

**ASSESSMENT
OF
NORTHERN
GROWTH STRATEGY**

(Option 2)

May 2009

Option comprises land at:

- West Hemel Hempstead (1,500 units)
- North of Gadebridge (1,700 units)
- Grovehill and Woodhall Farm (2,400 units)
- Holtsmere End (1,200 units)

Total units = c6,800

* Note: Dwelling capacities are indicative only.

Notes:

4. For further explanation of the issues being considered, please refer to the accompanying Methodology Statement (March 2009).
5. This document sets out the Councils' assessment of the issues as at 1st May 2009. Some information is incomplete. These gaps are not considered to be significant in terms of the forthcoming consultation. However, outstanding information will be sought prior to any decisions being made by the Councils with regard to the preferred growth option.
6. Please note that some information for land in St Albans district is not available in electronic form, so does not feature on the maps.

Key

- ✓ Impact assessed as broadly positive**
- ✘ Impact assessed as broadly negative**
- Impact considered as neutral**
- ? Impact is unclear and/or cannot be assessed at this stage**

- ✓ / - Impact is a mix of positive and neutral**
- ✘ / - Impact is a mix of negative and neutral**

For a full assessment of the economic, social and environmental impact of the growth option, and an indication of the weightings accorded to key sustainability indicators, please refer to the Sustainability Working Note prepared by independent consultants C4S.

(a) Sieve mapping

	Issue	Assessment	Nature of impact
1.	Flood risk	<p>All of the sites falls within Flood Zone 1, denoting the lowest level of flood risk i.e. 1 in 1000 year or less for river flooding. Consideration would however need to be given to the design of any buildings to reduce the risk of localised flooding from localised ponding and runoff during an extreme flood event.</p> <p>A preliminary Flood Risk Assessment has been prepared for the West Hemel Hempstead site by consultants EPG Clear, acting on behalf of Barratts. This recommends that the existing balancing pond off Long Chaulden in the eastern section of the site is retained and/or enhanced, to prevent any deterioration in performance with regard to runoff generated by the site. As the site is located on a slope there is potential for overland flow routes to develop within the site, which could pose a flood risk to properties located on the lower sections. Overland flow routing will therefore need to be carefully considered to ensure that roads and open spaces are configured and aligned to safely convey and attenuate flooding. These are however matters for the masterplanning and detailed design stages.</p> <p><u>OVERVIEW:</u> All of the sites are located in Flood Zone 1 and hence outside the flood plain. The Northern option therefore satisfies the requirements of the sequential test outlined in Planning Policy Statement 25: Development and Flood Risk. Appropriate Sustainable Urban Drainage Systems (SUDS) can be considered further through the detailed design and masterplanning process.</p> <p>See Map 2.</p>	-
2.	Statutory environmental designations (e) Special Areas of Conservation	The closest SAC is at Ashridge (Chilterns Beechwoods). The Appropriate Assessment (AA) Scoping Report (April 2008) considered that development of a significant scale to the west / northwest of Hemel Hempstead, which requires significant new road infrastructure such as a bypass, would potentially have a detrimental impact upon the SCA and would therefore trigger the requirement for a full Appropriate Assessment.	✖

	<p>(SACs)</p> <p>(f) Sites of Special Scientific Interest (SSSIs)</p> <p>(g) Local Nature Reserves (LNRs)</p> <p>(h) Chilterns Area of Outstanding Natural Beauty (AONB)</p>	<p>Development to the west and north of West Hemel Hempstead would bring the extended town closer to the AONB boundary. The impact of this new development would need careful mitigation through the inclusion of landscape buffering and new woodland planting. The landscape impact of a new bypass and its associated junctions would be significant.</p> <p>Part of Shrubhill Common, adjacent to West Hemel Hempstead is designated as a Local Nature Reserve. It will therefore be important to ensure that the biodiversity corridor is extended through any new development that takes place and out into the countryside beyond.</p> <p>OVERVIEW: None of the other sites that comprise the Northern option directly impact upon any statutory environmental designations, although the visual impacts of development to the north and west need to be carefully assessed due to their proximity to the AONB boundary. In addition to the impact of the new housing, the visual effect of the proposed bypass is of particular concern. This option would require a full Appropriate Assessment to be undertaken to consider its impact on the Special Area of Conservation (SAC) and any necessary mitigation measures.</p> <p>See Maps 3(a) and 3(b).</p>	
3.	<p>Non-statutory environmental designations</p> <p>(d) Ancient Semi Natural Woodland</p> <p>(e) Wildlife Sites</p> <p>(f) RIGGS</p>	<p>West Hemel Hempstead:</p> <ul style="list-style-type: none"> Established hedgerows are the most significant ecological feature at West Hemel Hempstead. These features can be retained and incorporated as part of the green corridors that run through the new development. <p>North of Gadebridge:</p> <ul style="list-style-type: none"> Dell Wood is designated as Ancient Semi-Natural Woodland. Development would need to be carefully planned so as to avoid having a detrimental impact upon this area. Warners End Valley is an important 'green tongue' connecting the town with the countryside beyond. This would need to be extended through any new development to ensure this countryside connection is retained. The development of a bypass would however act as a barrier to this biodiversity corridor. 	-

		<ul style="list-style-type: none"> • Warners End Wood also plays a locally important biodiversity role. • All of the above areas would need to be incorporated into the wider green infrastructure network for the development. <p>Grovehill and Woodhall:</p> <ul style="list-style-type: none"> • Varneys Wood to the north of the site is designated as Ancient Semi-Natural Woodland. Although development is unlikely to extend this far north, the bypass may have an impact upon this area. <p>Holtsmere End:</p> <ul style="list-style-type: none"> • There are no non-statutory designations affecting this area. However, there are a number of important areas of open space on the edge of the existing town which play an important biodiversity role. These should be incorporated into the wider green infrastructure network for the development. <p>Protected special such as badgers are likely to be present in certain areas and their habitats will need to be carefully accommodated within any development.</p> <p>There are no RIGGS within the Northern option.</p> <p>See Map 4.</p>	
4.	<p>Heritage designations</p> <p>(d) Conservation Areas</p> <p>(e) Listed Buildings</p> <p>(f) Scheduled Ancient Monuments</p>	<p>West Hemel Hempstead:</p> <p>Winkwell to the south is a Conservation Area. However, all but a very small section adjacent to Primrose Cottage is on the other side of the railway line. There is also an Area of Archaeological Significance at Winkwell, but as this is separated from the proposed development area by the railway line and London Road (A4251), there is unlikely to be any impact upon this. The area is considered to have limited archaeological potential. The only exceptions are the possible line of a Roman Road along Chaulden Lane and some evidence of agricultural exploitation of the landscape in the Roman period.</p> <p>North of Gadebridge:</p>	-

		<p>Boxted Farm is a Grade 2 listed building. Any development would need to pay attention to maintaining a degree of physical separation and maintaining the setting of this Listed Building.</p> <p>Grovehill and Woodhall: No historic designations affect this area. To the west, Piccotts End is designated as a Conservation Area and also affected by an Area of Archaeological Significance. Development would need to retain an appropriate physical and visual buffer with this area. The creation of a bypass and its junction with the Leighton Buzzard Road would have a visual impact upon this area and lead to a greater visual separation between this small settlement and the Gade Valley to the north.</p> <p>Holtsmere End: No historic designations affect this area. The closest Scheduled Ancient Monument is Aubreys fort, adjacent to the M1 motorway near Redbourn.</p> <p>There are no Historic Parks and Gardens within the Northern option.</p> <p>See Map 5.</p>	
5.	Agricultural land classification	<p>All of the development locations with each of the three growth options are currently used for agricultural purposes. It is understood that all of the land within the Northern option is Grade 3, apart from a small area at Holtsmere End, which is Grade 2.</p> <p>Much of the land at West Hemel Hempstead and North of Gadebridge is owned and farmed by the Gardener family. Their agent has confirmed that following development of this land the resulting field patterns leave viable agricultural fields and the family would continue to productively farm the remaining area within their ownership.</p> <p>See Map 6 for the full extent of the Gardener family land ownership.</p>	-
6.	Pipelines	<p>Holtsmere End is the only area directly affected by the presence of underground pipelines that serve the Buncefield Oil Depot. These pipelines would need to incorporate a 'buffer zone' to enable access for future repair and maintenance. This buffer zone could form part of the</p>	-

		<p>greenspace network for the neighbourhood. Whilst these pipelines do therefore not preclude the development of a new neighbourhood in this location, they do have an impact upon the land area available and its configuration.</p> <p>See Map 7.</p>	
7.	Overhead power lines	<p>A high voltage (400kV) transmission line runs to the east of the proposed development area at Holtsmere End, but does not affect the development area shown.</p> <p>A radio mast is located along the footpath that passes through the centre of the West Hemel Hempstead site. This could either be repositioned outside of the site, or accommodated within the development layout.</p> <p>See Map 7.</p>	-
8.	Location in relation to Health and Safety consultation zones	<p>None of the areas are affected by the Health and Safety Executive's current consultation zones relating to the Buncefield Oil Depot.</p> <p>Much of the area proposed for employment growth – which is common to all three growth scenarios - does fall within these buffer zones. However, only a small area is within the recently defined 'Development Proximity Zone' where new built development of any form is not advised. The majority lies within the outer zones, where employment development is permissible, subject to a sliding scale of constraints regarding size of buildings and number of employees.</p> <p>See Map 7.</p>	-
9.	<p>Impact upon Key Environmental designations (from SA/SEA)</p> <p>(j) Chilterns Area of Outstanding</p>	<p>(a) Chilterns AONB</p> <p>None of the sites that comprise the Northern option fall within the Chilterns Area of Outstanding Natural Beauty (AONB). Development of land at West Hemel Hempstead and to the north of the town (North of Gadebridge and Grovehill and Woodhall Farm) would however bring the extended town significantly closer to the AONB boundary. The impact of this new development and associated new road infrastructure would need careful mitigation through the inclusion of landscape buffering and new woodland planting.</p>	*

	<p>Natural Beauty (AONB)</p> <p>(k) Special Area of Conservation (SAC)</p> <p>(l) Site of Special Scientific Interest (SSSI)</p>	<p>(b) Special Area of Conservation (SAC) None of the land that comprises the Northern option falls within the SAC. The closest SAC is at Ashridge (Chilterns Beechwoods). The Appropriate Assessment (AA) Scoping Report (April 2008) considered that development of the scale proposed to the west / northwest of Hemel Hempstead, which requires significant new road infrastructure such as a bypass, would trigger the requirement for a full Appropriate Assessment. The level of development proposed in the Northern option is therefore considered to have a potential impact upon the SAC and would require a full Appropriate Assessment to be carried out.</p> <p>(m) Sites of Special Scientific Interest (SSSIs) Part of Shrubhill Common, which lies adjacent to West Hemel Hempstead, is designated as a SSSI.</p> <p>(n) Local Nature Reserves (LNRs) Shrubhill Common, adjacent to West Hemel Hempstead is a LNR. This green wedge would need to be continued through the site to maintain the existing countryside link. This would be harder to achieve with the development of a bypass as this would act as a significant physical barrier.</p> <p>(o) Semi-Natural Ancient Woodland (p) Historic Parks and Gardens (q) Scheduled Ancient Monuments (SAMs) (r) Floodplain</p> <p>For consideration of these issues, please refer to Sections 1 (flood risk), 3 (Non-Statutory environmental designations) and 4 (heritage designations).</p> <p>See Maps 2, 3 and 4.</p>	
--	--	---	--

(b) Infrastructure and Deliverability

	Issue	Assessment	Nature of impact
10.	<p>Infrastructure To include consideration of the following:</p> <ul style="list-style-type: none"> ▪ Are there places available in existing schools which can meet some of the future requirements? ▪ Is there sufficient green infrastructure to meet future requirements; or can appropriate provision be made as part of new development? ▪ How are increased requirements covered by current planned investment and to what extent 	<p>West Hemel Hempstead:</p> <ul style="list-style-type: none"> • New small-scale health facilities (i.e. a GP surgery) would be required as part of the new neighbourhood, as access to existing facilities within the town is poor and there is insufficient spare capacity. Some small-scale retail provision will be required to meet local needs. • Development would require additional primary school provision. This could be provided through the relocation of an existing one form entry school (Pixies Hill) to create a new two form entry school to serve both the existing and new development, or through utilising space capacity at Chaulden School, which is a 2 form entry school currently operating at less than 1 form entry capacity. • Initial draft masterplans drawn up by the landowners show the inclusion of areas of new planting and open space as part of the proposed development. In terms of green infrastructure, the area is of sufficient size to allow the main part of the dry valley adjoining Fields End to be retained as a link to Shrubhill Common (a Local Nature Reserve and important wildlife corridor) connecting the town with the countryside beyond. A new 30m tree belt was planted by one of the landowners in 2004/5 and runs through the centre of the site. This will help to break up and screen new development and also act as an ecological corridor. <p>North of Gadebridge:</p> <ul style="list-style-type: none"> • The assumed level of housing would generate the need for a new single form entry primary school – although provision would need to be considered alongside that for West Hemel Hempstead, which may enable provision of a 2 form entry school shared with the adjacent development. There is not expected to be any spare capacity at the nearest school (Galley Hill (formerly Rossgate). • Whilst there is a doctors surgery in Gadebridge, additional provision will need to be made within the new development to ensure local services are not over-burdened. • Carefully planned green infrastructure will be very important to ensure the continued role of Warners End Valley as a ‘green tongue’ connecting the town with the countryside beyond. Existing protected woodland will also need to be integrated into the scheme and appropriate 	* / ✓

	<p>can these meet the requirements of new development?</p> <ul style="list-style-type: none"> ▪ What are the thresholds to make specific infrastructure viable? ▪ Conclusions of the Hertfordshire Infrastructure and Investment Study (HIIS) 	<p>mitigation measures taken to ensure its future protection. Given the extent of the Gardener family landholdings (see Map 6), there are considered to be ample opportunities for new accessible green space to support the development.</p> <p>Grovehill and Woodhall:</p> <ul style="list-style-type: none"> • This area comprises two neighbourhoods and hence the requirement for a new two form entry primary school. The County Council have advised that if the neighbourhood size were to increase further, or if ongoing work proves higher child yields, a larger three form entry school would be required. • Due to the lack of landowner engagement (see section 11 below), no initial masterplanning work has been carried out for this area. However, due to its scale and the relative sensitivity of the landscape (see Section 25), careful consideration will need to be given to green infrastructure provision within the area. • There are existing doctors surgeries in Grovehill and Woodhall Farm. However, the new neighbourhood would need to provide additional provision within their local centres to ensure adequate provision for the new population and prevent existing facilities (which are understood to already be at capacity) from becoming overburdened. <p>Holtsmere End:</p> <ul style="list-style-type: none"> • Would generate the requirement for a new single form entry school. However, due to the proximity to development at Grovehill and Woodhall and the advice of the County Council (above), there may be scope to provided a new two form entry school to serve the new development at Holtsmere End and some of the development on the adjacent site. The County Council's preference is for new primary schools to be two form entry. • No initial masterplanning work has been carried out for this area. There is an existing doctors surgery and local centre (dominated by a Sainsburys supermarket) at Woodhall Farm. However, due to the population increase associate with a new neighbourhood, additional small-scale provision would need to be provided as an integral part of the development. <p><u>OVERVIEW:</u></p> <p>The Hertfordshire Infrastructure and Investment Study (HIIS) does not lead to any firm conclusions regarding any of the growth options. It does however estimate that the cost of the</p>	
--	---	--	--

	<p>northern bypass would be about £75 million. This cost could not be borne by the development and would require Government funding. It is not clear whether any such funding would be available. This raises important questions regarding the deliverability of this key piece of infrastructure. The cost of the bypass is so high due to its physical extent (connecting the A41 to the south west of the town with the Redbourn Road in the north east), and the barriers that it would have to cross. These include a mainline railway, canal and river at Winkwell. A direct connection would ideally be made with the M1 motorway, but this option would increase costs further and would not be supported by the Highways Agency. As well as costs, the environmental impact of the bypass needs to be considered. The road would require a significant land-take and bring the town closer to the AONB boundary than the housing alone. It would be highly visible on the slopes of the Gade and Bulbourne Valleys and would create a physical barrier, preventing important ecological corridors (Shrubhill Common, Warners End Valley etc) connecting to the open countryside. The Appropriate Assessment Scoping Report also considered that the bypass could have wider environmental implications. By increasing the accessibility of the area, it could result in higher visitor numbers to the Chiltern Beechwoods at Ashridge. This would have a detrimental effect upon the Special Area of Conservation.</p> <p>Discussions regarding schooling are still ongoing with the Local Education Authority (Hertfordshire County Council), but it is clear that appropriate provision can be made within the new development.</p> <p>Whilst the neighbourhood configuration allows for the provision of essential local facilities, such as primary schools and doctors surgeries, (subject to future detailed discussions with relevant service providers), consideration also needs to be given to the ability of the growth option to accommodate more significant infrastructure, such as a reserve secondary school site, a new cemetery and a town stadium. These more strategic pieces of infrastructure, which are of town-wide importance, are more easily accommodated where there is a larger agglomeration of new development. This is considered to be an advantage of the Northern option.</p> <p>Larger neighbourhoods (or two small neighbourhoods adjacent to one another) would also enable the Hertfordshire County Council policy of providing 2 form entry primary schools within on-site nursery provision to be followed. An agglomeration of development also provides greater scope</p>	
--	--	--

		<p>for the neighbourhoods to include a wider range of services and facilities within them – hence improving their sustainability credentials by reducing the need to travel.</p> <p>See Maps 8 and 9.</p>	
11.	<p>Deliverability</p> <p>To include consideration of the following:</p> <ul style="list-style-type: none"> ▪ the willingness of landowners to bring land forward for development ▪ the level of co-operation between landowners on sites that are in more than one ownership ▪ the viability of the development, particularly with regard to provision of key infrastructure ▪ flexibility of options – in terms of phasing options and capacity to 	<p>West Hemel Hempstead:</p> <p>Land ownership split, but there appears to be a willingness for landowners / developers to work together to bring forward a comprehensive and co-ordinated development. Northern part of site is owned by the Gardener family (who have extensive landholdings and farm locally). Taylor Wimpey have an option on this land. The southern section of the site, formerly owned by the Proctor family is now owned by Barratts, with a small area in the ownership of Hertfordshire County Council.</p> <p>North of Gadebridge:</p> <p>The majority of this area is owned and farmed by the Gardener family, who, together with their agent are actively involved in promoting the land for development. A smaller section of the site is owned by Hertfordshire County Council, who are also fully engaged with the process.</p> <p>Grovehill and Woodhall:</p> <p>There has been no landowner engagement with the Councils regarding the potential development of this land.</p> <p>Holtsmere End:</p> <p>The land is owned by Mr and Mrs Barr, who farm the land. Barratts are currently negotiating an option on the land. Although no technical work has yet been carried out to support redevelopment, their agents have been actively engaged in promoting the land.</p> <p><u>OVERVIEW:</u></p> <p>A number of landowners and/or appointed agents and house builders are actively involved in promoting their sites for development. These landowners have positively engaged with the Council in terms of their attendance at landowner meetings to discuss the growth agenda and</p>	*

	<p>accommodate appropriate non-residential uses.</p> <ul style="list-style-type: none"> ▪ the likelihood of sites actually progressing from designation to dwelling construction at the required rate. ▪ relative costs 	<p>have shown a willingness to enter into open discussions and share technical work. They have engaged in at least initial discussions with adjoining landowners where ownership of a site is split, although more formal joint-working arrangements would be required on several sites.</p> <p>A large area of the land that comprises the northern option is under the ownership of the Gardener family, with housebuilders having options on specific parts. The landowner has a proven track record of bringing land forward for residential development – with the Fields End estate built on former Gardener land. The extent of the land ownership brings with it flexibility in terms of the precise extent of the development areas. However, the Gardener land itself (with associated land parcels) is not sufficient to deliver the full quantum of development required and there is no active landowner involvement or engagement for the land north of Grovehill and Woodhall. This area has the capacity to accommodate two new neighbourhoods (i.e. approximately 2,400 new homes) and there is a serious question as to whether this important component of the option could be delivered.</p> <p>Adopting a Northern agglomeration could make it slightly harder to develop neighbourhoods with distinctive characters and qualities, due to the more limited number of locations. However, although in relatively close proximity, the areas in question are relatively different in character. It could also result in slightly less locational choice for those looking to buy a new property within the area than the dispersed option, as development would be concentrated in the north and west of the town. The Northern option could however be easier to manage for service providers as opposed to the dispersed option, as development is in larger agglomerations.</p> <p>The delivery of sites would need to be carefully planned to ensure that for each neighbourhood the key non-residential elements (such as the community facilities, schools and GP services) come on-stream at the appropriate time and does not overburden existing provision in the interim. Establishing a clear phasing for sites throughout the plan period i.e. to 2031 would help prevent these problems arising. This is important for all three options. The size of the area would provide a high level of flexibility in terms of the phasing of development.</p> <p>The Hertfordshire Infrastructure and Investment Study estimates that the costs of the northern bypass would be about £75 million. This cost could not be borne by the development and would</p>	
--	---	--	--

		<p>require Government funding. As it is not clear whether such funding would be available, significant doubt is cast on the deliverability of this key infrastructure component.</p> <p>In the light of the above, deliverability of the full Northern option is assessed to be the least good of the three options under consideration.</p>	
--	--	--	--

(c) Geological considerations

	Issue	Assessment	Nature of impact
12.	Mineral protection areas and/or areas of search	None of the areas are affected by any minerals designations.	-
13.	Land contamination	<p>West Hemel Hempstead: Dacorum Borough Council's Environmental Health team has no records of any potentially contaminative former land uses on the site, although there is a potentially infilled old chalk pit and a few potentially infilled agricultural ponds within the site boundary.</p> <p>North of Gadebridge: Dacorum Borough Council's Environmental Health team has no records of any potentially contaminative former land uses on the site,</p> <p>Grovehill and Woodhall: Dacorum Borough Council's Environmental Health team has no records of any potentially contaminative former land uses on the site, although there are a couple of potentially infilled old chalk pits and a potentially infilled agricultural pond within the site boundary. It is understood that part of Washington Avenue playing fields in Grovehill, immediately to the south of the site, was used for landfill/tipping in the early 1970s.</p> <p>Holtsmere End: This area falls within St Albans district. Historical maps show a potentially infilled old pit to the north of the Woodhall Farm estate, just over the Dacorum Borough boundary.</p> <p><u>OVERVIEW:</u> No significant issues raised which cannot be overcome through appropriate mitigation and remediation.</p>	-
14.	Ground stability	No known issues, although the area at Grovehill and Woodhall that may have been used for	-

		landfill / tipping would require further investigation.	
15.	Landfilling records	See Section 13 (Land Contamination). No significant issues raised which cannot be overcome through appropriate mitigation and remediation.	-
16.	Hydrogeological sensitivity (i.e. groundwater / aquifer protection zones)	All sites fall within Zone 3 of the Groundwater Protection Zone (with Zone 1 being the most sensitive). This is known as the 'Total Catchment Area.' The Environment Agency define the Total Catchment Area as the total area needed to support removal of water from the borehole and to support any discharge from the borehole.	-

(d) Transport and Accessibility

	Issue	Assessment	Nature of impact
17.	Results from Paramics Model	Full results not yet available. Please see separate report relating to Future Year Model run outputs (relating to impact of growth within existing town boundaries).	?
18.	<p>Wider Transport Assessment</p> <p>To include an initial assessment of the following:</p> <ul style="list-style-type: none"> ▪ Accessibility – including on foot and by cycle ▪ Public transport routes and their potential for dealing with growth ▪ Ability of locations to be served by all modes of travel ▪ Quality of the routes linking new development to town centre and other key locations ▪ Capacity of existing roads and services 	<p>Advice from Hertfordshire County Council is as follows:-</p> <p>West Hemel Hempstead and North of Gadebridge:</p> <p>There is an opportunity to introduce a cycle route to connect the areas with the town centre through adjacent residential areas but it will need to negotiate many existing barriers in terms of restricted road junctions and narrow sections of highway, as a result a route to connect with the town centre is unlikely to be of a high quality. It may be possible to upgrade the Leighton Buzzard Road from the bypass to include a dedicated cycling route that could provide an alternative, attractive and direct route into the town centre.</p> <p>The bypass will offer a realistic alternative route to allow bus services to travel through the area. There is minimal opportunity for bus priority measures towards the town centre and the approaches to the town from this direction suffer from significant congestion in the peak hours.</p> <p>The nature of the road network in the adjacent residential areas consists of quite narrow local access roads designed to serve the existing layout and due to their characteristics they may not be suitable to accommodate a significant increase in through traffic.</p> <p>Grovehill and Woodhall Farm and Holtsmere End:</p> <p>There is an opportunity to introduce a cycle route to connect the areas with the town centre through adjacent residential areas but it will need to negotiate many existing barriers in terms of restricted road junctions and narrow sections of highway, as a result a route to connect with the town centre is unlikely to be of a high quality. It may be possible to upgrade the Leighton Buzzard Road from the bypass to include a dedicated cycling route that could provide an alternative, attractive and direct route into the town centre.</p>	?

		<p>The bypass will offer a realistic alternative route to allow bus services to travel through the area. There is minimal opportunity for bus priority measures towards the town centre and the approaches to the town from this direction suffer from significant congestion in the peak hours.</p> <p>A development in this area extends Hemel Hempstead further to the north east away from the town centre and rail station, there is not a direct access to the main routes that serve the town however, they are opportunities to introduce quality cycling and pedestrian links to the nearby Maylands area.</p> <p>The nature of the road network in the adjacent residential areas consists of quite narrow local access roads designed to serve the existing layout and due to their characteristics they may not be suitable to accommodate a significant increase in through traffic.</p> <p><u>OVERVIEW:</u> It is assumed that this option includes a northern bypass that will connect the A41 to the southwest of the town with the B487 Redbourn Road in the northeast). It is also assumed that the bypass will have a junction with the A4146 Leighton Buzzard Road and several other junctions linking the route with the existing network.</p> <p>At this stage the locations of the site accesses have not been determined therefore it is difficult to predict the likely impact of the option on the surrounding road network.</p> <p>The bypass route through the all developments will provide an opportunity to route interurban and local bus services into the area.</p> <p>See Map 12.</p>	
--	--	---	--

(e) Economic development and regeneration potential

	Issue	Assessment	Nature of impact
19.	<p>Proximity to existing employment opportunities</p>	<p>West Hemel Hempstead: Poorly located in respect of existing employment opportunities at Maylands. Detailed consideration will need to be given to new bus routes connecting the area with the town centre, railway station and employment areas to ensure car-borne travel is minimised.</p> <p>North of Gadebridge: Poorly located in respect of existing employment opportunities at Maylands. Detailed consideration will need to be given to new bus routes connecting the area with the town centre, railway station and employment areas to ensure car-borne travel is minimised.</p> <p>Grovehill and Woodhall: Relatively well located in terms of employment opportunities at Maylands, although would require travel through an area that already suffers from severe peak hour traffic congestion. Some distance from employment opportunities in the town centre and from the railway stations, so will require new bus routes to ensure car-borne travel to these areas is minimised.</p> <p>Holtsmere End: Well located in terms of employment opportunities at Maylands, although would require travel through an area that already suffers from severe peak hour traffic congestion. Very peripheral in terms of the town centre facilities and accessing the railway stations.</p> <p><u>OVERVIEW:</u> The eastern component of the Northern option (Grovehill and Woodhall and Holtsmere End) is considered to be within relatively easy distance of the main employment area, and could therefore enable access by foot or bicycle. However, there are questions regarding the deliverability of part of this area (see Section 11). The remaining areas are more peripheral, although employment opportunities are available within the town centre, local centres and/or the smaller employment areas.</p>	<p>- / ✓</p>

		<p>The new neighbourhoods will provide additional local employment opportunities, although these are expected to be limited in both their range and scale.</p> <p>See Maps 8 and 10.</p>	
20.	The adjacency principle (i.e. potential to impact positively on neighbouring areas)	<p>West Hemel Hempstead: Development here is not expected to have a significant beneficial impact in terms of ‘uplift’ for neighbouring areas, as these are already relatively prosperous (i.e. Chaulden and Warners End).</p> <p>North of Gadebridge: Development here is not expected to have a significant beneficial impact in terms of ‘uplift’ for neighbouring areas, as these are already relatively prosperous (i.e. Gadebridge and Warners End).</p> <p>Grovehill and Woodhall: Grovehill is one of the most deprived wards within Hemel Hempstead. There is therefore scope for any new development to assist with the regeneration of this area. The local area would however suffer if the extensive informal public open space provided to the north of the existing town boundary were built upon.</p> <p>Holtsmere End: Development may have some beneficial impacts in terms of ‘uplift’ for neighbouring areas, as Woodhall Farm is the only neighbourhood in Hemel Hempstead that does not have a full local centre. Retail and community provision is currently centred around the Sainsburys store. A new neighbourhood may help to increase the level of facilities and services for existing as well as new residents.</p> <p><u>OVERVIEW:</u> Impact difficult to assess, but considered to be relatively limited in terms of uplift of existing residential areas. Refer also to consideration of ability to support Hemel 2020 (Section 21 below). The impact of growth is concentrated in a more limited number of locations that the Dispersed</p>	?

		option. Development will have a significant impact upon existing residents in the North and West of Hemel Hempstead and other nearby settlements (such as Redbourn).	
21.	Scope to support Hemel 2020 Vision	<p><u>Neighbourhood centres</u> As all locations will comprise new neighbourhoods, they are not expected to have any direct impacts (positive or negative) on the town's existing neighbourhood structure. By creating a more concentrated form of development there is capacity to include a broader range of social, community and retail facilities within the new neighbourhood centre(s).</p> <p><u>Waterhouse Square and Wider town centre</u> An increase in the town's population should help ensure the viability of existing town centre uses and encourage the provision of improved facilities included as part of the proposed Waterhouse Square development. This benefit would be equal for all three growth options.</p> <p><u>Green spaces</u> All neighbourhoods and extensions to neighbourhoods will be expected to make appropriate open space provision. This should include the continuation of any existing green links / biodiversity corridors connecting the town with the open countryside. The Northern option offers scope for the provision of a significant new area of open space – in the form of a country park – that may be more difficult to achieve through a more dispersed form of development. This would serve both new and existing residents.</p> <p><u>Maylands regeneration</u> All 3 growth scenarios assume that additional employment land will be provided on land to the east of the existing industrial area. The expansion of this employment area will assist with the regeneration of Maylands by providing expansion opportunities for existing businesses, new space to accommodate new employment development and the opportunity to provide other facilities (such as park and ride provision and a green energy centre). This will benefit both new and existing businesses. The expansion of the town will also result in an increase in the size of the local workforce and, if planned properly, boost services and facilities within the town, which will attract highly skilled workers to the area. Whilst it is accepted that not all new residents will work in the Maylands area, there are expected to be some economic benefits associated with the</p>	-

	<p>relatively close relationship between employment opportunities and some of the new homes, through the Northern option.</p> <p><u>OVERVIEW:</u> Impact difficult to assess with any certainty, but considered to be relatively significant on a town-wide basis, but potentially less significant than for the Eastern Option due to the distance of some of the areas from Maylands.</p>	
--	--	--

(f) Green Belt and Landscape Character

	Issue	Assessment	Nature of impact
22.	<p>Conformity with PPG2 criteria:</p> <ul style="list-style-type: none"> vi. to check the unrestricted sprawl of large built-up areas; vii. to prevent neighbouring towns from merging into one another; viii. to assist in safeguarding the countryside from encroachment; ix. to preserve the setting and special character of historic towns; and x. to assist in urban regeneration, by encouraging the recycling of derelict and 	<p>West Hemel Hempstead:</p> <ul style="list-style-type: none"> • There would be no actual merging, but there would be limited physical separation with Winkwell, Bourne End and Potton End. The physical separation would be further reduced if a bypass were built. • Shape of the site reduces the impact of development and prevents urban sprawl. • The railway line forms a physical barrier to the south and Pouchen End Lane would provide a new boundary to the west and north. <p>North of Gadebridge, Grovehill and Woodhall:</p> <ul style="list-style-type: none"> • Development in this location would have no clear northern boundary to act as a defensible northern boundary to the town. Whilst a bypass would create a clear boundary line, it would also require higher land-take than the neighbourhood development alone, resulting in further encroachment into the open countryside. • Whilst physical separation between the new development and Piccotts End would be maintained, the bypass would encroach upon this area and have a significant impact upon its historic and visual character. <p>Holtsmere End:</p> <ul style="list-style-type: none"> • The site has been reconfigured from the original 'Blue Blob' consulted upon in November 2006, in order to bring it closer to the edge of the town and retain greater separation with Redbourn. However, with the inclusion of a bypass and associated junctions, the distance between the two settlements would still be significantly reduced. <p>OVERVIEW:</p> <p>All three growth options will result in the loss of Green Belt land and significant change to existing Green Belt boundaries. Green Belt land is only being considered as there is insufficient land to accommodate growth needs within the existing town boundary. Some of the land areas that comprise the Northern option extend relatively arbitrarily into the open countryside. Whilst a new</p>	- / ✓

	<p>other urban land.</p> <p>Impact upon width of remaining Green Belt and ability to create new defensible Green Belt boundaries.</p> <p>To prevent settlements from merging.</p>	<p>northern boundary would be defined by the bypass, this road would further reduce the separation between settlements and lead to further urban encroachment into the countryside.</p> <p>The Northern option would result in the breaching of existing Green Belt boundaries and a reduction in Green Belt land in a more limited number of locations than the dispersed approach. An assessment will need to be made as to whether a more significant change in a more concentrated area(s) is more or less damaging to the overall future integrity of the greenbelt than a greater number of smaller boundary changes. Whilst most locations would be able to provide relatively clear boundaries, using woodland edges or existing lanes, the strength and robustness of these boundaries is variable and often poor. The creation of a northern bypass would significantly strengthen this boundary, but also has significant negative effects. Once the bypass is in place there is a risk of future pressure for further development on the northern side of this road, as accessibility to this area would be greatly improved. This is considered to be less of a risk with the Eastern option due to the physical size of the M1.</p> <p>No merging of towns or villages would occur as a result of following this approach to growth. Several hamlets and small-scale settlements would however be significantly affected. Although none would be subsumed, care will need to be taken to ensure that their individual and unique characteristics are protected.</p> <p>The Landscape Character Assessment considers the land adjacent to the north of the town to be of higher landscape quality than land to the East adjacent to the M1 (see section 25 above).</p> <p>See also discussion under Sections 4 (heritage designations), 20 and 21 (regeneration)</p> <p>See Map 1.</p>	
23.	<p>Ability to promote sustainable patterns of development</p>	<p>Neighbourhood based growth is inherently a relatively sustainable form of development. The more agglomerated form of development that characterises the Northern option makes it well placed to accommodate key infrastructure, which is associated with growth and wider town regeneration. To be truly sustainable, this infrastructure needs to be located close to the population it will serve. The proximity of some of the development area to the Maylands</p>	- / ✓

		employment areas a positive sustainability attribute, however the distance of other areas from the town centre and employment opportunities is a distinct negative.	
24.	<p>Ability to support Core Strategy objectives which seek to prevent</p> <p>(d) merging of settlements</p> <p>(e) substantial intrusion into open countryside and development which is poorly related to the town</p> <p>(f) extensive building along prominent open countryside in the Gade and Bulbourne valleys</p>	<p>See Sections 22 (Conformity with PPG2 criteria) and 25 (Landscape Character Assessment).</p> <p>The majority of the Northern option will have no impact upon either the Gade or Bulbourne Valleys. Whilst development at West Hemel Hempstead would have some impact upon the Bulbourne Valley, the elongated shape of the proposed development ensures that it avoids extensive building along the valley sides. The impact upon the valley sides can also be mitigated through the inclusion of woodland planting and open space on the more prominent central and southern slopes. The impact of the bypass on the valley sides would however be much more extensive and significant and result in significant visual intrusion in the Gade Valley north of Piccotts End, even though there would be no built development in this sensitive location.</p>	- / *
25.	<p>Landscape Character Assessment</p>	<p>West Hemel Hempstead: <i>Southern section located in Area 118 – Lower Bulbourne Valley.</i> Area characterised by a narrow valley floor with steeply sloping valley sides. Most of the area is stated to have no species of particular note, with the valley slopes characterised by large prairie fields with few hedges and narrow verges. Key buildings within Hemel Hempstead, such as the Kodak tower, are intermittently visible throughout the area. The overall strategy proposed is to 'Improve and Conserve.' Strategy guidelines include:</p> <ul style="list-style-type: none"> Promoting awareness and consideration of the setting of the AONB and views to and from it. 	- / *

	<ul style="list-style-type: none"> • Developing a strategy to limit built development within the area and mitigate the impact of existing development • Ensure that local highway improvements are sympathetic to the scale, pattern and character of the existing road network. <p><i>Northern section located in Area 120 – Little Heath Uplands (see below)</i></p> <p><u>North of Gadebridge:</u> <i>Located primarily in Area 120 – Little Heath Uplands</i> A plateau area of gently undulating upland. There is evidence of loss of field boundaries as fields have been increased in size for the intensification of agriculture. Key characteristics include urban fringe influences, arable farming, isolated farms and pasture fields and contained views. There are no recorded species of note. Forms part of ancient common land associated with the Ashridge Estate. The area is only locally visible from outside due to its plateau location. The landscape character is not considered to be unusual in Hertfordshire. However, it is made more unusual by distinctive features. Impact of built development is currently minimal due to the presence of mature hedgerows that act as screening. The overall strategy is to ‘Improve and Conserve.’ Strategy guidelines include:</p> <ul style="list-style-type: none"> • Ensure that the surroundings of converted and new buildings are designed and maintained so as to be in keeping with their agricultural surroundings. • Conserve and enhance the distinctive character of traditional settlements and individual buildings, through the use of high quality design and materials • Promote awareness of the setting of the AONB and views to and from it, when considering land use change proposals. • Support a strategy to limit built development within the area and the visual impact of development that may affect the area from the outside. <p>A small area lies on the slopes of <i>Area 123 – High Gade Valley.</i></p> <p><u>Grovehill and Woodhall:</u> <i>Located primarily in Area 95 – Revel End Plateau.</i> An area of gently undulating upland, with distinctive open dry valleys which feed into the Upper</p>	
--	--	--

	<p>Ver valley system along the Hempstead Road. One of these dry valleys forms the northern boundary of Hemel Hempstead. Arable farmland and isolated patches of pasture are the predominant land uses. Fields are large and irregularly shaped. The area is only locally visible from surrounding areas due to the level and elevated landform. It is a medium to large-scale landscape with open views across arable fields. The open arable landscape is common across northern Hertfordshire. There are few detracting features, although overhead power lines have a widespread visual impact. The overall strategy is to 'Improve and Conserve'. Strategy guidelines include:</p> <ul style="list-style-type: none"> • Promote the creation of a network of new medium to large woodlands in the arable landscape. • Encourage landowners to improve ecological diversity. • Promote the creation of buffer zones between intensive arable production and semi-natural habitats. • Ensure the surroundings of new and converted buildings are designed and maintained to be in keeping with their agricultural surroundings. • Conserve and enhance the distinctive character of traditional settlements and individual buildings, through the use of high quality design and materials • Promote awareness of the setting of the AONB and views to and from it, when considering land use change proposals. <p>A small area extends into <i>Area 124 – Gaddesden Row</i>, which is also a plateau landscape.</p> <p><u>Holtsmere End:</u> <i>Located primarily in Area 96 – Upper Ver Valley.</i></p> <p>This area includes the dry valley west of Redbourn along Hempstead Road / Redbourn Road. A continuous strip of pasture tracks the base of the dry valley from Redbourn. Generally open landscape, with gently undulating valley slopes and large arable fields. Distinctive features include the impact of the M1 motorway junctions, Aubrey's hill fort and horseyculture along the Hempstead Road. Although this is one of a number of river valleys in the county, it is unusual to find one that is so broad and open. The impact of current built development is low. The overall strategy is to 'Conserve and Strengthen.' Strategy guidelines include:</p> <ul style="list-style-type: none"> • Promote a clear strategy for the visual and noise mitigation of motorways and trunk roads and positively integrate these into the local landscape character. 	
--	---	--

		<ul style="list-style-type: none"> Enhance and restore hedgerows and ditches as characteristic field boundary patterns. <p>A small area falls within <i>Area 95 – Revel End Plateau</i> (see above)</p> <p>This area is designated as part of a ‘Landscape Development Area’ in the St Albans Local Plan (1994). The policy relating to this notes that <i>‘These areas are in need of attention. Structure Plan Policy 7 therefore seeks to guide long-term change, secure renewal, improvement and management of landscapes and create new landscapes.’</i> See Map 4.</p> <p><u>OVERVIEW:</u></p> <p>The western and northern areas are considered to be of higher landscape value than a number of alternative growth locations around the town, in part due to the setting they provide for the Chilterns AONB to the north. Careful mitigation measures would be required to ensure that the landscape impact of any development on the more prominent southern slopes of the Gade valley at West Hemel Hempstead is minimised. The impact of the bypass upon the Bulbourne valley is likely to be significant and would require considerable mitigation.</p> <p>The proximity of the area to the Chilterns AONB and the potential detrimental impact on the Special Area of Conservation at Ashridge need careful consideration (see Section 9).</p> <p>See Map 11.</p>	
26.	Historic Landscape Characterisation	<p>See Landscape Character Assessment above (Section 25).</p> <p>This issue will require further consideration at the detailed design and masterplanning stage, to ensure that any new development reflects historic hedgerow and settlement patterns.</p>	?
27.	Topography considerations	See Section 25 (Landscape Character Assessments).	-

(g) Conformity with established New Town principles

	Issue	Assessment	Nature of impact
28.	Enable sensitive recognition of natural and historic features and landform in new layouts.	<p>See Sections 25 (Landscape Character Assessment) and 26 (Historic Landscape Characterisation) above.</p> <p>The dry valleys at Grovehill and Woodhall and Holtsmere End are important natural features that need to be retained and kept free from built development. In order to achieve this, development will be pushed further northwards, further increasing its proximity to the Chilterns AONB and reducing its connection with the existing town.</p>	- / ✘
29.	Capacity to avoid or overcome features which would be damaging to the occupiers (i.e. through noise or air pollution)	<p>No current issues, although the noise and pollution impacts (both air and visual) of the new northern bypass would need to be taken into account. The development of a northern bypass would have a significant effect upon the relative tranquillity of a significant arc of countryside around the town.</p> <p>Noise and pollution mitigation measures will be required in accordance with Planning Policy Guidance Notes (PPGs) 23 and 24 for the sites. This will include the design of individual buildings, the layout of the site and appropriate buffering through landscaping.</p>	-
30.	Ability to ensure the local neighbourhood's needs are met	<p>Assuming that the neighbourhoods are of an appropriate size in terms of meeting particular thresholds, then it will be viable to provide essential local services and facilities within each area. This will include both 'hard' infrastructure, such as shops and community buildings, and 'soft' infrastructure, such as appropriate open space and landscaping. The agglomeration of the neighbourhood building blocks makes it easier to provide 2 form entry schools, which comply with County Council policy. It will also provide the scope for a wider range of new facilities viable as they can be 'shared' between the adjacent neighbourhood blocks, which will make them more viable.</p>	✓
31.	Ability to provide good access to	<p>The provision of improved public transport facilities, including park and ride, is currently being pursued with the Highway Authority. Provision of this, together with appropriate bus connections,</p>	- / ✓

	services (which are not part of the neighbourhood)	high quality and well located pedestrian and cycle routes will help to connect the new development to existing services and facilities elsewhere within the town, whilst reducing dependence upon the car. Advice from the Highway Authority is that it is usually easier to achieve and co-ordinate these improvements where there is an agglomerated form of development, rather than a dispersed form.	
32.	Ability to help achieve the future vision of the town in terms of: 13. Retaining the separate identity of the town; 14. Enhancing the vitality and attractiveness of the town centre; 15. Maintaining a balanced distribution of employment (with growth and rejuvenation in the Maylands business area); 16. Maintaining the existing neighbourhood pattern; 17. Making best use of the existing	All of the proposed locations are of sufficient size to accommodate the full range of uses outlined in our 'Neighbourhood Concept'. This option therefore accords with the neighbourhood approach supported by the Council and by respondents to previous consultation. A key benefit of the Northern option is that it will make it easier to deliver the concentrations of development in particular parts of the town that would be required to accommodate and/or ease delivery of some of the larger-scale town wide infrastructure. Town-wide infrastructure that will have to be provided on Green Belt land as part of the growth includes a new secondary school site, town stadium, park and ride, cemetery and additional open space. The Northern option would require the provision of additional employment land, and in common with the other two growth options, this would be provided to the east of the town between the existing Maylands Business Area and the M1. See also Sections 10 (infrastructure), 19 (proximity to existing employment opportunities), 20 (the adjacency principle), 21 (Scope to support Hemel 2020 Vision), 22 (conformity with PPG2 criteria), 23 (ability to promote sustainable patterns of development) and 30 (ability to ensure the local neighbourhood's needs are met).	- / ✓

	<p>green infrastructure; with</p> <p>18. Any new development being:</p> <ul style="list-style-type: none">- Based on the neighbourhood concept;- Providing its own infrastructure; and- Supporting relevant town-wide needs.		
--	--	--	--