Abbotsford Bridge Farm Abbotsford House School

> St John's Common

Hammond's Mill

Golf Centre CH2

West End Farm

Farm

House

Malcing

Farm

Gatehouse

nds

ge

Kent's

Farm

Theobalds

Works

Clay Pit

Bedelands.

Farm

Lowlands

BURGESS HILL

BURGESSEL

airplace Bridge

Feasibility Study for Development Options at Burgess Hill

Addendum to Final Report

December 2005

Hall

Antye Farm

Freckboroug

Pollards

Farm

Crank

Ditchling Common Country Park

KINS



# **Contents**

Chapter 1: Introduction

**Chapter 2:** Site Capacity

Chapter 3: Transport Impacts

**Chapter 4:** Summary of Findings and Conclusions

Annex B: Assessment of Social and Community Infrastructure – Option A and B

Annex C: Transport Analysis Technical Note



# **<u>1 - Introduction</u>**

#### 1.1 Background

Atkins consultants were commissioned in January 2005 to undertake a feasibility study to examine the potential for additional strategic development on land around Burgess Hill. The objective of the study was to explore and gain an understanding of the issues and implications for development around Burgess Hill and investigate whether there are any areas contiguous with the Burgess Hill urban area which could be developed to provide viable, sustainable new communities of up to 5,000 dwellings.

The Final Report, which was submitted in September 2005, assessed the environmental opportunities and constraints and identified potential developable areas within the study area which informed the three site development options. Two options (Options A and B) illustrated the potential to accommodate 5,000 dwellings in large self contained urban extensions. Option C demonstrated how the dwellings could be distributed within seven sites around Burgess Hill.

An evaluation of the key issues for each option was undertaken and is summarised in the Final Report (Part II). Option C was considered to be the most sustainable option for new development and was taken forward for further analysis.

Atkins has now been commissioned to undertake a similar level of analysis on Options A and B.

This addendum should be read in conjunction with Parts I and II of the September 2005 Final Report which provide the planning policy context, an assessment of the landscape and environmental opportunities and constraints in the study area and an evaluation of the Interim site options.

## **1.2 Content and Structure of Addendum Report**

This document is set out in 4 chapters. Chapter 2 identifies refined boundaries for site development Options A and B and the capacity of each Option. The land budgets have been informed by an assessment of the social and community infrastructure needs associated with the potential population of each site option. Site capacities are illustrated with layout plans to demonstrate how each option might be developed to try and achieve a sustainable community.

Chapter 3 looks at the transport impacts associated with the development of each option and how these could be mitigated.

Chapter 4 provides a summary of the findings comparing Options A, B and C.



# 2 - Site Capacity

#### **2.1 Site Layouts**

Site area boundaries for Options A and B have been refined in light of the additional analysis undertaken as part of the Final Report and further site visits. The capacity of each site has been calculated based on indicative site layouts. Figures 2.1 and 2.3 illustrate the site layouts for each option.

Option A covers an area of some 68.7ha and Option B an area of 130.9ha, excluding significant woodland and flood plain areas which are not suitable for development. A development schedule identifying a sustainable mix of land uses for each option is included in Table 2.1.

### Table 2.1: Development Schedule

Land Use (Ha)/Site	Option A	Option B	
District centre	0.35	0.49	
Education	6.05	8.62	
Open space	16.84	32.34	
Indoor sports and other built facilities	0.28	0.28	
Employment	1.01*	2.5	
Residual developable area	45.2	86.7	
Total parcel area	68.7	130.9	
No of Dwellings			
High density (60dph)	1084	2080	
Medium density (40dph)	723	1387	
Low density (30dph)	271	520	
Total Dwellings	2079	3987	

\*to be provided off site (assumes continuation of existing travel to work patterns)

# 2.2 Identification of Social and Community Infrastructure

The land budgets for each master plan have been informed by an assessment of the social and community infrastructure needs associated with the development. An assessment has been made of the additional land and floorspace requirements covering employment needs, local retailing, education facilities, primary healthcare infrastructure, open space and indoor recreation facilities to support such a community post 2016. The full findings of this assessment are included as Annex B.

The assessment considers the requirements relating to each land use in total followed by a schedule identifying the sizing of sites and the balance of uses required to support each site. The schedule represents a target land use mix which has informed the masterplanning process.

## 2.3 Indicative Land Budget

The land use budget is based upon overall community and Infrastructure requirements for the populations of each site option. The location of the facilities has been based upon the following principles:

- To maximise the opportunities afforded by additional facilities provision;
- To promote sustainable patterns of service delivery; and
- To promote each parcel and the town as a whole.

Although the intention is provide a degree of community self sufficiency, facilities have also been

sited to maximise the benefits to existing communities where they are poorly provided for at present. After applying employment densities to convert jobs into gross employment floorspace there is a requirement to provide for an additional 25,910m<sup>2</sup> of employment floorspace for Option A and 58,822m<sup>2</sup> for Option B assuming no surplus employment land or premises at 2016. This would equate to an employment land requirement of up to 1.01 ha for Option A and 2.5ha for Option B after applying plot coverage and building height assumptions. This assumes a continuation of existing travel to work patterns, where 23% of the workforce work within Burgess Hill (2001 census). For Option A, the employment component of the scheme is provided to the north of the A2300 adjacent to the sewage treatment works, which represents a suitable employment location and enables the number of residential units within the scheme to be maximised.

# 2.4 Housing Density Balance and Capacity Estimate

After accounting for community infrastructure needs and distributor roads the residual land has been planned for housing development. The housing density mix for each option has been based upon the maximising the efficient use of land and to enable provision of a range of dwelling types and sizes. The housing density mix for each option has been based upon a mix of 30% low density (30 dwellings/ha), 40% medium density (40 dwellings/ha) and 40% medium-high density (60 dwellings per ha). The rationale is to provide a range of dwelling types and sizes within each site. The distribution of medium and high density has been concentrated around the neighbourhood centre and along bus routes in order to maximise access and the viability of these services. Low density development has been located around more environmentally sensitive areas within parcels and adjoining the countryside edge to soften the visual impact of development.

Table 2.2 summarises the housing development capacity of both options. There is overall capacity for 2,079 dwellings in Option A and 3,987 dwellings in Option B. The lower capacity for Option A reflects the potentially significant visual and landscape impacts of any development to the south of the site.

# 2.5 Urban Design Considerations

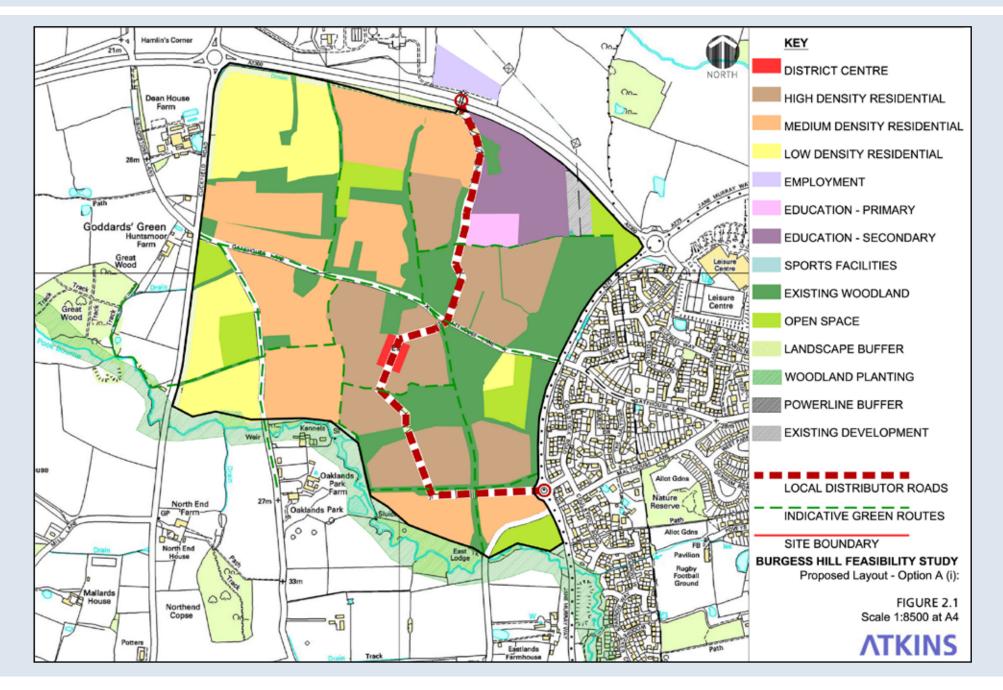
The site boundaries and subsequent site capacities have been informed by landscape and ecological assessments which take into account the floodplains. These assessments are illustrated in the Final Report. The indicative layouts illustrate how each option could accommodate a sustainable self-contained community which integrates with the surrounding environment, avoids coalesence with neighbouring urban areas and takes account of the transport network constraints. Table 2.2 identifies the key urban design issues associated with the masterplan layouts.

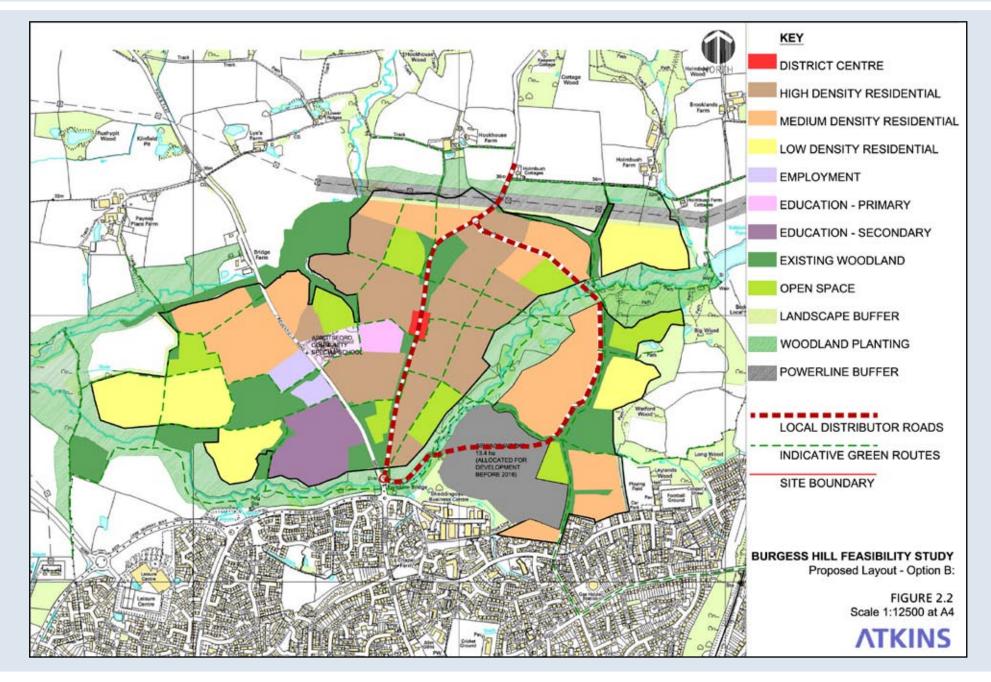
# Table 2.2: Urban Design Considerations

Urban Design Considerations/Site	Option A	Option B	
Access	Site is closely related to both the A2300 and A273, requiring short connections to the site and therefore reducing the impact of additional highway infrastructure upon the wider landscape.	The site adjoins the northern edge of the existing settlement and therefore proposed facilities and open space could serve the existing communities Access to this site may impact upon the wider landscape.	
Integration with the countryside edge	Existing site vegetation integrates the proposed housing within the eastern and southern site areas. The countryside edge adjoining the western edge of the site however it would benefit from planting to integrate the proposed development with the adjoining agricultural landscape. Consideration should be given to off-site planting to provide a setting to the development.	The site is set within a strong existing landscape structure made up of a series of small-scale arable fields and public open spaces adjoining th northern settlement boundary. Consideration should be given to off site planting to the proposed western edge and northern edg of the development which does not directly relat to the settlement edge (this includes agricultural land and Burgess Hill Golf Course).	
Integration with the settlement edge	The site adjoins the settlement edge, however the A273 may be perceived as a physical barrier to east-west movement between the site and Burgess Hill.	The site adjoins the northern edge of the existing settlement and therefore proposed facilities and open space could serve the existing communities. The density, scale and form of the proposed development along the southern edge of the site should relate in scale and form to the adjoining residential areas.	
Landscape Designations	There are no landscape designations, however land to the south is designated locally as a Green Crescent.	There are no landscape designations, however consideration of SNCI site adjoining the eastern edge of the site is required.	
Landscape Structure	A strong existing pasture landscape structure with existing woodland blocks and tree belts. There may be requirement for some further planting to locally screen development on the western edge of the proposed site. The western edge of the site and the interface with the existing development at Goddard's Green will need to be carefully considered to retain the locally distinctive character of the Goddard's Green junction and country lanes which border the western site boundary.	The site is set within a strong existing landscape structure made up of a series of small-scale arable fields and public open spaces adjoining the northern settlement boundary. Consider impact upon local landscape amenity of the wider agricultural landscape.	

Urban Design Considerations/Site	Option A	Option B
Visual Impact	There would be visual impact upon dwellings within the immediate vicinity of the site, impact upon a number of Public Rights of Way which run east west across the site and land to the south of the site. Views are also possible and views from Danworth Lane within the site area and from its junction with Pomper Lane to the south. There is some impact upon medium distance views from the south, including dwellings on Pomper Lane itself and the dwellings at Oaklands Park. Development would be visible from the existing settlement edge of Burgess Hill, from residential properties, albeit these would be glimpse views. Wherever possible the development should maintain informal open space between the site and the existing settlement edge to ameliorate visual impact.	The views into this site would be ameliorated by the existing landscape structure. Views of the site are possible from B2036 and A273 which passes to the south of the site, as part of the Burgess Hill 'ring road' and north-south through the site. It is also visible from a number of Public Rights of Way, including one which passes along Freeks Lane and through Bedlands Farm and the northern residential edge of Burgess Hill. Other Public Rights of Way follow the river which passes through the site in an east west direction and a bridleway which is located on the northern site boundary, which connects a series of farms, including, Hookhouse Farm, Holmbush Cottages and Holmbush Farm. Views will be possible from the farms mentioned above and the residential areas, adjoining Maple Drive, which overlook the southern edge of the site. Views of the western edge of the development (proposed low density housing to the west of the Burgess Hill Golf Course) would be possible from the secondary school at the junction of the A2300 and Jane Murray Way and housing within the residential area of The Acorns to the south of the A273. Some wider visual impacts may be associated with the link road which can be ameliorated with localised woodland planting and ground modelling.
Pedestrian/cycle links and Public Rights of Way.	Footpath connections can be connected into a number of existing Public Rights of Way and an east-west connection can be made via Gatehouse Lane and north-south via Danworth Lane.	The existing north-south lane, Freeks Lane, can provide a direct pedestrian and cycle connection from the site to Burgess Hill town centre. Footpaths along the watercourse can be integrated into a site-wide footpath network
Built and Natural Heritage	Setting of listed building will need to be preserved and enhanced with offsite planting along the western boundary of the site.	No listed buildings within site.
Floodplain	The southern boundary of the site adjoins the floodplain of the Pook Bourne. Sustainable urban Drainage System (SuDS) may be sought by EA.	The site is bisected by the floodplain extending north from Fairplace Bridge along the watercourse. EA may seek SuDS measures.

\*While site surveys have evaluated the relative visual impacts of development upon the whole landscape area within the study area, detailed masterplanning should be informed by further assessment to fully establish impacts and mitigation measures.







# **3. Transport Impacts**

This chapter summarises the analysis of transportation needs and impacts presented in Annex C. Measures are identified to improve the accessibility of potential development sites by modes of travel other than the private car as well as accommodating necessary private car trips.

#### **3.1 Existing Conditions**

Key demographic indicators suggest Mid Sussex has the highest rail mode share and the joint highest public transport mode share for journeys to work compared with other districts in the area. This suggests that the overall public transport market in Burgess Hill is reasonably healthy.

Burgess Hill is well served by existing bus services comprising 'town' services and 'infrequent rural' services. It also has two rail stations, Burgess Hill and Wivelsfield, connected to London Bridge, Gatwick and Brighton. There is no direct rail connection to London Victoria.

Burgess Hill lies to the east of the A23 Trunk Road, which connects to the M23 south of Crawley and provides a north-south route between the M25 and the coast (Brighton). The town is connected to the A23 via the A2300.

Existing traffic data suggests that the key highway links in Burgess Hill are close to theoretical capacity and that localised highway improvements would be required to support any major development proposals.

Existing on-site observation suggests that congestion in Burgess Hill is concentrated around key junctions within the town centre and stations during peak periods.

#### **3.2 Development Potential**

A site assessment framework has been developed to provide a preliminary assessment of options for strategic development in Burgess Hill. The site assessment framework formed the basis of a detailed trip generation, distribution and assignment exercise. In this case for development Options A and B.

Option A is located to the west of Burgess Hill. The site is bounded by the A2300 to the north and the A273 to the east. To the south of the site lies farmland and to the west lies Gatehouse Lane.

Option B is located to the north of Burgess Hill, close to the existing Sheddington Business Centre and straddling the B2036 and A273. The site is bounded by the A273 to the south and farmland on the remaining edges.

The development sites have been analysed in the previous chapter to assess the number of dwellings that can be accommodated. Table 3.1 shows the total number of dwellings, students and employees predicted for each development site.

## Table 3.1 – Development Options Land Use

Land Use	Option A	Option B
Housing	2079 units	3987 units
Primary School	210 students	365 students
Secondary School	700 student (434 on-site)	1100 students (834 on site)
Employment	178 employees (53 on-site)	390 employees (114 on-site)

The figures shown in Table 3.1 have formed the basis for the transport assessment work.

#### 3.3 Development Trip Generation

A multi-modal trip generation spreadsheet was developed using 2001 Census data and National Travel Survey (NTS) data for the period 1998-2000. The trip generation and distribution exercise comprised the following stages:

- Stage 1: Trips per household;
- Stage 2: Trips by journey purpose;
- Stage 3: Internal trips;
- Stage 4: Site trip attraction;
- Stage 5: Modal share by journey purpose;
- Stage 6: Total external trips by journey purpose and mode;
- Site 7: Total internal trips by journey purpose and mode; and
- Stage 8: Distribution of external trips by journey purpose and mode.

This process provided the total number of AM peak PM peak and daily multi-modal trips generated by each development site option. The trips were distributed to each ward in Burgess Hill and four external zones (north, east, south and west).

The development trips were then manually assigned to the highway network and a public transport passenger load, patronage and revenue estimation was undertaken.

The major sources of demand for public transport and highway trips under both development scenarios are as follows:

- North of Burgess Hill;
- Meeds Ward (town centre);
- Dunstall Ward; and
- Victoria Ward (Tescos superstore).

This pattern reflects the location of trip attractors within the Burgess Hill area itself (for shopping, leisure and work) and to the north of Burgess Hill (many work trip attractors are located here).

# 3.4 Development Impact and Mitigation

#### **Traffic Assignment and Impact**

In order to determine the impact of the development of Option A and Option B on the existing highway network within Burgess Hill the development car trips from the trip generation exercise have been manually assigned to the highway network. The assignment flows represent demand flows, i.e. the route(s) traffic would ideally take if capacity was available.

In addition a link capacity analysis has been undertaken based on existing traffic flows provided by Mid Sussex District Council which have been growthed to 2016 to provide base 2016 flows. These have been compared to base 2016 with development flows to gain an understanding of the impact of the development options on the existing highway network. The results are summarised in Table 3.2 for Option A and Table 3.3 for Option B.

Based on the information presented above and site visits to determine the existing patterns of traffic congestion within Burgess Hill the following highway infrastructure improvements will probably be required to support the development of Options A and B. • Option A:

- 1 New junction accesses to the development site;
- 2 Possible upgrading of A2300 and parts of A273 to dual carriageway;
- 3 Possible junction improvements in the town centre.
- Option B:
  - 1 New junction accesses to the development site;
  - 2 Major upgrading of the A273/B2036 junction, possibly by the creation of a single roundabout at this location;
  - 3 Junction improvements in the town centre;
  - 4 Possible upgrading of the A273 between the site and the A2300 to dual carriageway;
  - 5 Possible upgrading of the A2300 to dual carriageway;

The improvements are illustrated in Figures 3.1 and 3.2.

Figure 3.2 illustrates that access from the eastern portion of Option B to the town centre should be via the A273 and not Freeks Lane as this is a residential road which is already heavily congested.

# **Public Transport Assessment**

Analysis of the predicted public transport demands indicated that for both options new connections to Burgess Hill town centre should be provided, and that connections to the Triangle Centre and Tescos would also be advantageous.

Thus, for Option A it is proposed that the existing route 36 is modified so that it makes a complete loop around the western half of Burgess Hill, and also runs through

the centre of the new development. For Option B it is proposed that a new bus route is created running from the Triangle, via the development site and the town centre, to Tescos (see Figures 3.3 and 3.4).

The lower levels of demand for rail services and the greater constraints facing changes to this mode mean that comparable rail proposals have not been developed. However, key changes proposed to rail services in the Network Rail Route Utilisation Strategy were highlighted in the Option C analysis.

Estimated costs for the two options were developed using the Atkins bus cost model with revenues predicted based on the forecast usage and a fare rate similar to existing town centre services. A comparison of costs and revenues with the forecast patronage levels indicates that Option A may require some on going revenue support, while the greater size of the Option B development indicates that it could be financially self sustaining once the development is complete.

# **Provision for Pedestrians and Cyclists**

In order to support the development of either option it is recommended that that adequate pedestrian and cycle crossings, cycle and walk routes, cycle lanes and cycle storage is provided between the site and local destinations and services. For Option A it is recommended that the existing crossing between the site and town centre (A273 Gatehouse Lane) is improved, whilst for Option B Freeks lane should become a dedicated walk/cycle lane.

In addition the mixed-use nature of the development sites means that a large proportion of development trips will remain internal to each site, these trips should be encouraged by providing safe, well lit, walking and cycling routes throughout the site.

Road	Development Conditions	Analysis	Future Condition
A2300	Increase in flow in both directions during peak periods.	Traffic running between the development and the A23	Delays during peak periods. Upgrading to dual carriageway may be required.
A23	Increase in traffic flow, particularly northbound during the AM peak and southbound during the PM peak.	Associated with trips from new development with work destinations outside Burgess Hill.	Free flowing. May impact upon narrow sections of carriageway.
A273	Increase in traffic flow, particularly to the north of the development site.	Associated with destinations to the north of Burgess Hill and in the town centre.	Likely to remain free flowing with minor congestion during peak periods.
B2036	Increase in flow, particularly along the northern section through the town centre.		May impact upon existing congestion in the vicinity of Wivelsfield Station. Junction improvements may be required.
A273/B2036 to the north of Burgess Hill	May be used as a rat run for traffic from the development accessing the A23/M23.	Rat running traffic.	Traffic management measures may be required. Capacity should not be increased along this section of road.

# Table 3.2 - Development Traffic Impact Summary: Option A

# Table 3.3 - Development Traffic Impact Summary: Option B

Road	Development Conditions	Analysis	Future Condition
A2300	Increase in flow in both directions during peak periods.	Traffic running between the development and the A23	Delays during peak periods. Upgrading to dual carriageway may be required. Upgrading of A273/B2036 junction required.
A23	Increase in traffic flow, particularly northbound during the AM peak and southbound during the PM peak.	Associated with trips from new development with work destinations outside Burgess Hill.	Free flowing. May impact upon narrow sections of carriageway.
A273	Increase in traffic flow, particularly to the north of the development site and between the site and the A2300.	Associated with destinations to the north of Burgess Hill and in the town centre.	Congestion during peak periods. Major upgrading of A273/B2036 junction required. A273 will become dual carriageway between the site and A2300.
B2036	Major increase in flow, particularly along the northern section through the town centre.	Traffic from the development accessing Burgess Hill town centre and stations.	Will impact upon existing congestion in the vicinity of Wivelsfield Station. Junction improvements required.
A273/B2036 to the north of Burgess Hill	May be used as a rat run for traffic from the development accessing the A23/M23.	Rat running traffic.	Traffic management measures may be required. Capacity should not be increased along this section of road.

#### **Total Transport Costs**

Table 3.2 demonstrates that the total transport costs necessary to support the proposed development sites are approximately £15.6 million for Option A and £20.4 million for Option B. Cost per dwelling would be approximately £12,200 for Option A and £8,800 for Option B (based on 40% affordable housing). The higher cost per dwelling for Option A reflects the lower number of houses which this site can accommodate (see Annex C for a detailed breakdown of costs).

#### **Table 3.4 Transport Costs Summary**

Option		Highway Costs	Total Costs	Cost Per Dwelling
А	£472,820	£14,690,000	£15,162,820	£12,156
В	£1,074,262	£19,900,000	£20,974,262	£8,768

It is likely that all of the proposed improvements associated with each development site will be implemented through Section 106 agreements and paid for by the developer.

# 3.5 The Way Forward

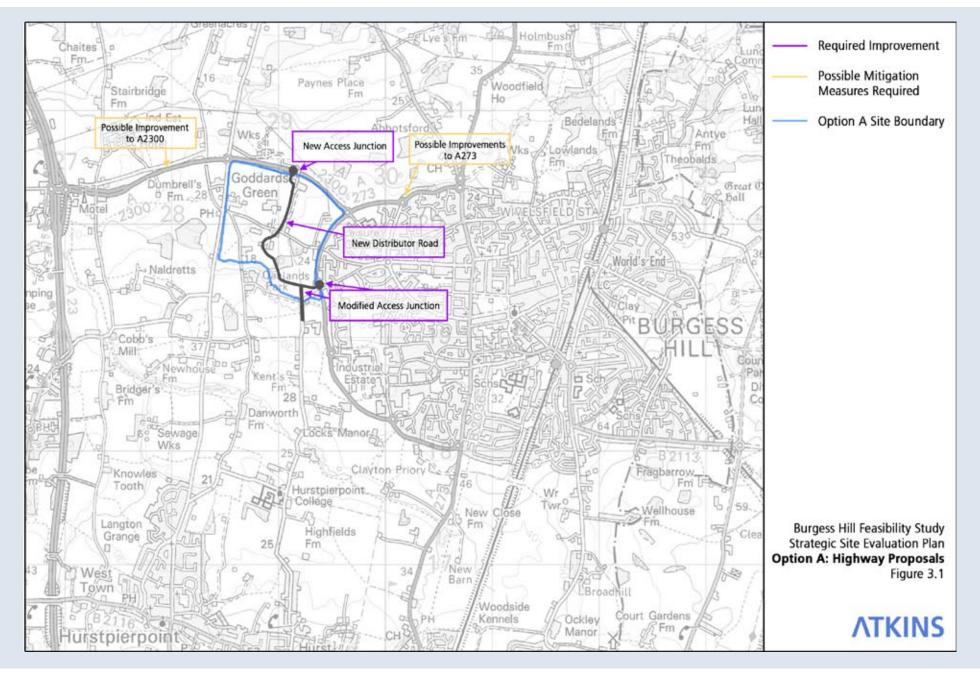
The results of this transport study suggest the proposed development of 2,079 houses to the west of Burgess Hill under Option A could be supported by associated improvements in transport networks. However this Option would result in congestion and would require investment in highway infrastructure works and public transport services. The proposed site is cut off from the town centre by the A273 and it would be very important to ensure that the development is linked to the town by appropriate and direct pedestrian and cycle routes.

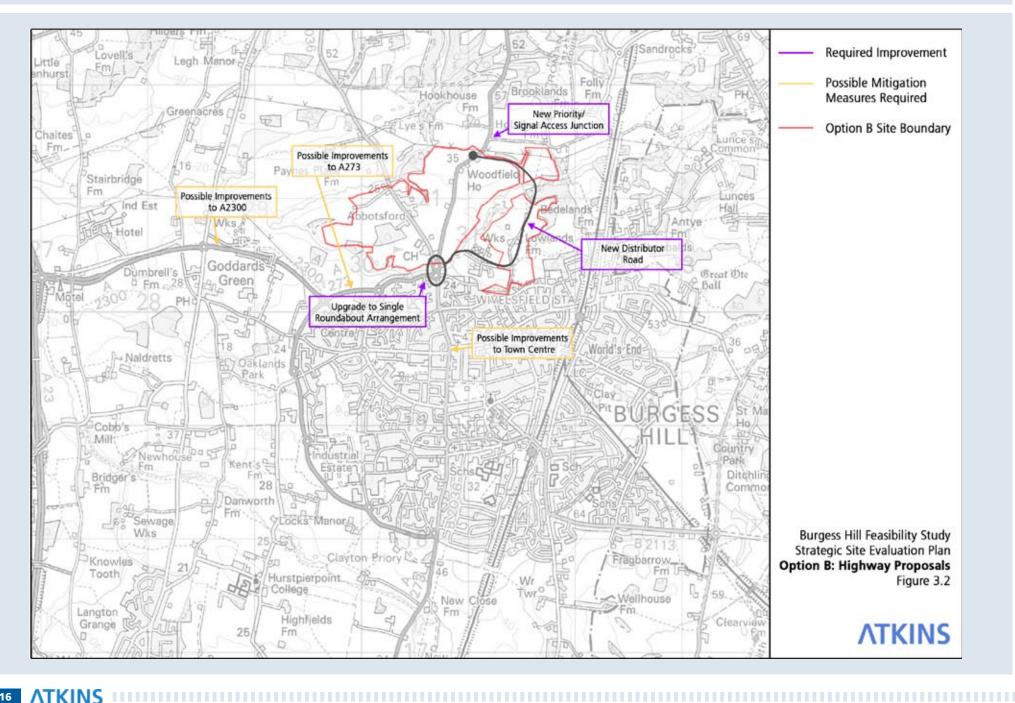
The results of this transport study also suggest the proposed development of 3,987 houses to the west

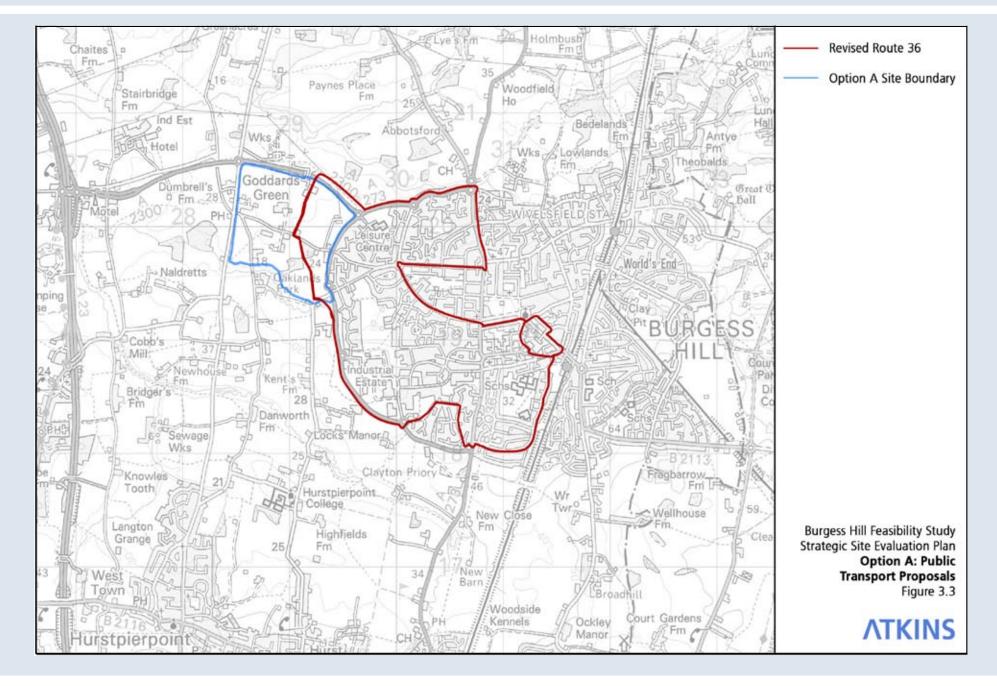
of Burgess Hill under Option B would have a greater impact and could only be supported by associated improvements in transport networks. This Option would result in congestion and would require more substantial investment in highway infrastructure works and public transport services involving a greater landtake especially in the town centre and would also need to be linked to the town by appropriate and direct pedestrian and cycle routes.

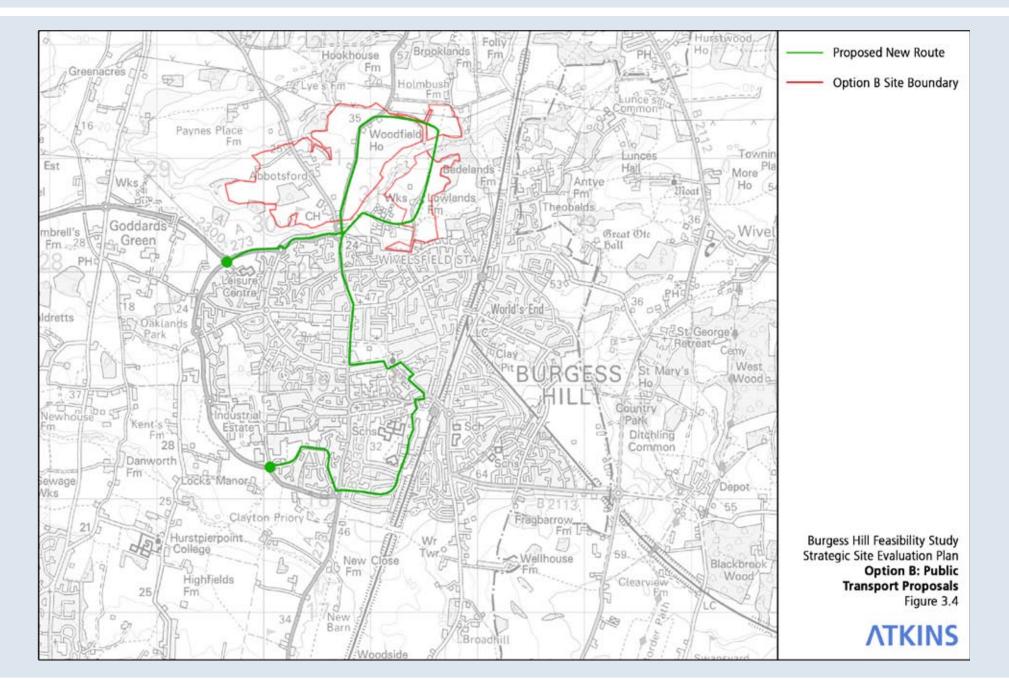
Option B could have a detrimental impact on villages to the north of Burgess Hill. A smaller number of units on the site may be appropriate to decrease this impact.

This study is strategic in nature and has used available traffic count, bus patronage and rail data. This has allowed the study to take an overview of the transport impact of the development of houses on Options A and B in terms of existing and proposed infrastructure. However, the strategic nature of the study does not allow the transport impact to be assessed at a local scale. It is recommended that if the development options are progressed to the next stage, further study at a local scale should be carried out. This would need to include junction assessments and, for Option B and impact assessment in the Haywards Heath area.









18

# <u>4 - Summary of Findings and</u> Conclusions

The aim of this Addendum report is to identify whether there is potential for additional strategic development to provide up to 5,000 dwellings on land identified as Option A and Option B to accommodate post 2016 housing needs. The study was undertaken in two stages, firstly a site analysis and secondly an assessment of the likely significant impacts on the surrounding transport network.

# 4.1 Site Analysis

The first stage involved a comprehensive site analysis to identify opportunities and constraints to developing areas contiguous with the Burgess Hill urban area and to determine the potential capacity of these areas. This involved undertaking landscape and ecological assessments and desk based assessments of sitespecific waste and infrastructure related issues. The results of these assessments are included within the Burgess Hill Feasibility Study Final Report (September 2005). The Final Report identified three potential development options. Two options (Options A and B) illustrated the potential to accommodate 5,000 dwellings in large self contained urban extensions. Option C demonstrated how the dwellings could be distributed within seven sites around Burgess Hill. Option C was identified as the preferred option and taken forward for more detailed analysis of the site capacities and associated social, community and transport infrastructure requirements.

This addendum provides the same level of detailed analysis for Options and B in order to enable a more robust comparison between the three development options. The most significant constraints to development of Option A are the floodplain, impact on local landscape character, views from the immediate vicinity and long distance views from Hurstpierpoint and the South Downs and proximity and coalescence issues relating to Hurstpierpoint.

The most significant constraints to development of Option B are the floodplain, which bisects the site, the local nature reserve and SNCI to the east and the proximity of Haywards Heath to the north.

Although the majority of the areas are in agricultural use, there are areas of woodlands, hedgerows and streams which should be protected. These areas could be incorporated within any potential development to provide a strong landscape framework and enhance the limited biodiversity.

An assessment of the capacity of existing community facilities and the need for new facilities to serve the new communities was undertaken to inform the land use mix of the proposed development sites. Table 2.2 identifies the issues associated with each site which should be considered further as part of any detailed masterplanning. There will be inevitable adverse impacts on outlying properties and farms with the development of large urban extensions and associated infrastructure which will need to be compensated. There will also be new impacts on the surrounding landscape and amenities of local residents which will require additional detailed assessment and mitigation.

#### 4.2 Impact Assessment

Stage two involved assessing the impacts of the maximum site capacity on the surrounding transport network in order to determine whether adverse impacts could be satisfactorily mitigated. The Transport Analysis looked at potential trip generation and the distribution and assignment of vehicular trips to the local highway network. A link capacity assessment was also undertaken to identify the capacity of the network to accommodate more traffic and inform the need for infrastructure improvements.

The results of this analysis suggest the proposed development of Option A and Option B in Burgess Hill could be supported by associated improvements in transport networks. This would include investment in additional bus services and upgrading of existing carriageways and junctions. Development of Option B would result in more significant congestion and delays during peak periods and would require major investment into carriageway upgrading and junction improvements. It would be necessary to ensure that the development sites are linked to the town centre by appropriate and direct cycle and pedestrian routes, to ensure that the sites are fully integrated with existing development in Burgess Hill.

This transport study suggests that the cost per dwelling associated with the transport proposals would be £12,200 for Option A and £8,800 for Option B. It is recommended that if the development options for Burgess Hill are progressed to the next stage, further study at a local scale should be carried out. This would include junction and/or network modelling.

## 4.3 Conclusions

Table 4.1 summarises the key issues pertaining to each site option (Options A, B and C) and provides an evaluation of how each option performs in relation to key criteria. The table demonstrates that Option C performs best in relation to all criteria expect infrastructure costs. Transport costs for Option C would be between £13,500 and £13,800 per dwelling, this may require funding in addition to developer contributions.

Option C represents an opportunity to provide the required number of dwellings with the least impact on the surrounding landscape and transport network. The option would allow for successful integration with existing communities, good cycle and pedestrian access to the town centre and provide an eastern link road to serve the new communities and improve access around Burgess Hill for existing communities. Distributing the housing requirement rather than concentrating it in a large self-contained community will also improve the viability and vitality of the existing town centre.

Option/ Criteria	Site Capacity	Transport Accessibility	Integration with surrounding environment	Impact on Transport Network	Infrastructure Costs	Impact on Viability of Town Centre
Option A	2,079 Shortfall of 2,921 dwellings	Second highest transport and accessibility score compared to Option B and Option C with link road.	The site adjoins the settlement edge, however the A273 may be perceived as a physical barrier to east-west movement between the site and Burgess Hill. The western edge of the site and the interface with the existing development at Goddard's Green will need to be carefully considered to retain the locally distinctive character of the Goddard's Green junction and country lanes which border the western site boundary.	Minor congestion and delays during peak period. May impact upon existing congestion in the vicinity of Wivelsfield Station. Junction improvements may be required.	No significant utilities infrastructure costs. Minor upgrading and junction improvement costs. However high cost per dwelling due to low number of houses.	Furthest option from the town centre and closest to the A23. Option would comprise self contained community divided from existing urban area by A273 which may reduce potential for integration with existing communities. Limited potential to improve viability of existing services through financial contributions and increased usage.
Option B	3,987 Shortfall of 1,013 dwellings	Lowest transport and accessibility score.	However, access to the town centre must be via the A273 and not Freeks Lane in order to avoid	Congestion and delays during peak periods. Major upgrading of carriageways and junctions required. Will impact upon existing congestion in the vicinity of Wivelsfield Station. Junction improvements required.	Utilities investment required to bring water to site. Major upgrading and junction improvement costs.	This option would comprise a self contained community which may reduce potential for integration with existing urban area. Limited potential to improve viability of existing services through financial contributions and increased usage. Proposed facilities and open space in the south of the site could serve the existing communities.
Option C	5,014 Surplus of 14 dwellings	Highest transport and accessibility score with the proposed link road.	The density, scale and form of development in each site would relate well to the existing urban areas. Minimal visual impact on surrounding areas which could be mitigated with planting. Some wider visual impacts may be associated with the link road. Ground modelling and landscaping could help to mitigate.	Eastern link road required to support development of Option C. Minor impacts on existing roads.	Significant utilities infrastructure investment due to capacity of electricity and gas and physical obstructions which hinder servicing of water to sites. Significant transport costs due to requirement for eastern link road.	This option would improve the viability of the town centre through increased financial contributions and usage. Proposed facilities and open space would serve existing communities. The proposed link road would improve accessibility around the east of Burgess Hill to the benefit of existing communities to the east of the railway line.

# Table 4.1: Burgess Hill Site Options Evaluation

