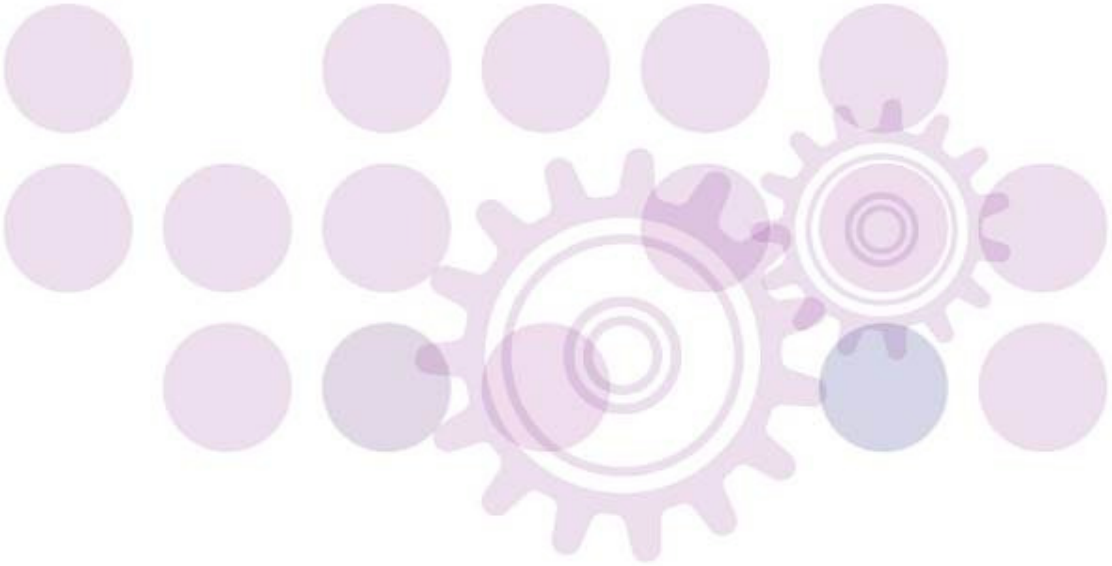
spd

supplementary planning document

Draft for public consultation
January 2017

Toad's Hole Valley



Brighton & Hove City Council

Aerial view of the Toad's Hole Valley site (foreground) to the sea.

Contents

1 About this SPD

Fig. 1.1: Site components and developable areas

1.1 This Draft Supplementary Planning Document (SPD) supplements the adopted City Plan Part One Policy DA7 Toad's Hole Valley (THV) and is to be read in conjunction with this and other relevant City Plan and saved Local Plan policies (see Appendix 1 and 2 Planning Policy Context).

1.2 It takes into account the results of early stakeholder consultation held in April- May 2016 which indicated preference for producing a detailed SPD and will be subject to city-wide consultation in early 2017 (see Appendix 2 for information about the stages in the production of an SPD and early stakeholder consultation results).

1.3 This Draft SPD provides guidance to ensure the successful delivery of a new neighbourhood for the city that meets the needs of the community. Through this guidance development are encouraged to deliver the following:

Opportunities for inward investment to meet the city's future needs

- A range of development types, densities and scale, relationships between land uses and opportunities for co-provision are identified to optimise use of the site for housing provision.

An attractive, vibrant and safe neighbourhood for all, which encourages social engagement and enjoyment of the area

- A neighbourhood centre that forms the heart and natural focus of Toad's Hole Valley, providing a range of services and facilities to meet the needs of new and existing communities.

A neighbourhood that is easy to access, move through and pleasant to spend time in

- Improved public transport and network of cycle and pedestrian links within and beyond the development site that provides better connections with surrounding neighbourhoods and communities employment opportunities, they city centre and the seafront, public services, the SDNP, SNCI and other open spaces; and
- measures to overcome the existing physical severance caused by the A27 and King George VI Avenue.

A resilient and healthy environment with exemplary standards of building and energy design

- Design solutions to reduce impact of light and air pollution and noise;
- low carbon now facilitating a transition to greater sustainability in future; and
- usable, open, recreational spaces and an enhanced and well-maintained SNCI.

Identification of funding opportunities to fund infrastructure

- Ensure Section 106 agreements, future CIL payments and other funding opportunities contribute to the delivery of a successful and viable neighbourhood.

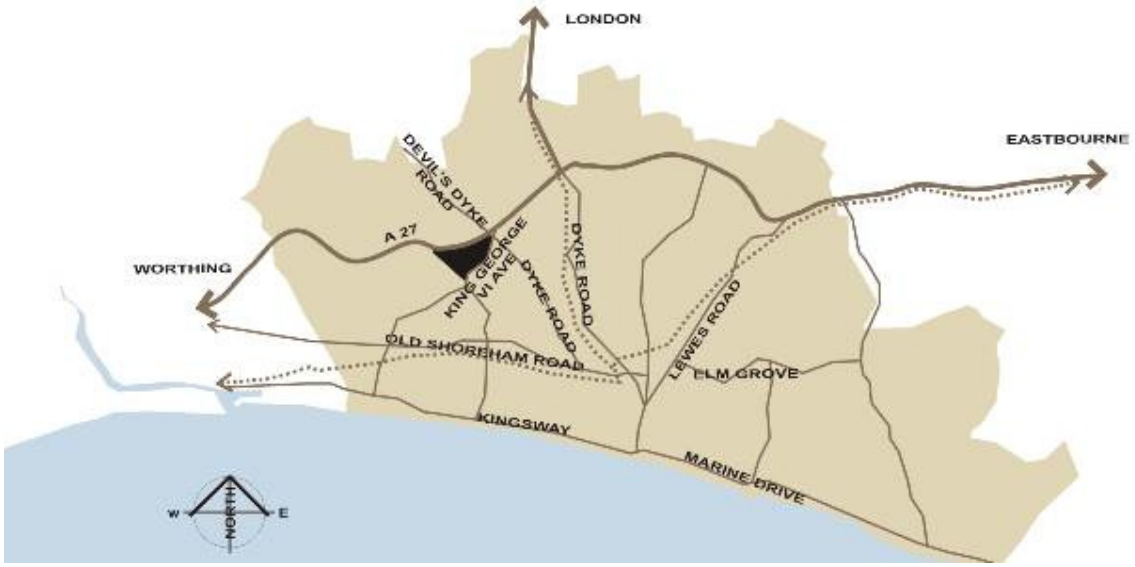


Fig. 1.2: Location of Toad's Hole Valley site in Brighton & Hove

1.4 The Toad's Hole Valley (THV) site is located on the northern edge of Brighton & Hove (Figure 1.2), between the Hangleton and Goldstone Valley residential areas, the THV Site of Nature Conservation Importance (SNCI) and the South Downs National Park (SDNP). It is formed of two separately owned areas - Court Farm (north eastern tip of the site) and Toad's Hole Valley, which includes the SNCI (see Figure 1.1).

1.5 This document applies to all the strategic allocation. With a developable area of 37 hectares (excluding the SNCI), this is the city's largest greenfield development site. As such, it presents a major opportunity to deliver purpose-built, mixed-use sustainable development that contributes to meeting the city's identified needs for housing, education, office and open space.

1.6 The aspirations for the development of a new community on this site have been established in City Plan Policy DA7 Toad's Hole Valley.

1.7 **The purpose of this SPD is to facilitate the delivery of this policy's vision for 'a modern, high quality and sustainable mixed use development [that helps to] meet the future needs of the city, improve accessibility and provide new community facilities to share with adjacent neighbourhoods.'**

1.8 This Draft SPD is not prescriptive but identifies opportunities to make the best use of the Toad's Hove Valley site by meeting, and if possible, exceeding policy requirements for the site, in particular housing provision.

1.9 It provides guidance and best practice examples of how the challenges of the site (topography, access, linkages, landscape impact and drainage) can be overcome or mitigated.

1.10 Once adopted, it is expected that planning applications relating to this site will follow this guidance and ensure recommendations are considered through the planning application process.

1.11 The council has prepared this document to help facilitate the delivery of key principles to ensure that:

- development is of the highest quality;
- there is comprehensive and co-ordinated development of the site as a whole, or if it is developed in stages that these do not prejudice or undermine the future development potential of other parts of the site;
- any future development preserves or enhances the setting of the South Downs National Park; and
- any potential harmful effects on the environment as a result of the development are mitigated.

2 The site

2.1 The existing THV development area has a number of notable physical elements that present challenges to the objective of developing a sustainable neighbourhood. These serve as barriers that will need to be addressed in any masterplanning of the site. The principal ones are shown in Figure 2.1 and described in more detail below.

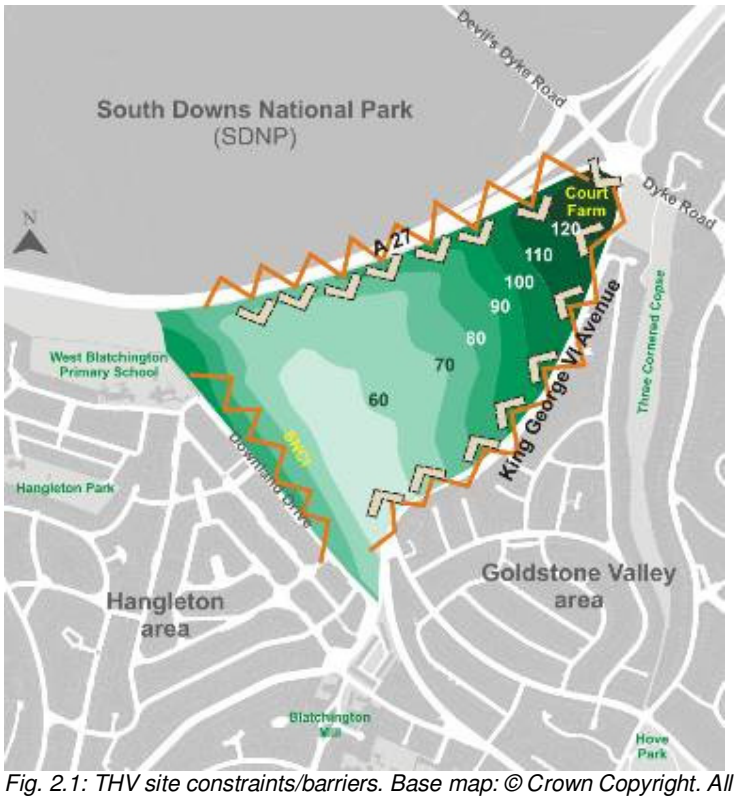


Fig. 2.1: THV site constraints/barriers. Base map: © Crown Copyright. All rights reserved. Licence: 100020999, Brighton & Hove City Council. 2016.

Noise

Barriers

Topography

Fig. 2.2: View of site looking north towards the South Downs National Park.

Fig. 2.3: View from the top of King George VI Avenue looking southwest with THV site to the right of the road, the steep bank (SNCI) and rooflines of the Hangleton residential area at the top.

2.2 The **topography** of the site is determined by a change in elevation of around 70m across the site from east to west, a steep bank at its western and northern boundaries and a flat-bottomed valley floor rising up again towards the east.

2.3 The **steep bank to the west of the site is protected as a Site of Nature Conservation Interest (SNCI)** and is also Open Access Land (CROW Act 2000). This is not included within the area identified for development, but it is an important asset that should managed sensitively for its ecological value and assessed in terms of its potential for enhancement and as a recreational use in conjunction with the wider development of the valley. The SNCI has been subject to little if any management over the last decades and in its existing form can be characterised as scrubland: a mixture of trees, grass and other vegetation.

2.4 The **city's bypass runs at a high level upon a steep bank on the northern boundary of the site** and is part of the strategic, south coast **A27 Trunk Road** mainly accommodating long distance traffic from within Sussex. North of the road lies the South Downs National Park.

2.5 **King George VI Avenue** is a local Principal (A class) Road which runs along the southern boundary of the site and is a major arterial road that connects the bypass to central Hove. The road is on a fairly steep incline which influences driver behaviour.

2.6 Whilst efforts were made at the time of the construction of the bypass to shield adjacent residential areas by way of cuttings and landscaped noise bunds, THV was left relatively unprotected and open to traffic noise, due partly to its topography.

2.7 Court Farm and much of the northern section of the site lie within the Court Farm Article 4 direction which regulates the provision of agricultural buildings. The entire site lies within a Groundwater Source Protection Zone (majority zone 2, with southern tip within zone 1 and north western corner within zone 3).

Fig. 2.4: View from SDNP looking southeast. A27 in the centre of the image with THV and Goldstone Valley residential area on the background.

Fig. 2.5:View from Devil's Dyke Road looking southwest towards the sea.

3 Planning policy context

Fig 3.1: Extract from the Brighton & Hove City Plan. Base map: © Crown Copyright. All rights reserved. Licence: 100020999, Brighton & Hove City Council. 2016.

3.1 In preparing this Draft SPD the council has had regard to relevant policy documents, particularly those highlighted below. A more detailed list of documents and policies relevant to the future development of the THV site is contained in Appendix 1.

National context

3.2 The National Planning Policy Framework (NPPF) published in 2012 indicates that a Supplementary Planning Document (SPD) should be used where it can help applicants make successful applications or aid infrastructure delivery and should not be used to add unnecessarily to the financial burdens on development.

3.3 Given the strategic nature and challenges for delivering development at the THV site, the need for detailed guidance is established in City Plan Policy DA7.

Local context

3.4 The local development plan currently comprises the Brighton & Hove City Plan Part One adopted in 2016, the Brighton & Hove Local Plan 2005 (retained policies March 2016) as well as the East Sussex, South Downs and Brighton & Hove Waste and Minerals Plan (adopted February 2013) and East Sussex, South Downs and Brighton & Hove Waste and Minerals Sites Plan (adopted January 2017).

3.5 The following City Plan policies are particularly relevant in informing this SPD:

- **Policy DA7 Toads Hole Valley** sets out the principle for developing the site including strategies, main priorities, amount of development and open space to be delivered. The full policy wording is provided in Appendix 2. It also outlines the need for new development to achieve One Planet targets (see Appendix 3) and promote the city's Biosphere objectives (see Appendix 4); respect the

setting of the South Downs National Park (SDNP); and conserve and enhance the Site of Nature Conservation Importance (SNCI).

- **Policy CP8 Sustainable Buildings** outlines the city's commitment to achieving excellence in sustainable building design and sets out environmental standards for new development.
- **Policies CP12 Urban Design, CP13 Streets and Open Spaces and CP14 Housing Density** set out the general strategic design criteria for new development to achieve high quality buildings, spaces and routes. These are expected, among other things, to be attractive, accessible, inclusive, adaptable, safe, sustainable and integrated into the wider site context.
- **Policy CP10 Biodiversity, Policy CP16 Open Space and CP17 Sports Provision** outline the city's expectations in respect of enhancing biodiversity and existing open spaces and also the provision of new open spaces. They recognise the importance of the South Downs Way Ahead Nature Improvement Area and the need for taking a landscape scale approach.
- **CP9 Sustainable Transport** sets out the general strategic approach to enhancing and delivering a sustainable transport network.
- **CP1 Housing Delivery, CP19 Housing Mix, CP20 Affordable Housing, SA6 Sustainable Neighbourhoods and CP18 Healthy City** outline the overarching elements in the delivery of sustainable communities.
- **CP2 Planning for Sustainable Economic Development, CP3 Employment Land and CP4 Retail Provision** outline the general strategic approach for meeting employment and retail needs.
- **CP5 Culture and Tourism** recognises the role of the South Downs as a visitor, education and recreation asset and seeks to promote eco-tourism and create a stronger visitor experience.

3.6 Court Farm, the smaller portion to the east of the THV site to the east, is has been the subject of planning decisions that have a bearing on future development of the site as a whole:

- Application BH2012/03446: Planning permission was granted on Appeal (APP/Q1445/A/13/2200978) for the demolition of existing buildings and construction of 5 two-storey detached houses and a 58-bed, part two and part three storey, nursing home. However this has yet to be implemented.
- Application BH2015/04184: Planning permission is being sought for the 'demolition of existing buildings and erection of 4 residential blocks, part three-, part four-storey containing 74 one-, two- and three-bedroom flats (30 affordable).

4 Development Response

4.1 This section of the Draft SPD identifies opportunities for applicants to meet City Plan Policy DA7 requirements and ambitions of developing a new sustainable neighbourhood at THV.

Submitting a planning application

4.2 To reduce the risks and costs associated with the planning process, it is strongly recommended that a **masterplan for the site** is prepared in discussion with the local planning authority and that development proposals are submitted to DesignPLACE review and are subject to community consultation prior to submission as a planning application.

4.3 To ensure masterplan principles inform the delivery of the development as whole or in stages it would be helpful if the masterplan was accompanied by **design code**. The design code should provide information about:

- **appearance** of buildings, including materials;
- **means of access** for all routes within the site and the way these link up with the public transport network and other roads and pedestrian and cycle routes outside the site;
- **landscaping** to improve/protect amenities within the site and surrounding areas;
- **layout** of buildings, routes and open spaces and distribution of land uses within the development and the way these are laid out in relation to buildings and spaces in neighbouring areas;
- **scale, height and dimension** of proposed buildings; and
- **sustainability** strategy to reduce the impact of the development.

4.4 It is recommended that the masterplan and design code be approved by the local planning authority prior to the submission of planning/reserved matters applications.

4.5 Given the sensitive nature of the site in relation to the setting of the SDNP and SNCI a range of studies and impact assessments will be needed to support pre-application discussions and/or the submission of planning applications.

4.6 An indicative list of the information needed is provided below. However, applicants should talk to the local planning authority about how much information might need to be included at each stage of the planning process.

- **Environmental Impact Assessment** (EIA) to identify the site's landscape and natural value and mitigation measures to minimise development impact.
- **Landscape Sensitivity Assessment** to inform the masterplan and **Landscape and Visual Impact Assessment** (LVIA) to assess the impacts of the development in relation to the setting and special qualities of the South Downs National Park. The LVIA may be submitted separately or as part of an Environmental Statement submitted with a planning application.
- **Transport Assessment** (TA) including an appropriate level of analysis and mitigation for the scale of development that addresses trip generation and movement by all forms of transport and other transport/travel-related issues such as road safety.
- **Archaeological Assessment** consisting of an initial desk-based assessment followed by field evaluation, if necessary, comprising geophysical survey and trial trenching to provide an understanding of archaeological interest that could be used to understand risk and inform development design options.
- **Ecological and Tree surveys** to provide benchmark data against which the delivery of net gains in biodiversity can be monitored.

4.7 The scale, form, height and siting of any proposed development of the THV site would need to be assessed in terms of its impact upon the **setting of South Downs National Park** (SDNP). In particular in regard to its landscape character and South Downs International Dark-Sky Reserve designation. More details about this designation are provided in Appendix 5. The SDNP Integrated Landscape Character Assessment and strategic views identified in section 6 of this Draft SPD should be used to guide impact assessments.

Amounts of development

4.8 The amount of development proposed for the THV site is determined in the first instance primarily by the land use area requirements identified in City Plan Policy DA7. These include a wide range of housing and office types, sizes and tenures; business space multi-use community facilities; shops and cafes; a secondary school; and open space.

4.9 The challenge of delivering this scale of development in a site of the size of THV is illustrated in the graph below that shows an approximate proportion of the area requirements identified in City Plan Policy DA7 in relation to the developable area of the site (excluding the SNCI).

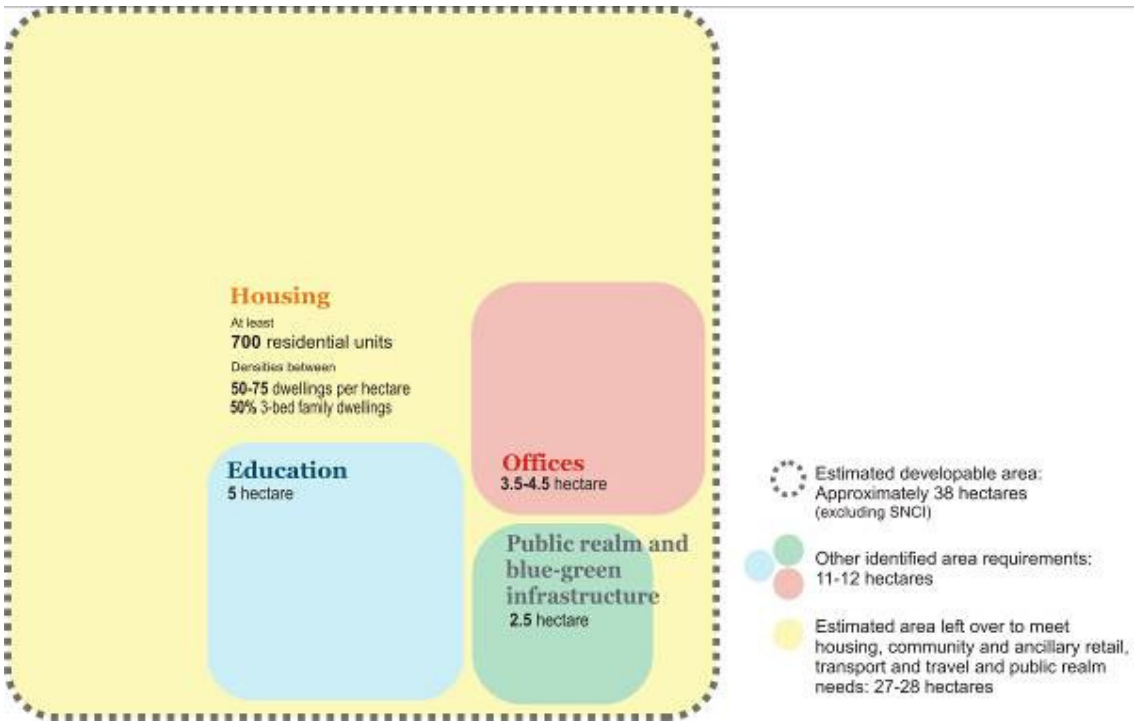


Fig. 4.1: City Plan Policy DA7 area requirement (proportionate representation of areas only).

Masterplanning and landscape-led design

4.10 The creation of a vibrant, attractive, accessible new neighbourhood that people want to live, work in and visit is the ultimate aim of City Plan Policy DA7.

4.11 The steeply sloping nature of the terrain, the setting of the SDNP and the protected SNCI provide a number of challenges to deliver this objective. In particular when it comes to designing buildings and a network of roads, paths and open spaces that sit well in the landscape and link effectively with the existing footpath and national cycle route (see Fig. 4.16, page 22).

4.12 The **design and layout of the development** should take a holistic, contextual and bespoke approach to key elements of site layout, solar orientation, site topography, visual impact and access.

4.13 This can be achieved through utilising building forms and combination of land uses that are responsive to site conditions. The proposed dual-use school playing field, for example, would of course need to be provided on level ground or via significant re-sculpting of the slopes whilst housing could use the contours to orientate dwellings to obtain solar gains.

4.14 **Strategic views** that need to be considered in any impact assessment of the development upon the landscape in general and the setting of the SDNP in particular are outlined below.

Fig. 4.2: Strategic views as per Tall Buildings Study (1 and 2). View from King George VI Drive (3) added in response to early stakeholder consultation request. Base map: © Crown Copyright. All rights reserved. Licence: 100020999, Brighton & Hove City Council. 2016.

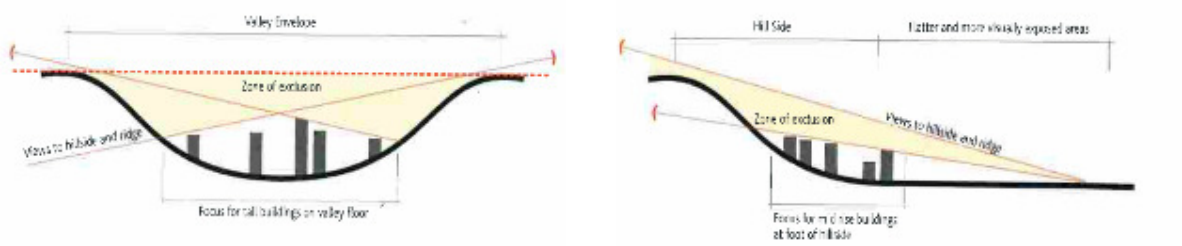


Fig. 4.3:Tall Building Study: extract from landform analysis

Fig. 4.4: Flatted development south of King George IV Avenue.

4.15 When it comes to **building heights**, the city's Urban Characterisation Study suggests that higher density, taller buildings (no more than 6 storeys) should be located at the flat-bottomed valley floor at the western end of the site. This is in line with existing development south of King George IV Avenue and in the area furthest away from the SDNP boundary (see Figs. 4.3 and 4.4). The valley floor is located along the SNCI border and impact upon it needs to be considered and mitigated if applicable.

4.16 **Building siting, massing and form** should:

- be visually stimulating and appropriate within the wider undulating landscape of the development area;
- maximise views and help to soften the hard edge of the current built-up area; and
- seek to minimise the impact of light pollution and exposure to air pollution for residents and users of the new and existing neighbourhood, and of road noise and wind upon the development (see Pollution and emissions, page 25) .

4.17 To help the local planning and SDNP authorities and consultees to have a better understanding of the design rationale behind the development, it is recommended that sections and 3D modelling of strategic views be submitted as part of a planning application.

4.18 A positive, creative approach to the mix of **land use** requirements is needed and careful consideration as to how these are combined to generate a critical mass of activities and housing densities that enables a diverse, welcoming and economically viable new neighbourhood to emerge.

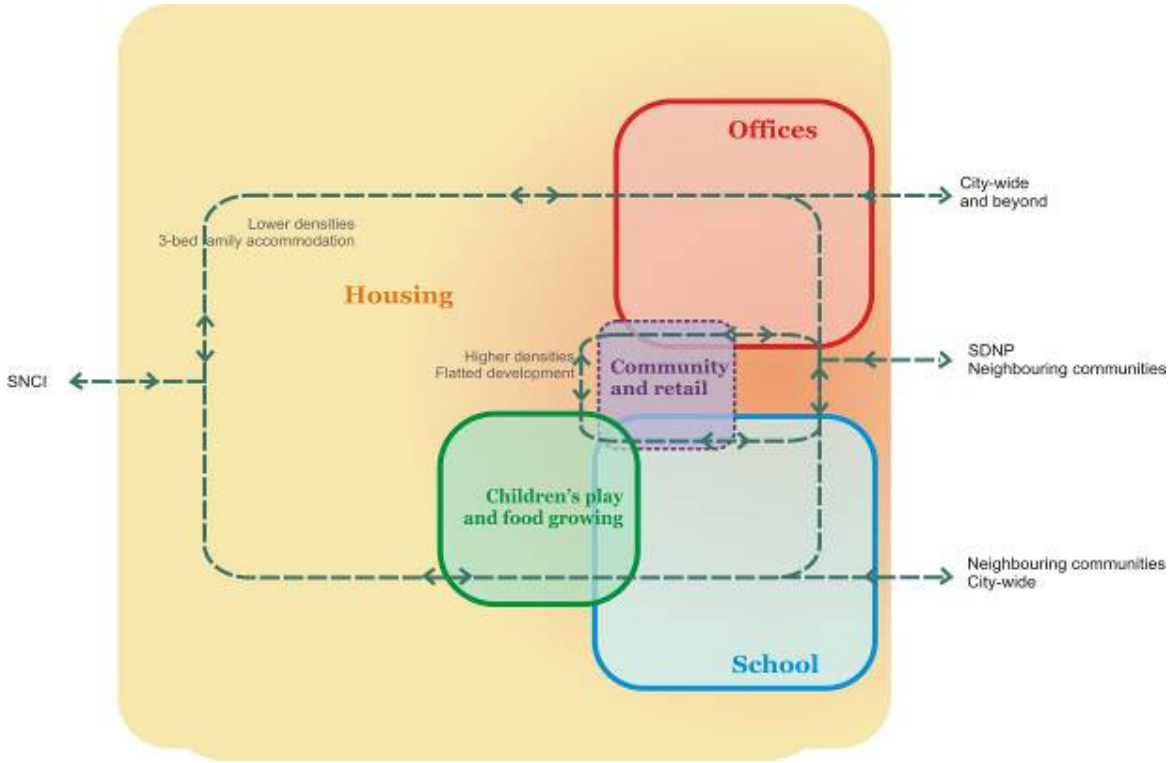


Fig. 4.5: Indicative land use relationship.

4.19 In line with City Plan policies and to boost the economic viability of the services available to the new neighbourhood and surrounding communities such as, for instance, bus services, planning applicants are encouraged to make the best use of the THV site and optimise housing provision.

4.20 Figure 4.5 identifies land use relationships and connections that can help them achieve effective/optimum use of the site. These are indicative and explore opportunities for clustering and co-provision and to create a vibrant mixed use neighbourhood centre.

4.21 It indicates support for:

- pulling together a mix of land use requirements to form an attractive neighbourhood centre that includes, for instance, community facilities and shops, children's play and food growing and high-density housing, the secondary school and office space;
- land uses with greater user reach such as the secondary school (city-wide) and offices (city-wide and beyond) to be placed in or near the periphery of the site with easy access in and out of the site;
- a secondary school that provides a community focus and optimises community use of indoor and outdoor play, sports and food growing facilities;
- a network of open spaces, paths and roads that connects land uses within the THV site and incorporates features such as food growing and play/recreation opportunities but also link up with neighbouring communities, the National Cycle Network Regional Route 82 (Brighton & Hove /West Sussex) and the SNCI; and
- creation of a well-integrated, accessible, mixed use neighbourhood centre – a place where people living and/or working in the neighbourhood can shop, visit a community facility or just dwell and relax informally.

Place making

4.22 Many of the city's outer suburbs lack a clearly defined centre and the creation of a new community and neighbourhood at THV allows for the provision of an identifiable centre to be planned from the outset.

4.23 Although the neighbourhood centre will need to include local shops and related uses, it is envisaged as being more than just a shopping centre. It should provide a focal point where a range and concentration of land uses and activities combine to form a social and commercial hub in which the various communities living and working at THV are attracted to spend informal leisure time.

4.24 The neighbourhood centre should be socially inclusive, promoting and supporting social interaction and accessible to all. It is recommended that the neighbourhood centre should be:

- an attractive, green, safe and accessible public realm with public seating and other facilities for informal recreation - a place for residents, workers and visitors to come and linger, shop, meet friends for a coffee, sit outside and watch the world go by;
- be located within the development site where the highest densities and building heights will be achieved as a means of maximising the overall capacity of the site, while meeting a range of residential and land use needs;
- the principal public transport pick-up or drop-off point for people travelling to and from the city centre and/or other locations in the city;
- the community facilities required for the Toad's Hole Valley development area, such as a doctor's surgery or community centre; and
- be the focal point within an accessible and legible network of routes and spaces across the development area.

4.25 Such a well-designed and integrated, mixed use neighbourhood centre has the potential to provide an important means for achieving Biosphere Reserve objectives, including culture, community and health.

Flexible, versatile local meeting space that can accommodate active and passive, formal and informal activities. Fig. 4.6 (above left): Jubilee Square in Brighton hosts a range of activities to take place all year round.

Fig. 4.7 (above): Paris Plage, France.

Fig 4.8: Proposals for flexible use of open space. Saint-Sauveur mixed use development, Lille, France (Ghel Architects). Source: www.lm-tv.fr

Housing

4.26 City Plan Policies CP1 and DA7 set a minimum target of 700 residential units to be brought forward in the THV site. This is to be achieved via residential varying between 50-75 dwellings per hectare and a minimum of 50% 3+ bedroom family housing.

4.27 The local planning authority recognises that housing numbers are set at a minimum and there may be an opportunity for increased housing provision which could help create a more viable neighbourhood that supports a variety of businesses and activities and is well served by regular bus services (see Transport and Travel on page 27).

4.28 In line with City Plan Policy CP19 **Housing Mix**, the ability of the THV site to accommodate a wide range of needs and lifestyles will be an important factor in creating a lively, diverse and economically-viable new neighbourhood.

4.29 The neighbourhood centre would be an appropriate location for higher **density** residential flats above shops and businesses with close access to public transport.

4.30 Housing design should consider opportunities to :

- accommodate a variety of typologies to meet a range of needs including housing for older people, people with disabilities, non-family households and non-car owners and provide the neighbourhood centre with a critical mass to sustain a viable customer base and public transport services;
- enable people to choose to reduce car dependency and ownership or choose ultra low-emission options;
- optimise provision of affordable housing units;
- create flexible spaces able to respond to changes in user lifestyle over time and to adapt to homeworking to help to create an economically active neighbourhood;
- achieve high standards of sustainable building design; and
- adopt efficient, affordable design and construction techniques that address specific local environmental issues such as traffic noise and water conservation.

Fig. 4.9: The Hyde, Kent, UK, Idris Perrineau Town Architects. Source: www.ecofriend.com

Fig. 4.10: Housing accommodation and facilities for older people. Image curtesy of Age Action Alliance's Glenise Martin (above).

Figs. 4.11 and 4.12: Accessible pathway solutions up steep slopes in Pittsburgh, USA (below left - Source: http://www.nextpittsburgh.com/city-design/august-wilson-park/) and location unknow (below right – Source: http://justcutepics.blogspot.co.uk/2009/08/40-cool-and-creative-wheelchair-ramps.html

Office

4.31 City Plan Policy DA7 requires that 25,000 square metres of B1 employment space within a site area of between 3.5 and 4.5 hectares be provided at THV. It is anticipated that this can be best provided through a flexible mixture of built forms and unit sizes that can cater for a variety of business types, from small start-up businesses, medium-sized enterprises and larger spaces suitable for the knowledge based economy, a key growth sector for the city and wider city region.

4.32 Masterplanning provides the opportunity to explore opportunities for the creation of flexible high quality office spaces that address changing work practices and incorporate green technologies. The location on the site should take advantage of transport connections and the mix of amenities and sense of place being created through the neighbourhood centre to ensure an attractive environment for employees to work, socialise and in many cases live.

Fig. 4.13 (above): Stockley Park, Heathrow. Source: The new geographyof office demand 2: Business Parks, UK Office Market Research, 2014.

Fig. 4.14 (left):Filwood Green Business Park, Bristol. Source: bristolgreencapital.org/launch-of-filwood-green-business-park-a-new-sustainable-home-for-businesses/#

Fig. 4.15 (below): Sussex Innovation Centre, Brighton. Source: bdaily.co.uk/entrepreneurship/01-06-2015/south-east-startup-scene-confidence-and-community-are-key-for-sussex-innovation/

4.33 Therefore whilst there are benefits to the offices being positioned along the northern boundary and/or along King George VI Avenue as it is easily accessible by car from the A27. Consideration should also be given to locating office use as part of the neighbourhood centre to add to its vitality, success and sense of place as well as creating an attractive environment for employees.

4.34 The design of the office accommodation should consider opportunities to deliver :

- user-centred facilities that are comfortable, energy-efficient environments to motivate and stimulate, allowing potential for zoned user environmental controls;

- high quality, flexible interior spaces with best-practice environmental design allowing for a 'seasonal-zoning' approach that maximises natural ventilation and light;
- a module-based gridded construction that allows for flexible use of interior space, future reconfiguration, and potential for extension/expansion;
- building entrances, service and delivery parking to maximise steeply sloping topography and capitalise on car parking needs to be met beneath the buildings in order to minimise visual impact and utilise the natural landforms;
- access to the best possible public transport provision by being located in or close to the neighbourhood centre or public transport stops;
- car parking in a manner that ensures that the roads leading to it are designed so as not to have the negative impacts associated with large numbers of vehicle movements; and
- Minimum Resource Use and Low Embodied Energy through the use of best-practice sustainable procurement methods and A-rated sustainable & renewable materials, including OSM (Off-Site Manufacturing) and MMM (Modern Methods of Manufacture).

Education

4.35 City Plan Policy DA7 requires that an area of 5 hectares be reserved for a sixform-entry secondary school for ages 11-18, or a through school, in order to meet identified needs.

4.36 The school will attract pupils and employ teachers, cleaners, catering and grounds maintenance staff from various areas of the city. As such, it provides an opportunity to provide a community focus and help animate the new neighbourhood.

4.37 It also provides opportunities for training/ apprenticeships links to the employment space to be explored. To that effect, office facilities should incorporate flexible spaces for events that can facilitate student engagement with the city's business community. This approach has proven successful and has been adopted as best practice by some of the existing secondary schools and Six FormColleges in the city.

4.38 The site for the school should be accessible from both the new development and the wider residential catchment area with improved links to the south and west, to the A27, the SNCI and the South Downs National Park that maximise road safety.

4.39 The design of the school should consider opportunities to :

- provide flexible, sustainable facilities which can offer a range of functions including lifelong learning, sport and leisure and have the potential for adaptation to future needs; and
- optimise community use of the playing field as well as indoor sports and other facilities, especially for young people.

Community and retail

4.40 City Plan Policy DA7 requires the provision of a new multi-use community facility or neighbourhood hub to include a community meeting place, a doctor's surgery, a resource promoting links with the SDNP as well as shops and cafes.

4.41 As referenced elsewhere in this document, as far as practicable these uses should be located within or close to the neighbourhood centre alongside residential flats and other facilities in order to achieve a social and economically viable hub that is easily accessed, used and valued by the local communities.

4.42 The SDNP Authority recommends that provision be made for any multipurpose community facility to include a National Park Interpretation/education facility. Options for incorporating such a facility into the neighbourhood centre and the pedestrian/cycling links to the park should be considered.

4.43 The provision of a new small local parade of 5 to 10 shops should be provided as part of the development proposal for the neighbourhood centre to meet for local needs with services and facilities. The parade could be largely retail-based and include some independent small businesses (such as newsagents, greengrocers, bakers), local services (hairdressers, café, etc.) and a convenience store for top-up and meal solutions.

4.44 End users should ideally be identified before construction commences on site to ensure that units are not left vacant once housing development has been completed.

4.45 Parking and servicing facilities should be provided to accord with the adopted standards (see SPD 14 Parking Standards).

4.46 Adequate cycle parking facilities should also be provided to encourage more sustainable movement patterns throughout the site.

Environment

4.47 City Plan Policy DA7 expects the development in THV to be of 'an exemplar of sustainable development and demonstrate that the city's UNESCO Biosphere Reserve objectives can be successfully integrated throughout the development scheme subject to viability and deliverability' (paragraph 3.84). City Plan Policy CP8 Sustainable Buildings lists priorities and sets out minimum standards to inform development design.

4.48 Every opportunity should be taken to reduce the ecological footprint of the development at THV. This can be best achieved by setting this as a target for the design team early on in the development process, enabling it to combine efforts to deliver high standards of building design and construction (energy generation, passive design approaches, food growing and minimising water use and waste management), effective, accessible and sustainable transport links (cycle and pedestrian routes and public transport), incorporate ultra-low emission vehicle technology e.g. charging points, and reducing heat island effect (green roofs and walls and greening of public streets and spaces).

4.49 Opportunities to combine Biosphere objectives to deliver exemplar environmental policy requirements include:

- making the most of the unique opportunity to plan for sustainable energy and a transition to zero carbon energy in future, by designing in renewable energy, decentralised energy - in particular a heat network; energy storage and grid services, and designing to high standards of energy efficiency;
- making creative use of steep slopes maximising the opportunities for good orientation to reduce the need for mechanical cooling and heating, maximise opportunities for renewable energy technologies, especially solar and contribute towards meeting the environmental criteria for the different types of buildings and land uses;
- installation of a heat network to supply heat (and power) to high density areas;
- using innovative, low energy design and construction methods that add to the sustainability, biodiversity and quality of the natural environment through the inclusion of elements such as chalk grassland roofs, green walls and drought resistant planting, to minimise the visual impact of the development;
- taking advantage of the benefits associated with economies of scale created by the wider development to deliver site-wide community-based energy and water solutions such as district heating and rainwater harvesting;
- using landscape-led, climate resilient water management solutions appropriate to use within a Groundwater Source Protection Zone (part of the site is within GSPZ1 and GSPZ1) including rain gardens, swales, ponds and green roofs and walls that help to reduce the risk of flooding and enhance biodiversity within the site and the SNCI (see Public realm and blue-green infrastructure on page 31);
- choosing building materials based on their sustainability, functional performance and low maintenance over time; and
- carbon emission reduction via, for instance, promotion and provision associated with ultra-low emission vehicles.

4.50 A Toads Hole Valley Heat Network Study has been undertaken to explore the feasibility and viability of a heat network for the site. The techno-economic assessment shows that the site has potential for a long-term transition away from fossil fuels with multiple potential sources. The installation of a district heating scheme at this stage can facilitate an easier transition to a low or zero carbon solution in future. All heat sources considered have significantly lower emissions than a standard solution utilising gas boilers for heating.

Transport and Travel

4.51 City Plan Policy DA7 seeks the development of a fully connected new neighbourhood at THV. The site's location on the edge of the built up area, and the physical severance caused by the steep slopes of the SNCI, the A27 and King George VI Avenue pose considerable challenges to achieving this objective.

4.52 Other policy challenges include establishing and maintaining a viable, regular public transport service; creating sustainable transport linkages within and across the site which connect safely and conveniently with existing provision; enabling safe and efficient vehicle movement within a neighbourhood that is designed for and prioritises movement for people; includes better links with existing neighbourhoods and communities, shops and services; creates new links with the

SDNP; and reduces or minimises traffic-related light, air and noise pollution and carbon emissions

4.53 Further transport and travel goals and objectives, and priorities and themes, are set out within the council's current Local Transport Plan (LTP4).

4.54 The key to resolving a number of these challenges requires developers/ planning applicants to work in partnership with the council, public transport operators and local partners, stakeholders and communities to examine how existing sustainable transport routes can link up with Toad's Hole Valley. It will also depend on if, or how, housing provision could exceed the minimum figure of 700 units set out in the City Plan Policy DA7, as this will affect the need or demand for travel. It is understood that this could determine the level of viability of the introduction and continued operation of a regular bus service.

4.55 Transport and travel options for the site would need to be tested once the location of land uses (i.e. residential, employment, school, etc.) has been finalised.

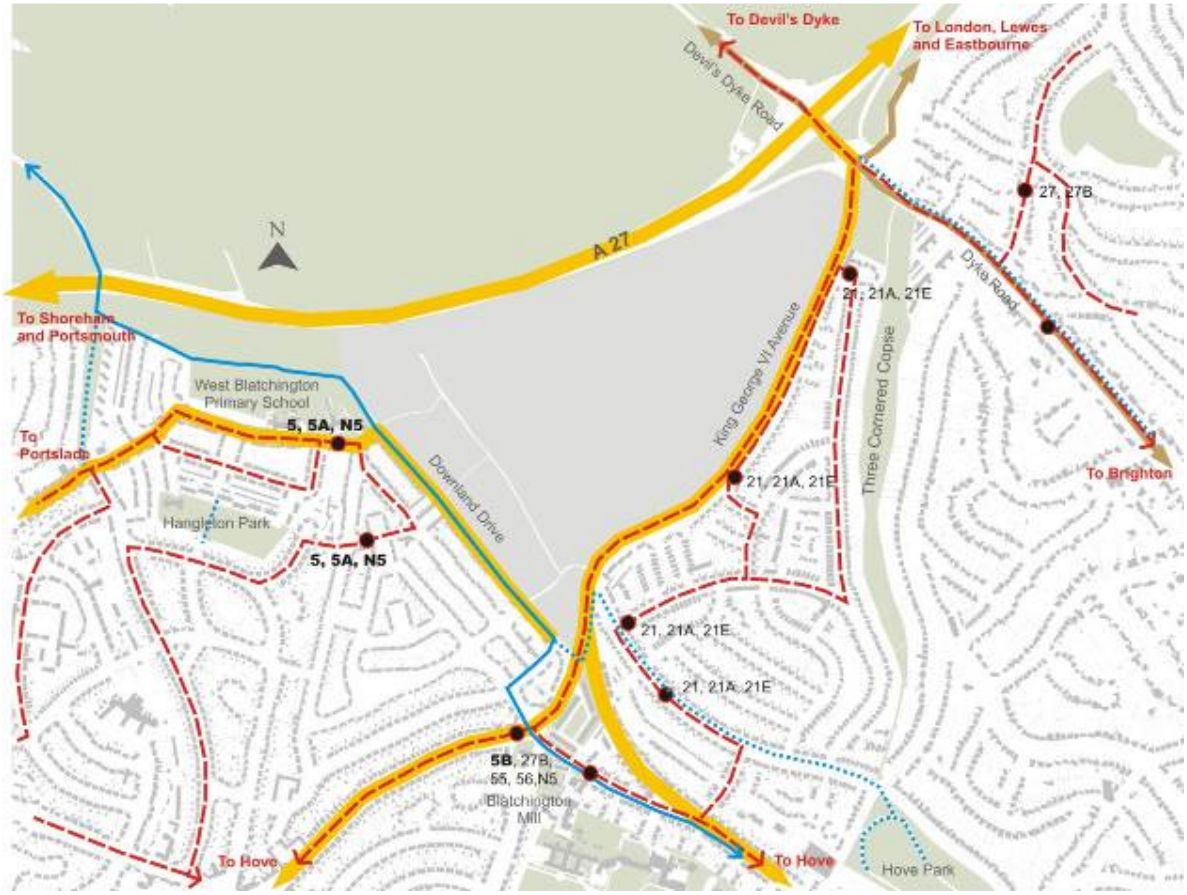


Fig. 4.16: Existing A and minor roads with pulbic transport and cycle links. Base map: © Crown Copyright. All rights reserved. Licence: 100020999, Brighton & Hove City Council. 2016.

- Bus routes
- 5 Frequent bus routes
- 21 Less frequent bus routes
- Bus stops closest to THV site with routes identified
- A roads
- Minor roads
- National Cycle Regional Route 82 (Brighton & Hove / West Sussex)
- Cycle routes not on the National Cycle Network

4.56 It is recommended, however, that the design of the network of paths, roads and public transport across the site consider opportunities for the following:

- Using site layout, building use, promotional/persuasive information and targeted marketing to promote and provide for sustainable transport initiatives via such as minimum on-site car-parking, public transport use, car sharing and access to car clubs;
- creating a more built-up area feel to King George VI Avenue with possibly street-facing frontages set back from the road by at least three meters (see Pollution and emissions, page 25) and the inclusion of some commercial uses with active frontages at ground floor level to provide a sense of spatial containment to the road;
- adopt physical measures such as central reservations and crossing points that help place the needs of pedestrians and cyclists as top priorities, and which could also help to change driver perceptions and behaviours and therefore reduce the impacts of vehicles/ traffic;
- using, whenever possible, existing (formal and informal) pedestrian and cycling entry points and desire lines into the THV site to inform design of road network of the new neighbourhood;
- an appropriate number of accessible bus stops with up to date information systems;
- provide opportunities for safe pedestrian and cycle crossing along the King George VI Avenue edge using these as opportunities to manage traffic flow along this avenue;
- improve pedestrian and cycle access to THV site to and from Hangleton area via the SNCI whilst taking steps to minimise impact upon this protected part of the site; and
- design a network of paths, roads and open spaces in the development site to be as accessible as possible for all users.

4.57 Other issues to be considered as part of the overall design/layout of the site include:

Public transport

- There are several commercial and financially supported bus routes and stops close to the THV site's south and west edges that could be extended to support new bus services at THV and/or improvement of services to existing communities and visitors to the SDNP; and
- exploring options for secondary school to be located near and or close to existing services in order to use these until resident numbers at THV are high enough to support new services going into the site.

Parking for vehicles and servicing areas

- The amount and type of parking that could be provided for developments/land-uses should have due regard to the council's SPD14 Parking Standards.
- individual developments should design in sufficient areas to enable servicing and delivery in a way that does not hinder movement and access within the site and/or affect the local community and environment
- parking provided in connection with a future office use may be considered for informal weekend Park + Ride where the criteria set out in the supporting text of policy CP9 Sustainable Transport can be met.

An example: Upton (Northamptonshire, UK)

Construction of the Upton residential extension to the market town of Northampton began in 2004. By 2011, it was estimated to have 5,536 inhabitants with most of the 8 development sites having been occupied by 2016. The development was guided by a masterplan and design codes and demonstrates how large scale developments can incorporate sustainable principles of urban growth. The masterplan outlines design principles and the design codes provide the detailed guidance that ensures coherence and consistency through the different phases of the development.

Design features include:

- a variety of housing types, sizes and tenures at higher densities;
- improved public transport and pedestrian and cycle links in and around the site;
- a main street and square with a school and recreational and children play and local shopping facilities to serve focal points for the community;
- innovative drainage techniques that combine surface water discharge into a swale system and porous paving in courtyards and residential areas; and
- requirement for developers to procure green tariff electricity supplies, use a common service corridor, optimise passive solar gain, meet CO2 emissions targets, adopt rainwater harvesting technologies, use recycled or local, sustainably sourced materials and recycle waste during construction and afterwards.

As part of the design process, a working group and a steering committee of local stakeholders were set up to oversee the project's implementation and maintain the involvement of the wider community.

Source: https://www.itdp.org/wp-content/uploads/2014/07/26.-092211_ITDP_NED_Vauban.pdf

Travel plan

- Providing detailed Travel Plans for different land-uses that set out how access and movement will be promoted, provided for and/or managed to help prevent or mitigate the potential impacts of the new community on the site and within its surrounding areas, including the setting of the South Downs National Park.

Links with the SDNP

- Improving legibility and condition of existing links over the A27 to the east (Devil's Dyke roundabouts) and west (pedestrian bridge north of Hangleton) of the site;
- providing information boards about the SDNP at the two existing access points (car and foot bridge over the A27 to the east and west of the site); and
- explore opportunities for new connections into the SDNP including identifying a broad location for the provision for a **National Park Gateway** that connects the Park with THV and surrounding neighbourhoods (SDNP Authority suggested this could take the form of a tunnel under the A27 and/or a link to the old railway line up to Devil's Dyke and the South Downs Way).

Pollution and emissions

- Although traffic noise levels are not considered to warrant mitigating actions based on Government (Defra) Noise Mapping, given the outcome of stakeholder consultation, consideration should be given to reducing/minimising the impacts on the new community, including measures that could be introduced by, or in partnership with, Highways England (e.g. use of vegetation to absorb air pollutants, landscaped noise bunds and low noise road surfaces);
- the best air quality will be set back from roads and towards the top of the slope where dispersion conditions are easier and there will be higher pollution within three metres of the A2038 King George VI Avenue due to heavy vehicles climbing up the hill with limits for particulate, nitrogen dioxide and carbon monoxide being at risk if the main carriageway is enclosed by walls or buildings within a few metres of road kerb and/or if the steep road gradient could be avoided (minimising fuel consumption, tailpipe emissions and tyre and break wear);
- taking account of development impact on local air quality and the SDNP Dark-Sky Reserve (see Appendix 5) taking steps to minimise light pollution and seeking improvements in water, land, air quality and noise pollution;
- promoting reduction in car use in order to contribute to meeting the local and national carbon reduction targets;
- ensuring that options considered for traffic-calming do not have any unacceptable indirect adverse effects for noise or air quality; and
- exploring options for the design and placement of buildings, hard and soft landscaping design and innovative solutions that can positively change and sculpt the nature of the acoustic environment within the new neighbourhood.

Public realm and blue-green infrastructure

4.58 The creation of a new neighbourhood/community provides an opportunity to design open spaces that are rich in biodiversity, accessible, usable and that help reduce vulnerability to a changing climate.

4.59 The ability to incorporate landscape-led solutions for the provision of transport and communication, water management (blue) and biodiversity (green) infrastructure services into the network of open spaces will be an important element of any development proposal.

4.60 Delivering effective links through and between the school playing field, food growing space, public open space and to the National Park and South Downs Way Ahead Nature Improvement Area and contributing to Biodiversity Action Plan Targets.

4.61 Net community benefits should be secured through careful planning and integration of the public realm network and land uses by designing-in opportunities for passive surveillance and social interaction between residents, workers and visitors can aid social cohesion within the THV development.

4.62 The design of the network of paths, roads and open spaces at THV provides opportunities for delivering net community benefits and meet a wide range of policy objectives (connectivity, legibility, low ecological footprint and reduced landscape impact) and City Plan policy requirements (space for children's play and informal sport facilities and food growing space; SNCI enhancement and biodiversity gains; water management; and recreation, pedestrian and cycle linkages, vehicle movement and parking).

4.63 For example, locating housing and associated outdoor amenity space for the older people alongside a children's play area could assist with the creation of a successful and sustainable neighbourhood where people positively engage with the wider community. Such an approach would help meet the Biosphere objectives by encouraging active, sociable, meaningful lives to promote good health and well-being.

4.64 To make the best use of the site the design of the public realm network should:

- be weaved into the fabric of the development and the activities planned for the site in order to encourage social interaction and, as often as possible, passive surveillance for squares, streets and pedestrian and cycling routes;
- create spaces that can be used flexibly to perform different functions for users at different times such as residential streets that can be used as play space or for community events and use of the topography to provide extreme play opportunities;
- incorporate natural ways of preventing flooding via sustainable drainage solutions that are appropriate to a Ground Water Protection Zone and can help increase the capacity of the piped system to cope with rainwater events and reduce impact upon the rest of the catchment area;
- explore opportunities for integrating informal children's play and adult health and fitness into the design of public spaces such as the use of street furniture that doubles-up as play equipment and/or an exercise trail;
- incorporate the SNCI as a unique resource and create opportunities for enhancing biodiversity through appropriate landscaping and planting; and
- be created from robust, durable and sustainable materials that take into consideration and factor in long-term financial arrangements, including maintenance costs.

4.65 Examples illustrating how the challenge of delivering public realm and infrastructure was tackled elsewhere are provided below.

Figs 4.17 and 4.18 (above): Landscape-led opportunities for play and food growing. Source: www.pinterest.com

Fig. 4.19 (right): Residential street in Vauban, Germany. Source: expo2010.freiburg.de/servlet/PB/menu/1220468_l2 /index.html

Fig. 4.20 (left): Sustainable housing with SUDS infiltration ditches, Euralille 2, Lille, France.

*Fig. 4.21 (below): Examples of commonly used sustainable drainage for diffierent development types. Image courtesy CIRIA C753, 2016 (*WOODS BALLARD, B, WILSON, S, UDALE-CLARKE, H, ILLMAN, S, SCOTT, T, ASHLEY, R, KELLAGHER, R (2015) *The Suds Manual*, C753, CIRIA, London ISBN: 978-0-86017-760-9, www.ciria.org).

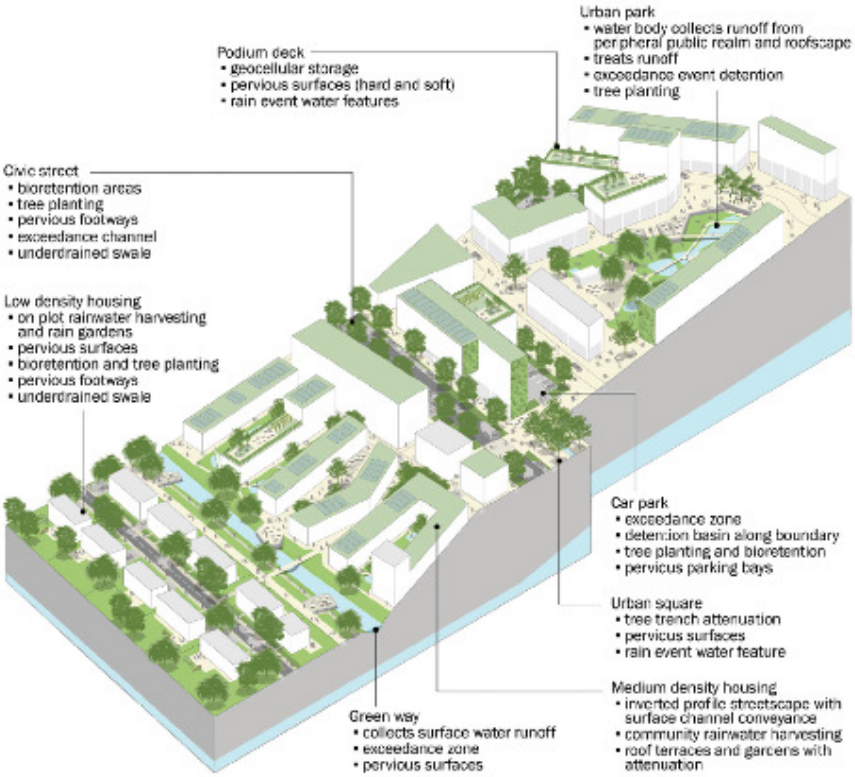


Fig. 4.22 (above): Colourful decorated channels capture water runoff and allow children to play when water is present in Westminster, London.
Fig. 4.23 (right): Green roof bike shelter with green roof in Islington, London.
Fig.4.24 (below): Cross-section showing example of SuDS on a sloping site.
Images courtesy CIRIA C753, 2016.

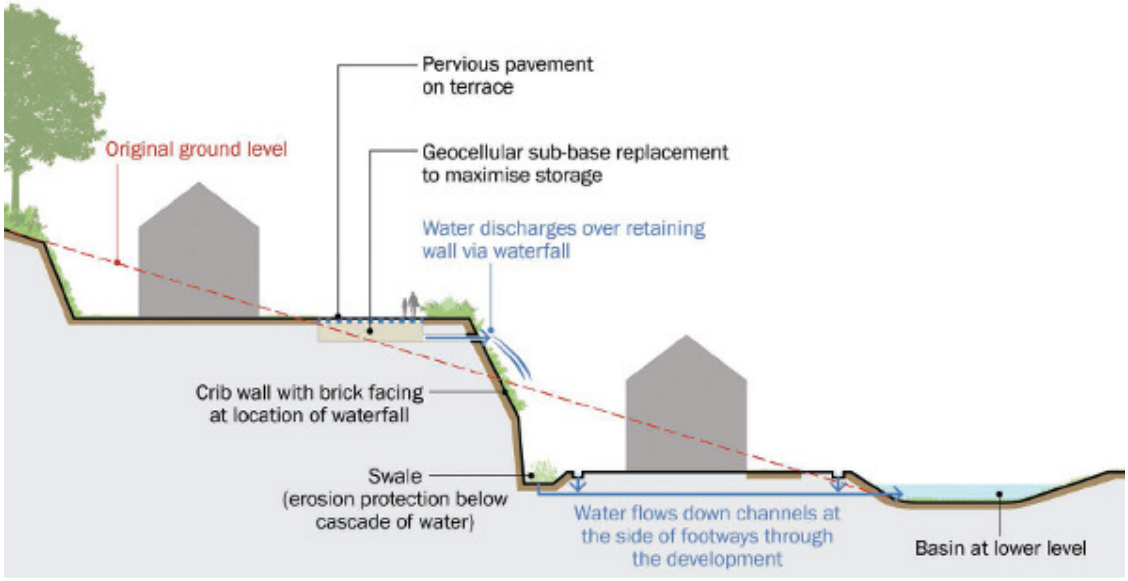


Fig. 4.25: Alara Factory community garden, London

Food growing

- The Food and Development Planning Advice Note (PAN) 06 demonstrates how the required minimum of 0.5 hectares of food growing can be woven into the fabric of the development to provide successful multi-functional uses of space. The integration of productive planting into landscape plans, provision of community food growing areas, or bespoke small scale allotment type areas within developments can bring these areas to life and support community cohesion, biodiversity enhancement and offer health benefits to users. Innovative incorporation of food growing areas into the public realm network should be sought for the THV site.

SNCI and other large open spaces

- Located west of the site, the SNCI is not included in the developable area for the THV site. However, its restoration and enhancement would provide a unique, desirable resource from which existing and future communities would be likely to benefit.
- It is important to ensure it is easily accessible and that its nature conservation importance is recognised, appropriately managed, enhanced and utilised in the landscaping and ecological planning of the new development. As such, it should also be an integral part of the public realm network of improved pedestrian and cycle linkages from the site to the SNCI and SDNP. Strong linkages to the secondary school could also enable it to support implementation of the school curriculum (i.e. biology, geography and art lessons).
- Located within the developable area of the site, the steep slope along the A27 and other areas of the site that may prove unsuitable to accommodate development across the site but could provide opportunities for softening the built-up edge of the new development, increasing biodiversity gains across the site, food growing and informal recreational activities such as dog walking.

5 Development phasing and infrastructure delivery

5.1 Given the size and complexities of delivering development at the THV site, decision-making and construction would be expected to take place in phases. The masterplanning process should therefore seek to ensure that each phase incrementally and cumulatively secures a successful and viable community that is connected and integrated and can meet the various aspirations of City Plan Policy DA7.

5.2 To ensure that development cycles do not place unacceptable burden on existing facilities and the new and existing neighbourhoods over the total lifespan of its construction, a phasing programme should be agreed with the local planning authority that ensures:

- supporting, ancillary and community uses (including the school, ancillary shops and the multi-use community facility) are provided at the appropriate time; and
- land is retained for employment purposes and development and a minimum of a first phase of the employment land should be completed prior to completion of the housing element of the scheme to stimulate the market.

5.3 Certain infrastructure requirements will need to be provided from the onset of the development. This will largely depend upon the design and phasing of development but it is hoped the multi-use neighbourhood centre can be delivered as early as possible.

5.4 With provision of a district heating system in the masterplan, an energy centre must be provided to serve the site at an early stage with the laying of appropriate pipework in conjunction with each development phase. The Toad's Hole Valley Heat Network Study offers design guidance to help optimise a heat network for the site (see Appendix 6), including development density and a heat network zone, energy centre, heat sources, phasing, network design and customer protection.

5.5 To facilitate development at THV, planning applicants will be required to deliver a range of measures for mitigating site impacts and ensuring the development complies with policy, either by way of s106 Agreements or by developer contributions through a Community Infrastructure Levy (CIL).

5.6 Infrastructure will need to be in place and on time to serve the development in accordance with an approved phasing plan. The timing of any necessary developer contributions will need to be agreed with the Local Planning Authority in line with the phasing plan.

5.7 The areas where contributions may be sought will be in accordance with City Plan policy objectives and as further defined in Policy CP7 Infrastructure & Developer Contributions and the annexe Infrastructure Delivery Plan document. The type of contributions may include:

- Affordable business accommodation provision and retention;
- Affordable housing provision including accessibility and retention;
- Air quality mitigation measures and/or management;
- Community safety measures and maintenance including appropriate lighting infrastructure;
- Education and learning facilities provision and/or upgrade;
- Employment, commercial space provision and retention;
- Employment training and job opportunities throughout construction phases;
- Health care facilities including integrated provision for other community needs, retention or replacement, including engagement and support;
- Highways site-specific connectivity and upgrade to main trunk road and local corridors and sustainable transport accessibility;
- Phasing Plan;
- Project management monitoring contribution;
- Public Open Space including parks recreation, play space, sports and allotment provision;
- Public realm, environmental improvements, legibility including site specific artistic components
- Sustainable development high standard achievement measures and biodiversity landscape enhancement; including SNCI reinstatement and connectivity to SDNP; and
- Utilities appropriate connectivity, upgrade and management.

City Planning
Brighton & Hove City Council
Hove Town Hall
Norton Road
Hove
BN3 3BQ

Brighton & Hove City Council