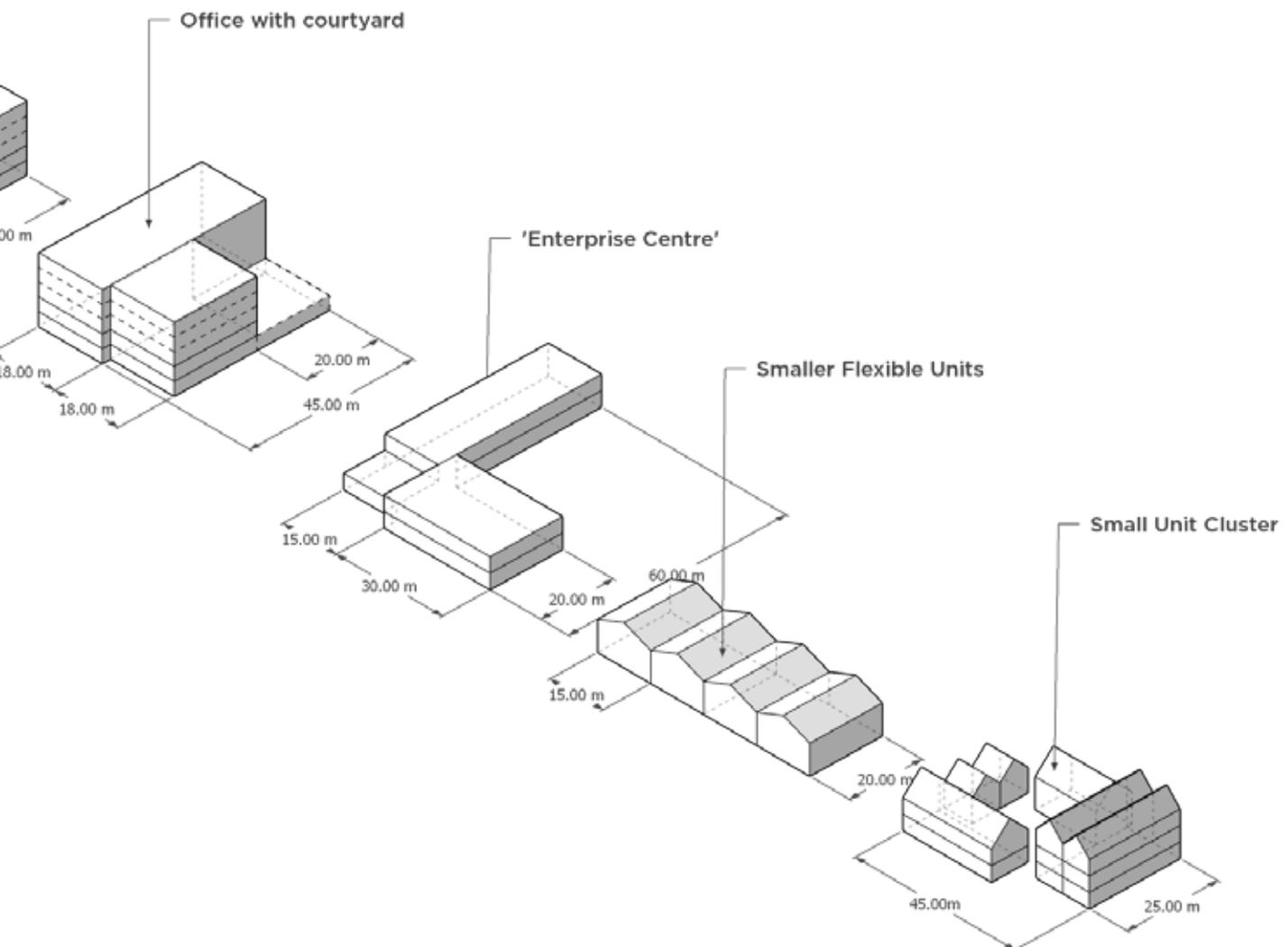
## Building Typologies

4.7 It is essential that design options reflect commercially deliverable schemes for them to be meaningful. To ensure the illustrative layout reflects commercial requirements for office space and other uses, background research into currently available precedent office schemes of high quality has been undertaken to determine typical dimensions and layouts.

4.8 The precedent office typologies were selected for their strong match with the vision and ambitions for quality development on the site, and precedents were located across the UK, in existing or proposed business park and urban regeneration settings.

4.9 As a result, a range of suitable building typologies has been used in the production of the illustrative design options. Figure 37 below shows typical dimensions for these flexible typologies.

### Lower Depth Office



## Design Option 1: Balanced Development Scenario



Figure 38: Illustrative masterplan for Design Option 1

**Access**

- 1 M23 J9A Vehicle Access
- 2 Access to Gatwick Airport
- 3 Railway Footbridge
- 4 Access to Limes Avenue
- 5 Access to Bayhorne Lane
- 6 Restricted Vehicle / Bus Access
- 7 New Sussex Border Path Access

**Public Space**

- 8 Gatwick Open Setting - 'Biopark'
- 9 Formal Landscape 'Gateway'
- 10 Focal Point Space
- 11 Natural Open Space
- 12 Parkland-style Open Space
- 13 Central Square
- 14 Green Square

**Green and Blue**

- 15 Retained Copse
- 16 Retained Tree Line
- 17 New Screen Planting
- 18 SuDS Swales and Ponds
- 19 Green Roofs
- 20 Swales within streets

**Built Form & Character**

- 21 Meadowcroft - smaller units
- 22 Intensive Campus-style area
- 23 Farm Barn-style cluster
- 24 Landmark Hotel
- 25 Landmark Feature
- 26 Cafe Pavilion
- 27 Mixed use facility addressing park

**ILLUSTRATIVE MASTERPLAN**

4.10 The illustrative masterplan sets out an indicative design approach and layout that balances development floorspace with placemaking, green and blue infrastructure, open space and sustainable movement.

4.11 Simulated aerial views of the illustrative masterplan from the north, east and southwest are shown below, showing how the proposals would sit within the context.

4.12 The following sections set out the illustrative masterplan's approach to Development Quanta, Movement, Servicing and Vehicle Parking, Green and Blue Infrastructure. Built Form & Character and Environment Sustainability.



Figure 39: Aerial view of illustrative masterplan from southwest



Figure 40: Aerial view of illustrative masterplan from north



Figure 41: Aerial view of illustrative masterplan from the east (Balcombe Road)

## DEVELOPMENT QUANTA

4.13 The illustrative masterplan identifies a potential 147,000sqm of gross floorspace development, across all uses, comprising:

- 11,500sqm hotel space
- Mixed use facilities at the main square and facing the parkland-style open space (7,500sqm).
- Commercial space, including B1 offices and limited B8 storage and distribution facilities (128,000sqm).

4.14 In addition, there is additional floorspace required for multi-storey car parking (discussed later in this chapter).

4.15 This is split between five main development parcels, four located in the western part of the site, and one located in the Meadowcroft area of the site. Within each parcel, there are smaller individual development plots that can potentially be further subdivided dependent on market demands and any designs for cluster-style built form.

4.16 Indicative floor area ratios (FAR) show a graduation in development intensity from the southern edge (higher at around 2.0 to 2.2) to the northern and eastern edge (lower at around 0.75). The overall 1.5 FAR is similar to that of a town centre, indicating the intensity of development required to achieve the floorspace ambitions set out in the policy.

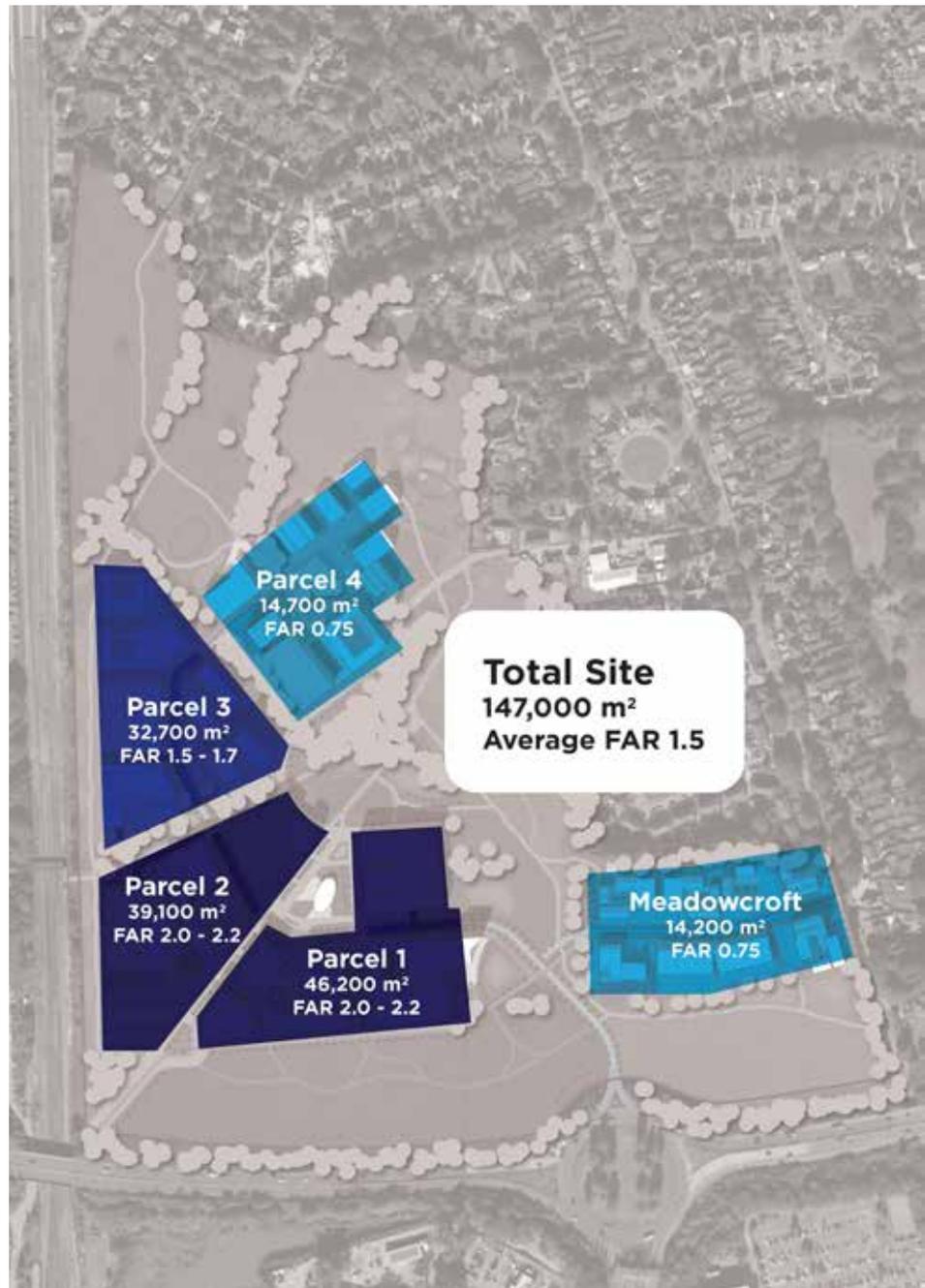


Figure 42: Development quanta for Design Option 1

**MOVEMENT**

4.17 The movement network on the site is designed to strongly prioritise the use of sustainable transport modes, such as walking, cycling and public transport. As with the concept plan, maximising permeability and connectivity to Gatwick Airport railway station, Horley railway station and the town centre is vital for this to occur. The movement network includes an option to divert the existing Public Right of Way to extend from Balcombe Road across the site along the northern edge of the designated Gatwick Open Setting to the pedestrian bridge across the railway. This option provides an opportunity for the Public Right of Way to follow a more natural and recreational route. Even if the public right of way were to remain on its current route, an alternative recreational route along the Gatwick Open Setting would increase the recreational value of this corridor.

4.18 The different core street typologies are identified:

- Main Street – car, bus, cycle, pedestrian.
- Formal Pedestrian Routes – cycle, pedestrian.
- Green Finger – cycle, pedestrian.

4.19 These typologies are located on the movement plan. Formal pedestrian routes are predominant at the southern, more intensively developed end of the site, and green finger routes are more prevalent at the northern end of the site, connecting to open space and following the lines of existing green infrastructure.

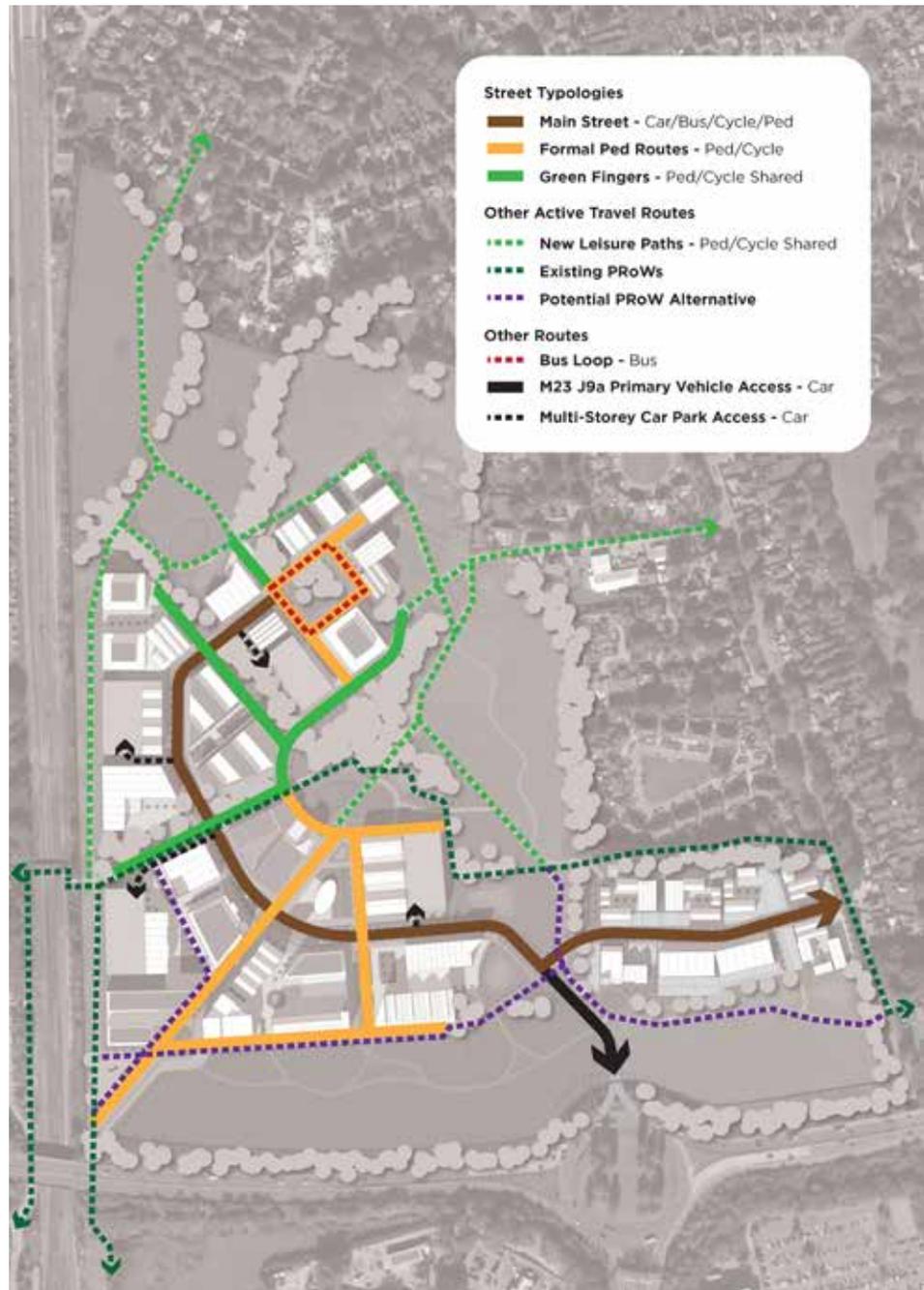


Figure 43: Movement network for Design Option 1

4.20 The three main typologies are illustrated below, with indicative street sections and design details.

4.21 As well as the street typologies, a range of illustrative leisure routes through open space have been detailed on the plan. These provide connectivity to the existing built up areas, and a 'leisure loop' through open space for employees and local residents.

4.22 Existing public rights of way (PRoWs) are retained. Potential alternative routes for Public Rights of Way are shown to illustrate how diversions can provide a recreational walking environment that is attractive and well-overlooked. In the south-east, an alternative route for the Sussex Border Path which cuts across open space and avoids the use of Balcombe Road is illustrated.

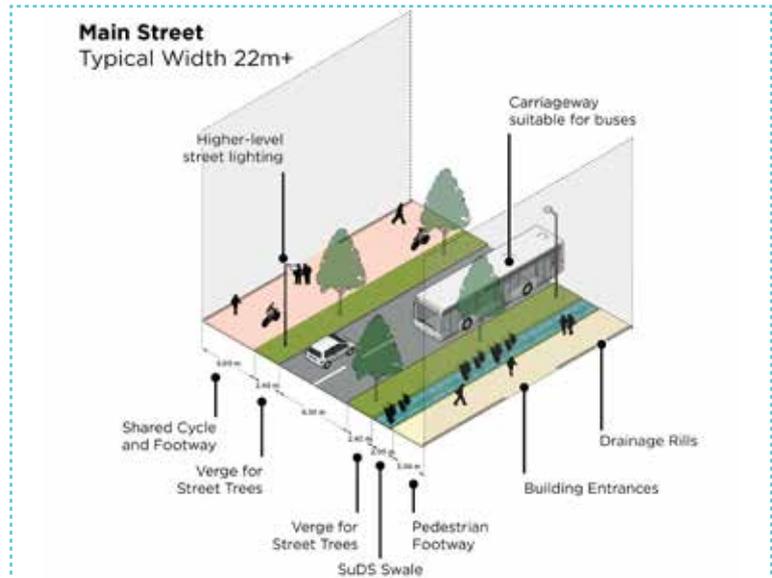


Figure 44: Illustrative profile of Main Street typology

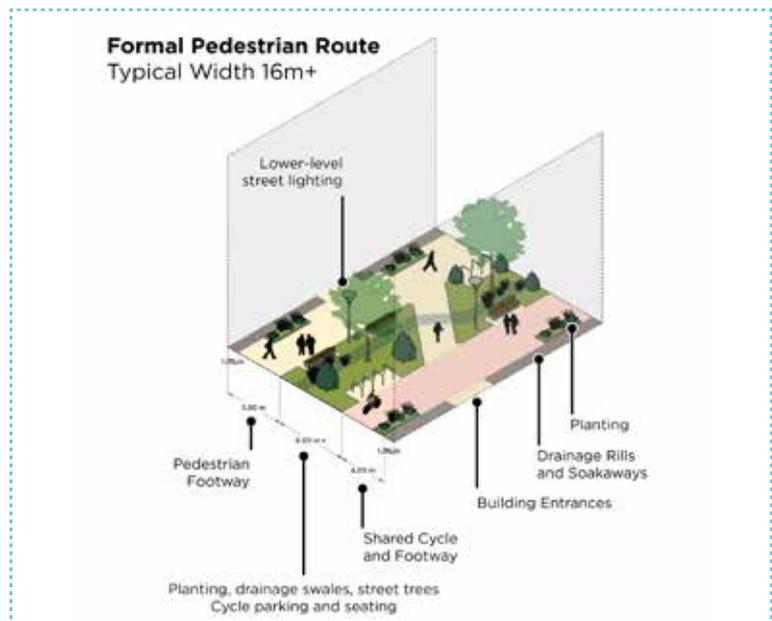


Figure 45: Illustrative profile of Formal Pedestrian Route typology

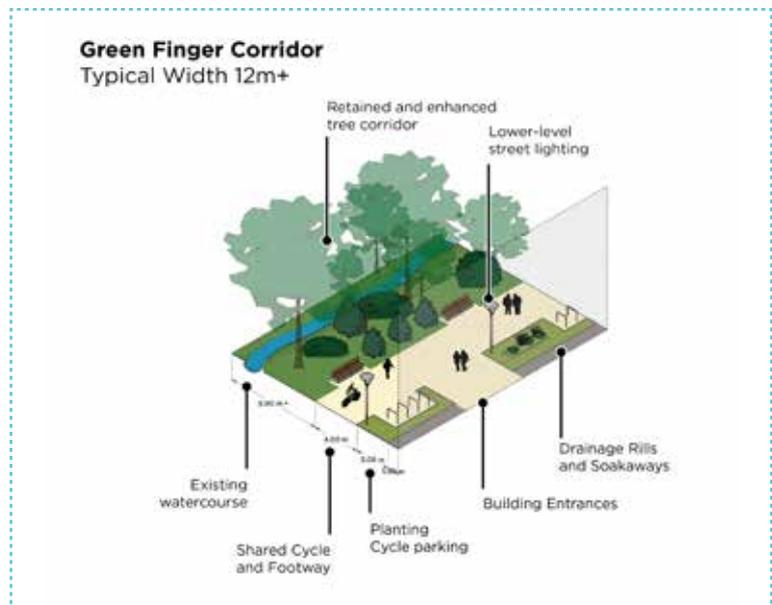


Figure 46: Illustrative profile of Green Finger typology

4.23 Public transport runs from Balcombe Road along the Main Street through Meadowcroft and into the western part of the site, turning at a loop around the green square at the north end. Indicative locations for bus stops show that all development within the site can be less than 200m from a bus stop with the use of just 3 stops.

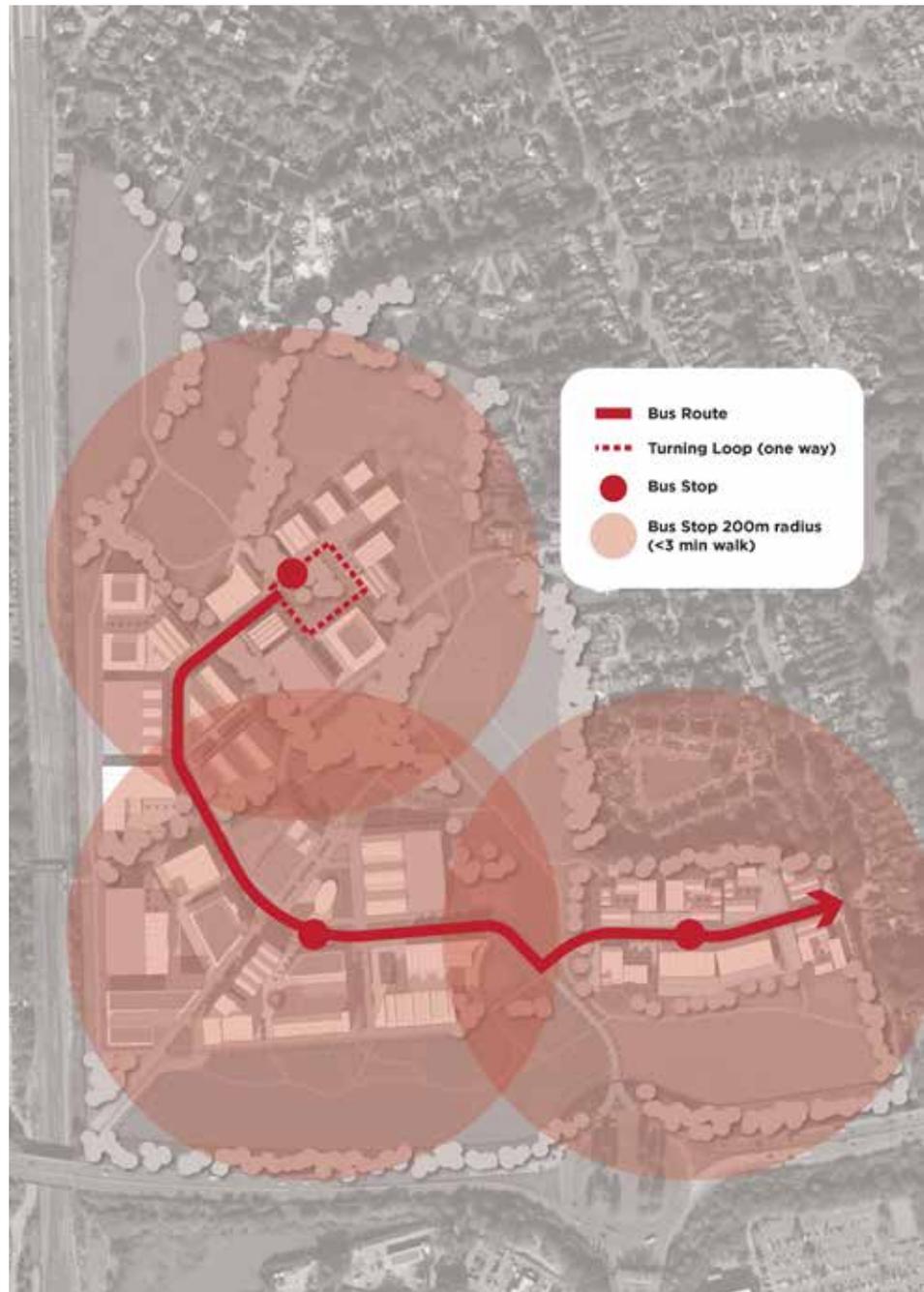


Figure 47: Indicative public transport routing and stops

## SERVICING AND VEHICLE PARKING

- 4.24 All development plots can be accessed by service and emergency vehicles, although as this requires the use of pedestrian and cycling routes. Service vehicles would ideally be restricted to authorised vehicles only, and restricted to out of normal office hours.
- 4.25 Uber, Taxi and other Private Hire Vehicles would be restricted to the Main Street. No development plot is more than 2 minutes' walk from this street.
- 4.26 Delivery vehicles would be either restricted to operating out of office hours or restricted to the main street, with final journeys to buildings on foot with a trolley or similar.
- 4.27 Car parking on site is handled in line with the design principles laid out earlier in this document. Within the main site, car parking is provided through multi-storey car parks, one located within each of the four main development parcels. Within the Meadowcroft area, car parking is handled by landscaped surface car parking.
- 4.28 This approach ensures approximately one parking space per 50sqm of net commercial floorspace when averaged across the site.
- 4.29 Multi-storey car parks are located at edges of development parcels, minimising their inactive frontages to the main street or primary pedestrian movement corridors. Where car park sides are exposed to open space, use of green walls is recommended.

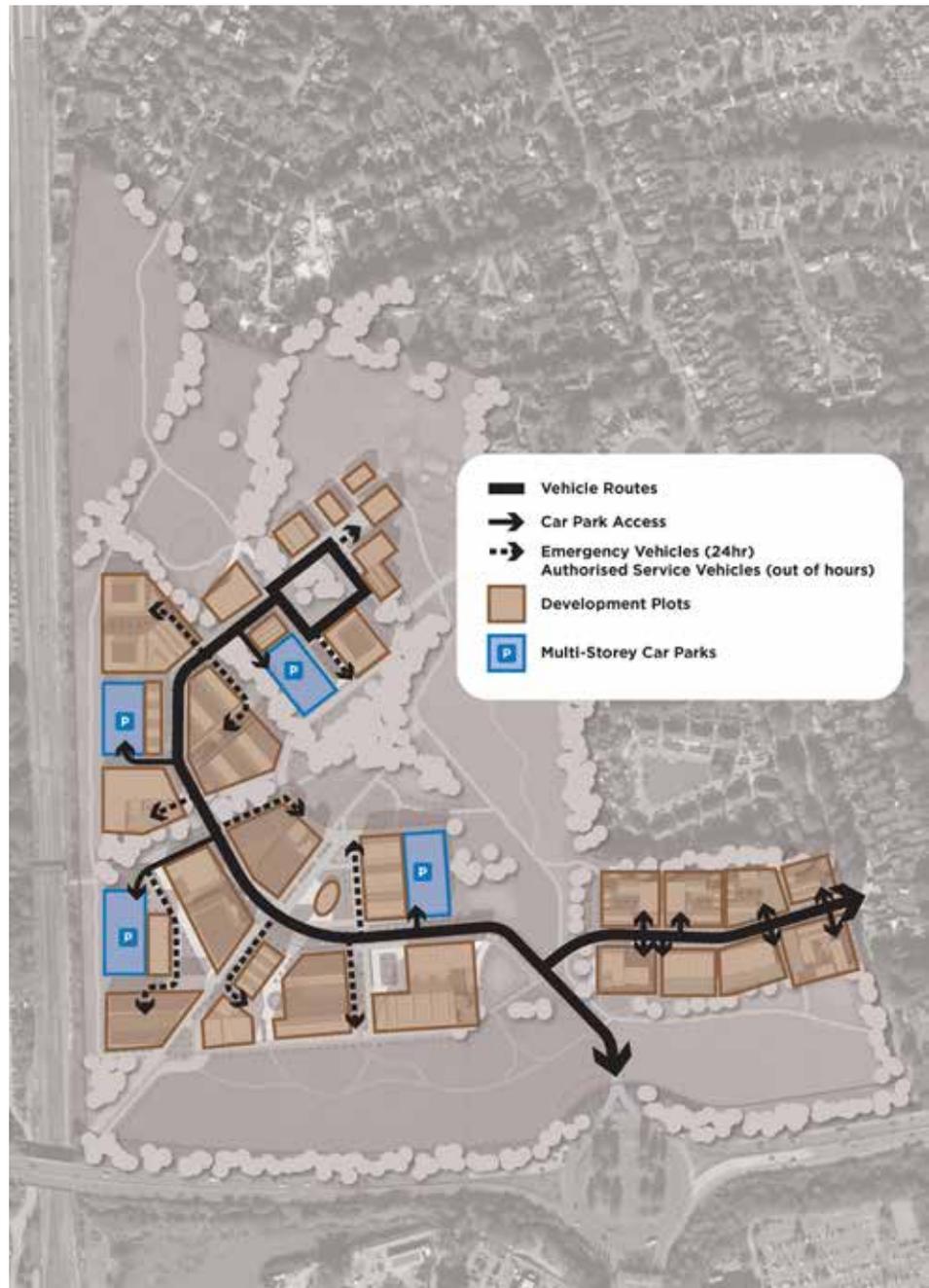


Figure 48: Indicative plan of servicing and parking access

4.30 Multi-storey car park heights are assumed to be 3m per deck, with the roof also used for parking. Overall heights are matched to adjacent buildings.

4.31 Multi-storey car parks are accessed from the main street where possible.

Table 1: Car parking provision for Design Option 1

Parcel	Net Floorspace* (sqm)	Parking Spaces	Spaces per sqm	Notes
1	39,300	600	65	MSCP Can be supplemented with selective undercroft or podium parking
2	33,200	730	45	MSCP
3	27,800	440	63	MSCP Can be supplement with selective undercroft or podium parking
4	12,500	400	31	MSCP
M'croft	12,100	240	50	Surface parking
<b>TOTAL</b>	<b>125,000</b>	<b>2,386</b>	<b>52</b>	

\* Assumed to be 85% of gross floorspace after building servicing subtracted

4.32 This level of car parking provision is lower than RBBC's maximum parking standards in policy, however, as detailed in the Design Principles chapter, a reduction in this provision is necessary to maximise the sustainable modal shift opportunity for the site. Given the highly sustainable location, and recent precedent examples of similar business parks in sustainable locations, this parking provision should be sufficient.

4.33 As well as what is suitable in terms of commercial attractiveness and issues, car parking space numbers on the site will also be dependent on any cap on the number of vehicles accessing the site from the M23/A23, and any limit on access from Balcombe Road. Therefore car parking provision is likely to be a key determinant of floorspace achievable on the site. Maximising sustainable mobility is therefore in the interests of developers keen to maximise floorspace development.

4.34 Although not detailed in the plan, the Design Principles chapter sets out a phasing approach for car parking development, which allows flexibility in parking provision over time as building plots are developed, with the long-term target of parking provision as set out above.

1. Initial plots within a development parcel are built with temporary surface car parking on an adjacent plot that serves the whole parcel.
2. As the parcel is built out, a multi-storey car park (MSCP) is built as the parcel's development becomes sufficient to support one. Surface parking is retained throughout the transition.
3. Once the MSCP is complete, the plot containing surface parking can be developed and the surface parking removed. All parking for the parcel is contained within the MSCP or any in-building podium or undercroft parking, at the discretion of the developer.

4.35 Provision of disabled parking bays should still be made close to or adjacent to buildings that are more distant from MSCPs within their cluster.

## GREEN AND BLUE INFRASTRUCTURE

4.36 The illustrative masterplan contains extensive green and blue infrastructure, forming an attractive and sustainable setting for development, as well as providing amenity value for local residents and employees working on the site.

4.37 Areas within Flood Zone 2 are undeveloped, and surface water SuDS features are outside of these fluvial flood zones. Surface water management is undertaken through a combination of plot-level and street-level interventions such as rills, soakaways and planted areas, through to strategic level balancing ponds at the edge of development parcels and the retention of existing watercourses throughout the site.

4.38 Existing mature trees are retained in their entirety, except for where the main street needs to cut through existing tree lines. The existing tree lines and central copse form a strong green and blue framework for development, creating an attractive mature setting from first occupation.

4.39 Open space typologies vary subtly around the site, from the north where a more 'parkland' style feel is evident with strong tree lines, to the east where natural open space is proposed, to the southern Gatwick Open Setting where a 'biopark' of grass and wildflower planting is proposed. Taken together, these typologies provide variety, function and contribute to the biodiversity of the site.



Figure 49: Indicative plan of green and blue infrastructure within the site

4.40 Within the centre of the site, the focal point is a more formally landscaped location, blending towards the tree copse as a backdrop. Streets are lined with trees and planted areas (see Movement section for more information on green and blue infrastructure within streets).



Figure 50: Potential character of northern 'parkland'-style open space

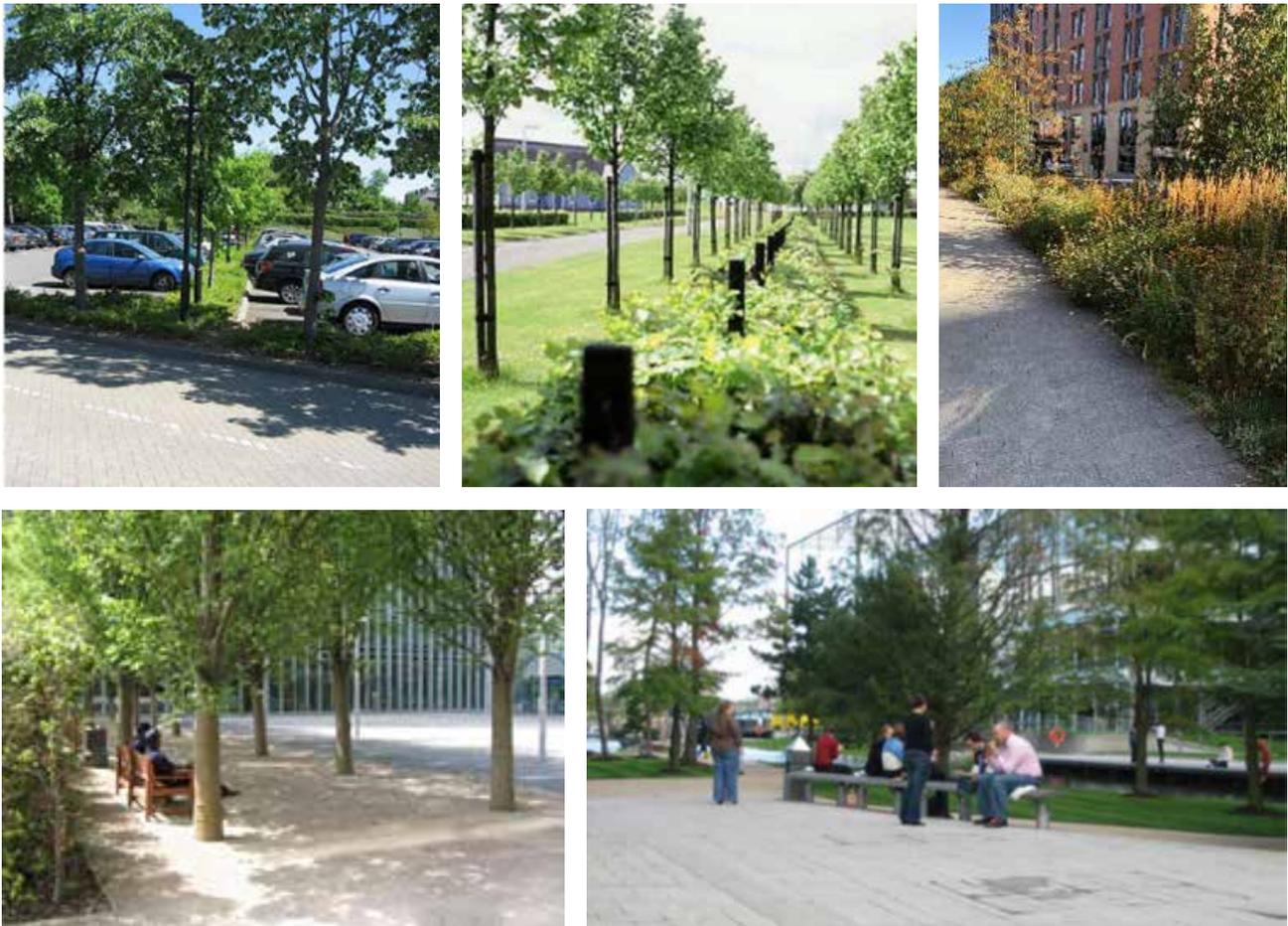


Figure 51: Landscape character precedents for public realm

## BUILT FORM & CHARACTER

4.41 Building heights have been kept as low as possible to avoid impacts on nearby Gatwick Airport and its safeguarding issues, as well as to reduce impact on surrounding residential areas.

4.42 Building heights rise from the north-east (bordering existing residential areas), where they broadly match existing heights, and peak in the southwest at a maximum of 7 storeys at the hotel site (approx. 28m). Storey heights are assumed to be 4m for office buildings.



Figure 52: Indicative plan of building heights

4.43 Building heights are considered with adjacent street cross-sections to reinforce distinctive character areas within the site. A variety of characters are set out in Figure 53.

4.44 Potential character areas within the site are:

- 'Campus': a high-intensity campus-style, walkable environment with high quality street scenes and formal street planting or landscaping.
- Green Streets: formal streets and courtyard spaces, with strong building lines framed by mature tree lines.
- Green Square: a loose collection of buildings based around existing mature trees with shared space public realm connected to the surrounding natural open space.
- 'Farm Barns': inspired by the farm building vernacular, barn-style highly permeable development with views through to the natural open space and natural planting/ landscaping.
- Park Focal Point: a distinctive building and public space fronting onto the parkland-style open space, providing a focal point to draw the eye from the northern entrance
- Focal Point: a formally landscaped open space at the heart of the development, backed by a mature tree copse.

4.45 Although it has not been included in the illustrative masterplan, some of the existing buildings and gardens at Bayhorne Farm may be suitable for retention for community use. The



Figure 53: Indicative plan of character areas within the site

masterplan outlined does not prevent their retention and they would naturally connect to the 'farm barn' style character area adjacent. Retention and reuse could create a connecting asset between residential areas and the business park, and provide punctuation within an open space loop around the site.

4.46 General character and architectural precedents for a modern high quality development of the form set out in the vision are shown in Figure 54 below:



Figure 54: Built form character precedents

4.47 Views into and within the site have been considered, with the following considerations:

- Reduction of visual impact on surrounding residential areas.
- Glimpsed visibility from Horley town centre.
- Visibility of the site and a distinctive frontage from the A23.
- Legibility for pedestrian movement and navigation within the site, especially when arriving from Gatwick Airport rail station.

4.48 A selection of simulated viewpoints from surrounding locations are shown below. These views use Google Maps data with the illustrative masterplan overlaid. At street levels, Google Maps data can display some artefacts which are present in the images.

4.49 Key landmarks within the site are created through building heights. A landmark tower is located at the focal point open space, guiding pedestrians towards it. In addition, the hotel at the southwestern corner functions as a landmark with high visibility from surrounding roads and the railway. The Horley Design Guide references high buildings as key landmarks for legibility, character and memorability due to the otherwise flat land levels of the area.



Figure 56: View from Horley Rail Station bridge showing glimpsed view of roofscape and landmark tower



Figure 58: View from Balcombe Road along Bayhorne Lane



Figure 60: View from The Crescent looking southeast



Figure 55: View from A23 looking east showing distinctive southern frontage



Figure 57: View from Horley town centre ground level showing very small glimpses of landmark tower

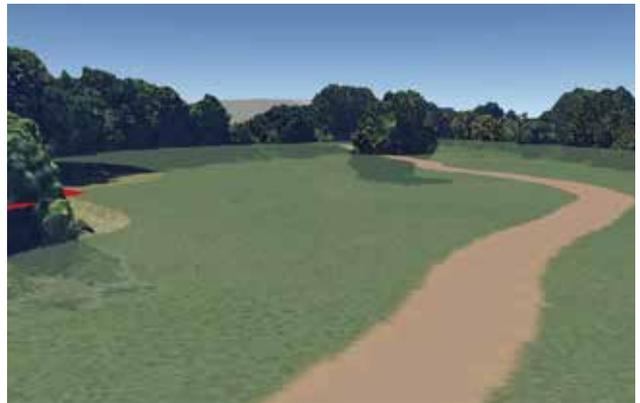


Figure 59: View from north (Limes Avenue entrance) across 'parkland' open space to mixed-use facility



Figure 61: View from The Crescent looking northeast

## ENVIRONMENTAL SUSTAINABILITY

4.50 The environmental sustainability measures of the illustrative masterplan are summarised in Table 2 below, across four key themes.

Table 2: Environmental sustainability measures

Theme	Measures
<b>Energy</b>	<ul style="list-style-type: none"> <li>• Potential for low-carbon district heating network (more information below)</li> <li>• Building depths minimised to allow natural lighting, solar gain and natural ventilation</li> <li>• Use of internal atria to allow natural light into deeper buildings</li> <li>• Roofscape designed to allow maximum space for solar panel energy generation</li> <li>• Public spaces oriented for maximum sunlight to ensure extended use of outdoors</li> <li>• Green roofs for insulation and heat moderation</li> <li>• Retention of mature trees for pleasant microclimate throughout year in public realm</li> </ul>
<b>Transport</b>	<ul style="list-style-type: none"> <li>• Highly sustainable location with excellent rail and bus services to Gatwick Airport</li> <li>• Pedestrian and walking connectivity maximised, with clear connectivity to onward sustainable travel</li> <li>• Car parking minimised</li> <li>• Walking connections to town centre and surrounding residential areas</li> </ul>
<b>Nature</b>	<ul style="list-style-type: none"> <li>• Extensive natural open space provision</li> <li>• ‘Biopark’ habitat provision in Gatwick Open Setting</li> <li>• Retention of mature tree corridors and vegetation</li> <li>• New street trees and public realm planting to introduce variety of habitats throughout site</li> <li>• Green roofs to support biodiversity</li> <li>• Integration of habitats within SuDS features</li> </ul>
<b>Water</b>	<ul style="list-style-type: none"> <li>• Use of SuDS at local and strategic scale to slow water flow from site and provide filtration through use of reedbeds or planting</li> <li>• Retention of existing watercourses</li> <li>• Use of green roofs to filter rainwater</li> </ul>

4.51 The scale of development proposed for the site offers the potential for a viable district heating network with a centralised heat source. Such networks offer the potential for significant reductions in carbon emissions and energy efficiency across the development. For a masterplan to incorporate such a network, the following design considerations apply:

- A central location for the district heating source, weighted by development quantum. Potential locations are highlighted in Figure 62.
- Installation of heating ducts along streets and servicing routes prior to plot development to prevent conflicts with future development.

- Use of the open space for ground source heat pump loops connected to the centralised heating source.
- ‘Sleeving’ of the central heating source by single-aspect units.
- Co-location of the central heating source with a foodstore or similar on-site facility to harvest waste heat from fridges.

4.52 Given the new-build nature of the development and high energy-efficiency standards that will be in place, a low-temperature heat network using a ground source heat pump would be a potential low-carbon configuration. More information on configurations can be found in the Department of Energy and Climate Change publication ‘Heat Pumps in District Heating’ (2016).

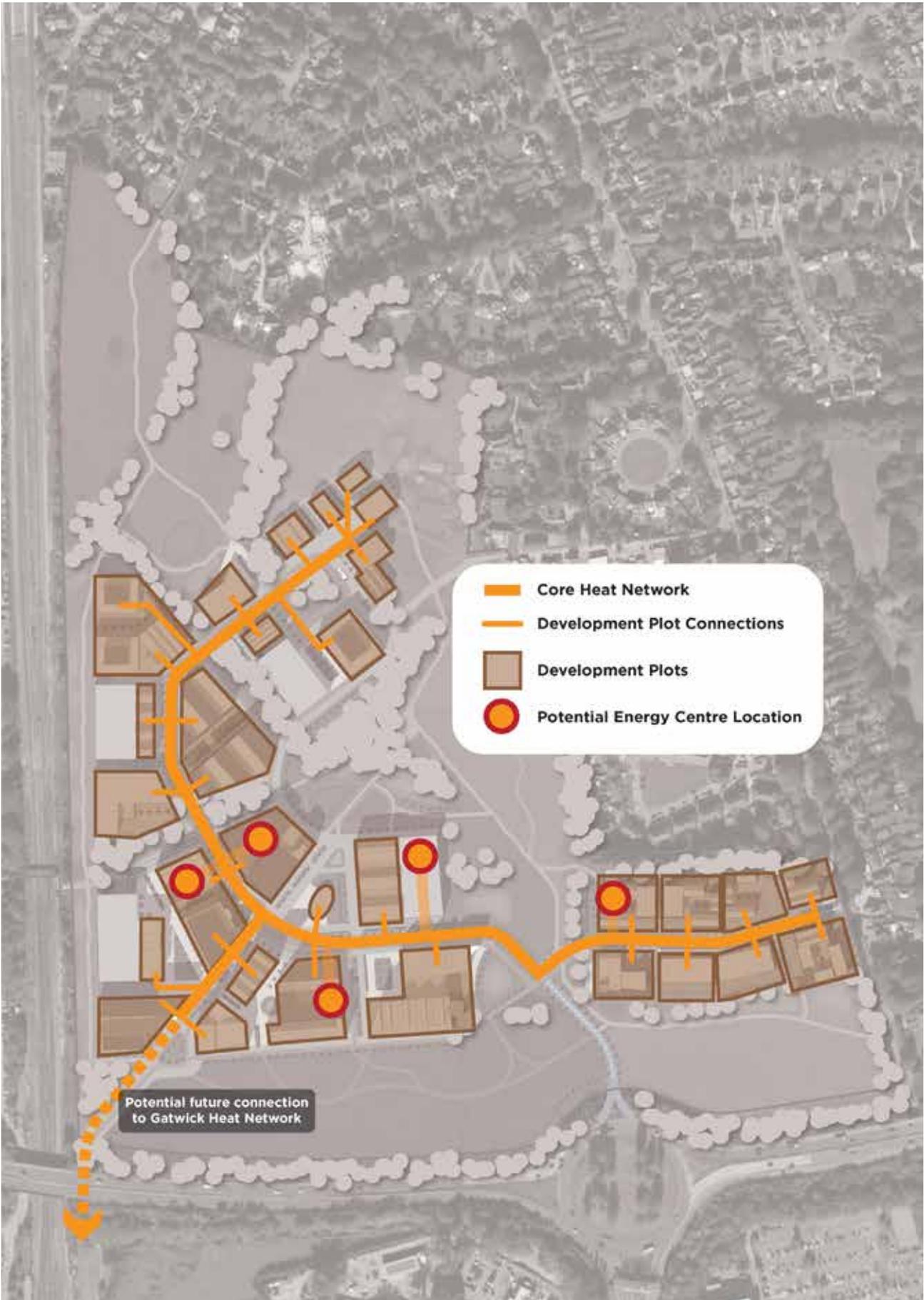


Figure 62: Illustrative configuration of district heat network

**DESIGN OPTION 1A:  
INCORPORATING B8 USES**

4.53 This sub-option within the preferred design option (1), sets out an alternative configuration of uses to incorporate the potential of limited smaller-scale B8 warehousing and distribution uses. The potential for incorporation of limited B8 uses is set out in RBBC’s policy.

4.54 B8 uses are normally subject to different, and potentially conflicting design considerations to those that have driven the masterplan for the rest of the site. Typically B8 developments require large footprints at a low intensity with, major servicing areas, highway infrastructure and lack active frontages on most of their exterior. They typically require more car parking for employees and are difficult to serve with public transport due to their low employment density. In this context, DMP Policy HOR9 permits only a limited amount of B8 development to avoid the design issues that otherwise arise when trying to integrate such large scale developments.

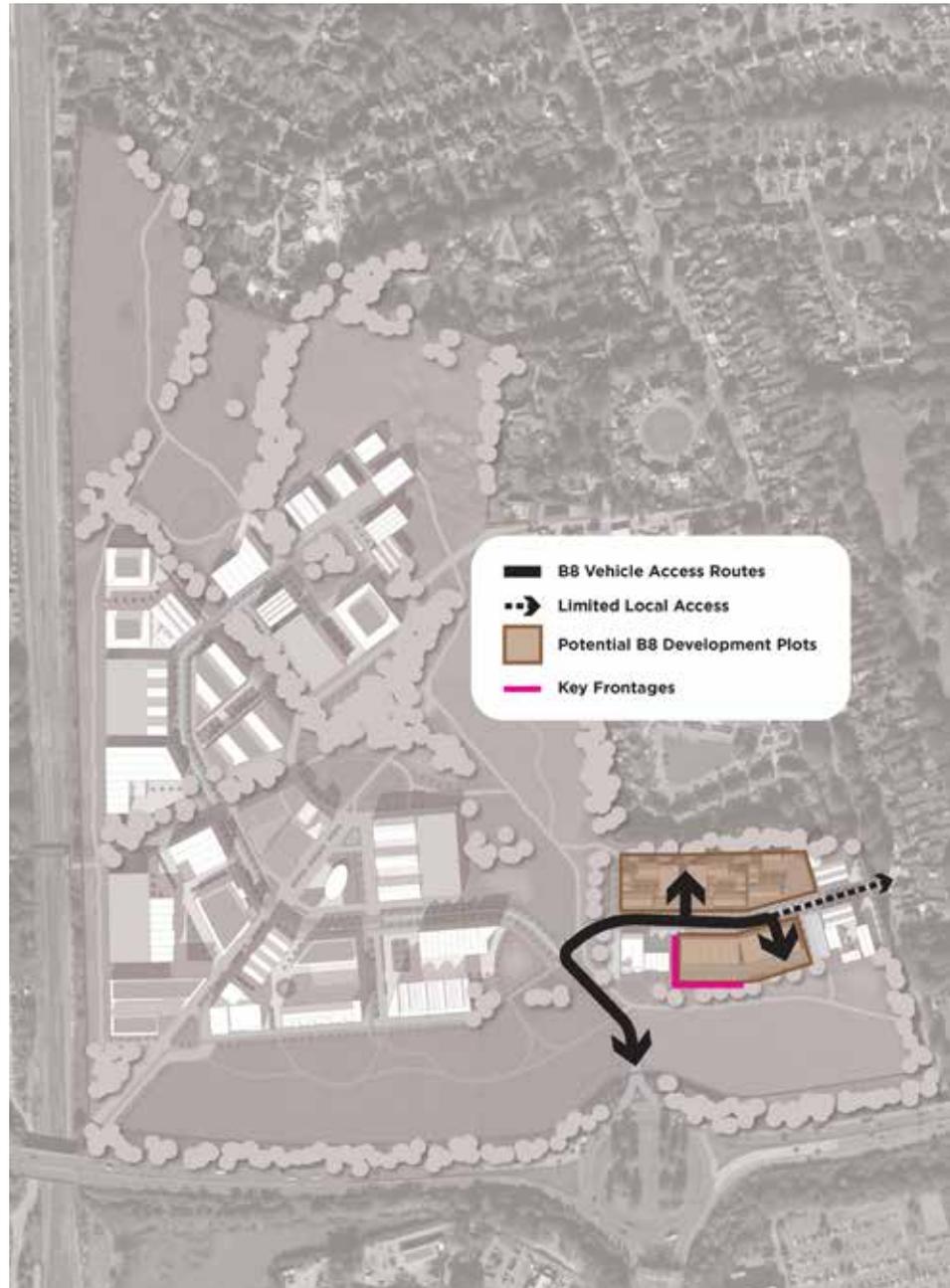


Figure 63: Design option 1a, showing potential locations and considerations for B8 uses

- 4.55 Figure 63 sets out potential locations for limited B8 uses within the illustrative masterplan. These are concentrated in and around Meadowcroft, close to the M23 J9a for the following reasons:
- Assist in opening up the site during the early phasing of development.
  - Be more suitably served from the M23 – the use of Balcombe Road for accessing the site is restricted by DMP Policy HOR9 to emergency services, public transport, cycles and a limited number of registered vehicles of local employees.
  - Avoid the need for larger vehicles to travel through the site to serve B8 development, which would compromise objectives to create a movement network that is weighted towards walking and cycling - thereby limiting motorised access to public transport and to access car parking and servicing areas that support the office and complementary mixed uses.
- 4.56 Locating limited B8 uses within the site should be approached with caution. Emphasis should be placed on small scale logistics operations. Otherwise, the increased scale of such facilities, coupled with lack of active frontages and need for significant highway infrastructure and servicing access will compromise adjacent parts of the park, potentially reducing the value uplift for the whole site and reducing its overall saleability. 'First impressions count', and although this does ensure some commercial flexibility, this may be at the long term detriment of the overall value and potential of the rest of the development.
- 4.57 As the uses are necessarily near an important gateway access to the site, sensitive architectural treatment of the highlighted frontages would be needed to ensure blank facades are not presented to arriving vehicles and views from the A23.
- 4.58 In addition, B8 is required to be limited in scale so as to limit its impact on the strategic road network, and maximise the opportunity for high employment density on this well-connected and sustainable site.

## Design Option 2: Maximising Employment Floorspace



Figure 64: Illustrative masterplan for Design Option 2, with changes from option 1

## ILLUSTRATIVE MASTERPLAN

- 4.59 Design Option 2 sets out an intensified design option, maximising commercial floorspace to test the policy designation of a maximum of 200,000m<sup>2</sup> of development.
- 4.60 Given the site constraints of Flood Zone 2, Gatwick Open Setting, airport safeguarding considerations, and surrounding residential development of this level of floorspace requires high overall floor area ratios and a high average intensity across the site.
- 4.61 This design option alters the basic illustrative masterplan from Option 1 with targeted intensification. These alterations are:
- A general increase in building heights.
  - An increase in ground footprints or infill development.
  - Relocation of multi-storey car parks from the main development parcels into the eastern natural open space.
- 4.62 Detailed differences are annotated in Figure 64.

## DEVELOPMENT QUANTA

4.63 Option 2 shows a layout supporting 190,000sqm of gross commercial floorspace across all uses, comprising:

- 11,500sqm hotel space
- Mixed use facilities at the main square and facing the parkland-style open space (8,500sqm).
- Commercial space, including B1 offices and limited B8 storage and distribution facilities (170,000sqm).

4.64 To achieve this, the indicative plot ratio for the development parcels has to rise considerably, varying from 1.5 to 2.5 across the site. The average FAR within developable areas rises to 1.9.

4.65 The Meadowcroft parcel remains unchanged, due to its proximity to existing houses and limited scope to add additional height.

4.66 Building heights across the site have been increased, particularly in the following locations:

- The south western corner adjacent to the airport.
- The northern edge.
- The centre of the site adjacent to the focal point, at the furthest point from surrounding built-up areas.



Figure 65: Development quanta for Design Option 2

**ANALYSIS AND COMPARISONS**

4.67 The illustrative layout demonstrates that incorporating such a development quantum is feasible, but it does have impacts on a range of issues discussed below:

- Character and public realm: the increase in Floor Area Ratio required across the site will alter the character of the development across the site. There is less space for public realm and the streets and spaces will have a more intensive, urban character.
- Impact on surroundings: the increase in heights to support additional floorspace will mean the development is more visible from the surrounding built-up area.
- Parking provision and sustainable travel: increases in development floorspace require greater levels of car parking provision, which will have an impact on open space provision and the levels of traffic generated. High levels of sustainable modal shift, encouraged through employee incentives and other demand management measures, will be essential if such development quantum is to be realised.
- Development in open space: the location of the multi-storey car parks in the open space to the east requires development outside of the boundaries set out in the Concept Plan and principles earlier in this document, although it remains in compliance with policy HOR9 which does not



Figure 66: Building heights in Design Option 2

prevent development in this area, assuming the car park remains outside of or raised above Flood Zone 2.

- Development variety: buildings are generally larger in footprint, and have less variety in unit size and configuration across the site, potentially reducing flexibility.

4.68 To demonstrate the increased impact on visibility of taller building heights and other design changes, a range of simulated views are shown below.



Figure 67: View from east showing visibility of car parks and green walls from Design Option 2



Figure 68: View from north showing increase in mass and heights of buildings from Design Option 2



Figure 69: View from Horley rail station bridge showing increased visibility from Design Option 2



Figure 70: View from The Crescent showing increased visibility from Design Option 2

# 5. Conclusions

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- 5.1 This report has set out a range of constraints and opportunities on the site at Horley, defined by RBBC DMP policy HOR9, that will determine masterplanning responses and overall capacity.
- 5.2 Informed by these constraints and opportunities, a set of design principles covering all scales of built environment development have been set out, that aim to achieve high quality placemaking and sustainable development on the site.
- 5.3 A concept plan informed by the constraints and opportunities has been prepared, that offers an approach to structuring development on the site.
- 5.4 More detailed masterplanning of different development options has been undertaken to test the concept plan and design principles with example layouts and massing. This has combined:
- The agreed vision from stakeholders.
  - Physical constraints.
  - The opportunity of the sustainable location.
  - Urban design considerations.
  - Deliverability and commercially viable units.
- 5.5 Three options have been prepared:
- Option 1: A balanced scenario, with approximately 150,000m<sup>2</sup> of gross floorspace.
  - Option 1a: An alteration demonstrating flexibility to accommodate limited B8 uses.
  - Option 2: A scenario maximising employment floorspace, with approximately 190,000m<sup>2</sup> of gross floorspace.
- 5.6 This approach has tested the HOR9 policy, which allocated up to 200,000m<sup>2</sup> of development subject to masterplanning. **Option 1 is the preferred design option**, delivering a balance of developable floorspace and satisfying the design principles for sustainable development.
- 5.7 This report is not prescriptive and sets out design options and considerations that may be followed by future masterplanning work.

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