

Councils Response to Stage 1 Matters, Issues, Questions Thursday 12th December 2019.

Matter 7 – The Broad Locations for Development – Specific Matters (Policy S6 (i) to (xi))

Main Issue

Whether the detailed policy for each broad location for development is justified, effective and consistent with national policy.

North Hemel Hempstead (iv)

1. Question 1

Is the site suitable for housing and are there any specific constraints or requirements associated with it, or the need for mitigation measures?

- 1.1 Yes, as demonstrated in the Councils strategic site evaluations work, the site is considered suitable for housing. Potential significant constraints, requirements and mitigations were directly considered in the Draft Strategic Site Selection Evaluation Outcomes methodology as set out Planning Policy Committee [March 2018](#).

The evaluation uses the criteria below, based on the approach in PPC reports mentioned above (and as similarly set out in the Call for sites and Local Plan regulation 18 consultation background materials).

Stage 1

1. *Green Belt Review evaluation will be undertaken on the basis of a judgement of impact on (i.e. 'damage' to) Green Belt purposes (taking account of the purposes defined in and considered in the relevant parcel assessment in the GBR). Sites are rated as 'higher impact', 'medium impact' or 'lower impact' (set out as Red Amber Green (RAG)). It is important to remember that the independent Green Belt Review set out that "All strategic parcels in the Green Belt, at least in part, clearly perform a key role". The assessment is a comparative one in the context of understanding relative impacts on the Green Belt. To achieve 'further consideration for development' the site must be evaluated as lower or medium impact (Green or Amber). Any Red rating (higher impact) will rule a site out for further consideration.*

Stage 2

2. *Suitability will set out as (Red Amber Green) if there are any issues which are overriding constraints to development – eg Access, Transport, Heritage, Biodiversity, Flood Risk. Any Red rating will rule a site out for further consideration.*
3. *Availability will set out as (Red Amber Green) if there are any issues which are overriding constraints to development in terms of land ownership, restrictive covenants etc. Any Red rating will rule a site out for further consideration.*

Stage 3

4. *Unique contribution to improve public services and facilities, e.g. public transport - (set out as Red Amber Green). Any Green rating is considered to be potentially significantly positive at a District wide (or even wider) scale.*
5. *Unique contribution to enhancing local high quality job opportunities and the aspirations of the Hertfordshire Local Economic Partnership / Hertfordshire EnviroTech Enterprise Zone - (set out as Green Amber Red). Any Green rating is considered to be potentially significantly positive at a District wide (or even wider) scale.*
6. *Unique contribution to other infrastructure provision or community benefits - (set out as Red Amber Green). Any Green rating is considered to be potentially significantly positive at a District wide (or even wider) scale*
7. *Deliverable / Achievable is there is a reasonable prospect that the development, including all key aspects (including viability) being assessed as part of the overall 'package' proposed, is viable and deliverable (set out as Red Amber Green). Any Red rating will rule a site out for further consideration. 8. An overall evaluation judgement will be recorded (set out as Red Amber Green) as how the site is evaluated for further consideration for development in the Plan."*

1.2 This methodology identified two potential levels of constraints in the site assessment;

- Level 1: Overriding Constrains that would rule out sites as potentially 'suitable'.
- Level 2: Constraints that would need specific requirements and mitigations.

1.3 There are not considered to be any overriding constraints that would make the site unsuitable, or that require specific requirements and mitigations.

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2. Question 2

What evidence is there to demonstrate that the proposed broad location is capable of delivering 1,500 dwellings? (1,000 of which are beyond the plan period).

2.1 The primary evidence is set out in Annex 1 of the draft Local Plan at page 98. This sets out all of the Broad Location area and Base Capacity Calculations in Hectares. For North Hemel Hempstead this sets out;

2.2

Broad Location (BL)	BL Wider Area (Ha) (Purple on Policies Map)	Broad Location Non-Green Belt Area (Ha) i.e. Area to be removed from GB	60/40 resi / non-resi split on BL Wider Area	60/40 resi / non-resi split on non-GB Area	New Education Site in GB up to (Ha)	Net developable area when education sites are in Green Belt - 80% of Non-Green Belt area	SADC net developable area for capacity calculations x 40 dwellings per hectare =
North Hemel	87.2	66.8	52.3/34.9	40.1/26.7			40.1x40 = 1604

2.3 In this instance, 60% of the area to be removed from the GB is used as a basis for the capacity. There is the accompanying assumption that 40% of the area to be removed from the Green Belt is infrastructure and open space. The reasoning for this has been set out as Strategic Local Plan Background Note: Residential Density October 2014 ([HOU 015](#));

Gross density calculations can be used to estimate and illustrate the potential development capacity of a site. The Green Belt Review Part 2 (SKM Enviro Consultancy Study) used the approach that up to 60% of the Gross Development Area (GDA) would be developed (termed Net Development Area) and the remaining 40% would be required to provide infrastructure, main roads, open space and public facilities.

Therefore 40.1 (developable area) x 40 (dwelling per hectare) = 1,604 dwellings. A small rounding down has then been applied to give 1,500.

2.4 The appropriate densities to use and areas to which they would be applied was addressed on several occasions at PPC, including in particular PPC report [January 2014](#), which sets out;

It is considered that 40dph is a relatively 'safe', robust assumption which can be readily achieved in suburban location housing developments in the District, particularly with a dwelling mix similar to that indicated in the recent Strategic Housing Market Assessment (SHMA). This simple calculation makes no specific allowance for infrastructure and major open space in larger development areas...

Appendix 1 provides a summary of the "Strategic" Green Belt land releases as recommended by SKM. For these areas SKM identified potential development parcels and calculated a dwelling capacity range based on net densities of 30 – 50dph. It is recommended that Plan policies are developed on the basis of achieving a mid-range overall

target minimum density of 40dph. This will necessitate some higher suburban density forms of development in some locations.

- 2.5 Furthermore, as set out in Strategic Local Plan Background Note: Residential Density October 2014 ([HOU 015](#)), a draft of which was presented to PPC [July 2014](#). This includes as M7ivQ2 Appendix 1.

Work on density assumptions in the draft Strategic Local Plan (SLP) is based on HCA research, in the form of a density matrix (Table 3.3 from the Homes and Communities Agency Urban Design Compendium – reference below). The matrix links typical residential densities to urban form ('creating urban structure'). It draws on examples of development across the UK and Europe. Average densities are based on case studies analysed as part of the Sustainable Residential Quality: Exploring the housing potential of large sites research. The matrix recommends that residential densities of 30 to 50 DPH (alongside related services) should be applied in suburban locations. This is considered to be relevant to the SKM identified sub areas assessed for the draft SLP, as they are located on the edges of existing settlements and exhibit suburban characteristics.

- 2.6 The landowner / developer team have confirmed the capacity was appropriate, deliverable and supported as part of landowner / developer submissions summer 2018.
- 2.7 The landowner / developer team have also confirmed that the capacity was appropriate, deliverable and supported as part of their landowner / developer Local Plan Regulation 19 Publication formal representations in October 2018.
- 2.8 The early Masterplanning work by the Crown Estate with SADC/DBC/HCC that supported the HGC bid (see other MIQs) also demonstrated that this Broad Location is capable of delivering 1,500 homes.
- 2.9 As addressed in more detail in response to other MIQs, it can also be noted that the Broad Location landowner/developer team (Pigeon HH Ltd) have signed a Statement of Common Ground. This includes their confirmation that they agree that the 1,500 figure is deliverable.

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3. Question 3

What arrangements have been made for joint working between the Council and Dacorum Borough Council to deliver the proposed broad location?

3.1 The Council has responded in detail as set out at question M7iQ7.

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4. Question 4

Should the policy refer specifically to the provision of sports facilities?

- 4.1 No, as set out in the Council's response to M7i Q11, the Council considers that there is no requirement to set out specifically the provision of sports facilities in the policy here. Appropriate sports facilities will be required, but will most appropriately be identified in detail and secured through the mechanisms that the draft Plan already contains. This includes at S6 (iv):

S6(iv) – Requirement 1 - Masterplanned development led by the Council in collaboration with Dacorum Borough Council, local communities, landowners and other stakeholders

S6 (iv) Requirement 9 - A substantial new Country Park providing facilities for new and existing communities and a permanent green buffer to Redbourn

S6 (iv) Requirement 15 - Recreation space and other community facilities, including health provision

- 4.2 This also includes at L22 'Community, Leisure and Sports Facilities'

"the provision of new community, leisure and sports facilities will be concentrated in the following locations;

...

- As part of new Local Centres within Broad Locations for development and in other major developments*
- As part of new educational development, where joint use facilities should be provided*

...

The council will encourage new and enhanced sport and recreational facilities in appropriate and sustainable locations, including in particular:

- "New local provision as part of major residential development at Broad Locations, including possible joint use of education and multi-purpose community buildings / halls or improvements to existing parish halls / centres near to the new housing areas"*

- 4.3 This also includes at policy L28 'Green Space Standards and New Green Space Provision': *Creation of new green space through development or other opportunities will be directed at meeting needs for the new development and also addressing identified needs and deficiencies in the host settlement.*

Priority provision at the Broad Locations (excluding provision of country parks / wildlife habitat creation areas – Policy S6) is set out in the Table below:

Broad location	Priority provision
<i>East / North Hemel Hempstead</i>	<i>Playing pitches for adult and junior football, junior rugby and cricket</i>

	<p><i>Hemel Hempstead related needs to be confirmed through Masterplanning process</i></p> <p><i>Strategic play</i> <i>Teenage areas</i> <i>Parks and gardens</i> <i>Playing pitches: adult and junior football</i> <i>Allotments</i></p>
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- 4.4 It is noted that there has been an objection received by Sports England in relation to a lack of specific sports provisions identified in the draft Local Plan, as well as concerns with the robustness of the Playing Pitch Strategy Update 2019 ([LCRT 002](#)). The Council has been working closely with Sports England in recent months and is in the process of developing a new Playing Pitch Strategy for the District that will meet Sport England's concerns about the current version. This new document will include identifying more directly in line with current guidance and best practice the current shortfall in existing sports facilities, as well as additional requirements from projected population growth from the Broad Locations.
- 4.5 The new Playing Pitch Strategy will, through the Masterplanning and subsequent Planning Application processes be used to secure on site provision and appropriate contributions from S106 agreements. This new work has included working with other bodies, such as Herts FA and services within the Council to identify areas for potential improvement.
- 4.6 All of the above is being incorporated into the iterative collaborative work on Masterplanning for East Hemel North. This includes the work under the arrangements of the East Hemel PPA in conjunction with key partners - DBC, HCC and the landowners.

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5. Question 5

What further infrastructure work needs to be undertaken, and is this appropriate to be left to the masterplanning stage?

- 5.1 Yes, further infrastructure work is required to be undertaken, and this has been identified in the Infrastructure Delivery Plan 2018/19 ([INFR 001](#)). A list of infrastructure assessed for capacity is included in M7ivQ5 [appendix 1](#). For North Hemel Hempstead, this is summarised below:

LOCATION	North Hemel Hempstead Broad Location
Infrastructure	
Transport Infrastructure:	
Strategic - LTP4 major scheme	
Local highway - on & off site	Y
Sustainable travel - public transport	Y
Sustainable travel - walking + cycling on & off site	Y
Education:	
Primary (assumes £8.7m per new 2FE primary school or £12.4m per new 3FE primary school)	1 x 3fe
Secondary (assumes £37.3m per new 8FE secondary school)	
Early years	Y
Green Infrastructure:	CMO
Strategic open space	Y*
Local open space / play space	Y
Community Facilities:	
Health sq. m est floorspace provided onsite	358
Other community provision	Y
Neighbourhood Centre / Local Centre sq. m est net floorspace at groundfloor	900
SUDS	Y
Energy Strategy / Renewable energy	Y
Digital Infrastructure	Y

- 5.2 As set out in Policy S6 iv), much of this infrastructure is set out as a policy requirement. As set out in the Council's response to M6 Q5, significant progress has been made in respect of Masterplanning for the Broad Locations of East Hemel Hempstead, North St Albans and North West Harpenden. This has included co-operations with parties expected to deliver this infrastructure such as Hertfordshire County Council, NHS and Developers, and the detail is considered to be appropriate and realistic for this stage of the process.

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6. Question 6

What are the timescales and funding sources for the necessary improvements to junction 8 of the M1?

- 6.1 Hertfordshire County Council is the Transport Authority for this area. The M1 J8 scheme is identified in the Hertfordshire's Local Transport Plan 2018 – 2031 (LTP4) as a Transport Improvement to support new development. A copy of LTP4 can be found in [INFR 001](#) 2018-2019 Infrastructure Delivery Plan reference 74 link on page 168. Please see extract below.

<i>Scheme Table</i>					
<i>Categories</i>		<i>Lead Authority/ Promoter</i>	<i>Status</i>	<i>Time Frame</i>	<i>Information</i>

<i>Transport Improvements to support new development (Specific junctions known to be affected)</i>	<i>6) East Hemel Hempstead</i>	<i>Developer</i>	<i>Subject to Planning Consent</i>	<i>Medium</i>	<i>Includes upgraded A414/Green Lanes junction, M1 Junction 8 enhancements and new spine road linking the A414 and B487.</i>

- 6.2 The scheme is also identified in the HCC South West Herts GTP which is a daughter document to LTP4. A copy of the GTP can be found in [INFR 001](#) 2018-2019 Infrastructure Delivery Plan reference 77 link on page 169. Please see extract below.

<i>Reference</i>	<i>Scheme or Project Name</i>	<i>Concept description</i>
...
SM7c	<i>M1 Junction 8 enhancement</i>	<i>Enhancement to M1 Junction 8 and the adjacent junction at Breakspear Way/Green Lane to provide additional vehicle capacity and connectivity to Maylands, and relieve congestion on the A414.</i>

Intervention Qualitative Assessment

Intervention ID	Scheme Approach ID / Project	Intervention Name	District(s)	Cost Range	Timescale if delivered in isolation	Level of Risk	Likelihood of Funding (internal or external)
...
SM7
	c	M1 Junction 8 enhancement	St Albans, Dacorum	£10m-£50m	5-10 years	Medium Risk	High Likelihood

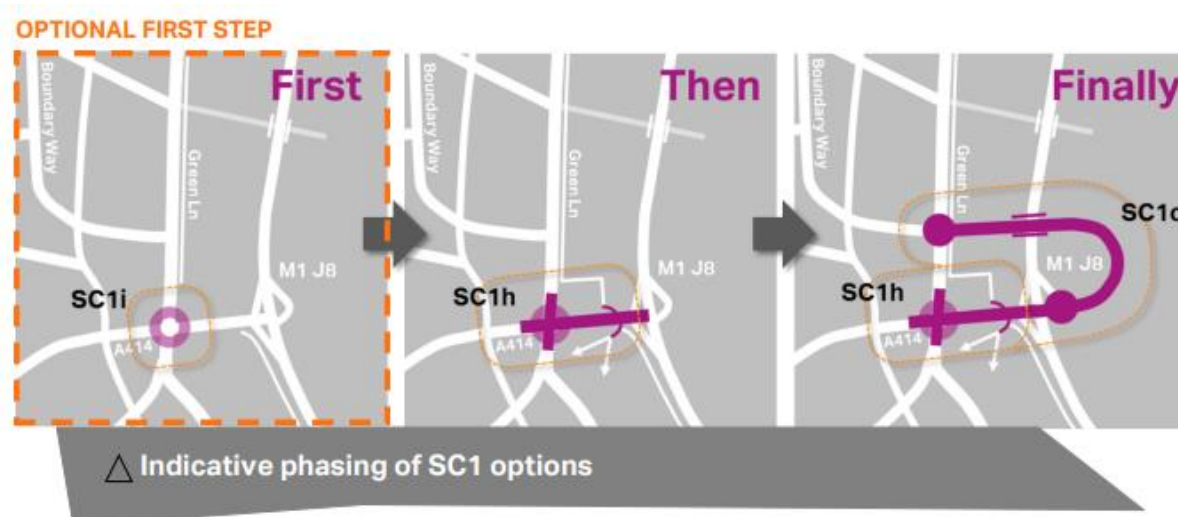
6.3 The Maylands Growth Corridor Study Hemel Hempstead: Investment Prospectus (January 2018) (please see IDP Appendix 3 at [INFR 002b](#)) is the key document which was prepared in a collaborative process which included key stakeholders such as HCC, HE, LEP, SADC, DBC and TCE. It outlines a schedule of interventions, including M1 J8. It explains that M1 J8 forms part of the 'Scheme Concept 1 (SC1) Eastern Gateway Improvements to M1 Junction 8 and A414 Breakspear Way-Green Lane Junction'

6.4 In terms of what is proposed, the document sets out:

What is proposed?

A range of highway-focused options have been considered, each varying in terms of scale and impact. It is important not to view each Scheme Concept in isolation, and that as a package the interventions will complement each other. Whilst Scheme Concept 1 will deliver increased highway capacity which will reduce queues and delays to motorists, it will also take pressure off other parts of the transport network so that they can facilitate movements by bike or on foot and free up capacity for buses.

A phased approach has been devised. As shown below.



6.5 In terms of timescales and funding sources the Maylands Growth Corridor Study Hemel Hempstead: Investment Prospectus sets out the following on page 16:

When will it happen?

SC1i could come forward within 2 years. Its delivery will be strongly tied to the Maylands Gateway development.

SC1h could come forward within 2-5 years during the early phases of East Hemel Hempstead urban extension development, depending on when or if SC1i is implemented.

SC1c is a more complex intervention which could be delivered within 5-10 years, before the completion of East Hemel Hempstead urban extension development.

Who will be responsible for delivering it?

SC1i can be delivered within the existing highway boundary and will be funded by local developers and delivered by Hertfordshire County Council.

SC1h will require land outside of the existing highway boundary but within the control of The Crown Estate and will be funded entirely by local developers including The Crown Estate. It will be delivered by Hertfordshire County Council or by the developer themselves.

SC1c will require land outside of the existing highway boundary but within the control of The Crown Estate and will require funding from a mixture of sources including local developers and central Government. It will be delivered by Hertfordshire County Council. Or the developer themselves. As it will interact with the strategic road network, Highways England will need to be heavily involved in the development and delivery of SC1c.

How much will it cost?

SC1i - < £250k

SC1h - £2m - £5m (depending on whether dualling of Green Lane is included or not)

SC1c - £15m - £25m (depending on composition of scheme)

- 6.6 As stated above, M1 J8 is part of a package of interventions for the eastern gateway area which complement each other and with phasing planned over a 2-10 year period. Together they are known as SC1 and an outline of the proposals is included at paragraph 8.4 above. The M1 J8 element of SC1 could be delivered within 5-10 years and will require funding from a mixture of sources including local developers and central government. The other SC1 interventions are funded by local developers and are scheduled to be delivered sooner and therefore will provide transport benefits to the eastern gateway at an earlier stage.
- 6.7 In terms of funding sources, the work to secure funding for M1 J8 is ongoing. A key example of progress can be seen in the The Herts Enterprise Zone Board Meeting in October 2018 which considered a report regarding EZ Accelerator Funding for Breakspear and J8 Improvement Works. It was proposed that the EZ project and TCE co-fund a package of work to undertake the design and preparatory works for the Breakspear Way and M1 Junction 8 improvements ahead of securing planning permission, in order to accelerate delivery of this critical infrastructure. The estimated costs for preparatory highways and utilities works is £6m, which could be funded £3m by the EZ, forward funded by a LEP repayable grant, and £3m by TCE. It is understood that the funding has been secured and the project for the design and preparatory works has commenced. This is considered to be an important piece of work, and once completed, it will form the foundation which will allow funding to be secured. This investment represents a significant commitment by the LEP and landowner to progress the M1 J8 scheme.

6.8 Furthermore, Herts EZ advise:

The upgrade of M1 Junction 8 is a critical infrastructure improvement needed to support both employment and residential growth in the Hemel Hempstead and St Albans area. This upgrade will support delivery of the Hemel Garden Community programme, the East Hemel Hempstead development and the Hertfordshire IQ Enterprise Zone (EZ), all of which are connected with the wider growth and transformation of Hemel Hempstead, expected to deliver circa 10,000 new jobs and circa 11,000 new homes. The M1 junction 8 upgrade would be delivered on land either within the ownership of the Crown Estate (TCE) or highway land. TCE and Hertfordshire IQ Enterprise Zone (supported by Hertfordshire LEP) are currently funding a detailed design project in sufficient detail to enable the construction of the J8 upgrade, along with the design of related highways improvements required for delivery of the TCE owned Herts IQ East Hemel site. This includes the major upgrade of Breakspear Junction which provides a key access point from the A414 to the Maylands Business Park and East Hemel areas. This co-funded £6m design project is being undertaken ahead of planning permission being secured, in order that these essential highways works are ready to be implemented when planning permission is secured by The Crown Estate. It is clearly unusual for both public and private investors to take such an approach, and this gives a strong indication of the local stakeholders commitment to the success of the project and the deliverability of the J8 upgrade scheme.

In terms of funding for the implementation of the main J8 upgrade scheme, this will be secured through a package of funders, and a plan is currently being concluded to target and secure a range of funding sources, including Road Investment Strategy 2, S106, CIL, Housing Infrastructure Fund, LEP Growth Deal funding and landowner contribution of land. However, the Herts IQ Enterprise Zone is able to provide a level of confidence in relation to funding for this scheme, through future business rates income being an already 'secured' source of funding to help deliver a range of Herts IQ priorities, of which the upgrade of the M1 J8 is its major project. Herts IQ EZ should be considered the funder of last resort to underpin delivery as there are a number of competing uses of the business rates funding to support delivery of the wider Herts IQ EZ project. In terms of the timeframe in which funding will be available, Hertfordshire County Council is the accountable body for Hertfordshire LEP and the Herts IQ Enterprise Zone, and has already considered early access to funds via public borrowing, to be repaid as funding sources become available.

- 6.9 The Hemel Hempstead broad locations have been afforded Garden Community status (within a wider proposal) which means MHCLG funding has been allocated to fast-track specialist survey work and planning works necessary for development. The Garden Community status provides extra confidence regarding commitment, resourcing and intent.
- 6.10 In terms of developer contributions, The SADC CIL LP Viability Strategic Site Testing ([INFR Sep 2019](#)) for East Hemel Hempstead North, East Hemel Hempstead South and North Hemel Hempstead, all identify contributions for transport infrastructure. Together the transport contributions indicated in the viability assessments add up to circa £61m as shown in extracts below. All broad locations are assessed as viable, which includes the transport contribution (See SADC response to M6 Q20); therefore viability (or lack thereof) should not be a barrier to securing appropriate transport contributions at this level.
- 6.11 Aside from these sites in SADC, additional developer funding for transport infrastructure is expected to come from the wider Hemel Garden Communities development of up to 11,000

homes (including c 5,000 homes in SADC). If transport contributions were set at a similar level in HGC DBC sites, the indicative transport pot could possibly double to circa £122m.

East Hemel Hempstead (North)

Table 3.2.14: Section 106 contributions

Contribution description	Contribution	Comments on contribution
...
Transport Infrastructure	£18,150,000	Allows for: - Strategic - LTP4 major scheme; - Local highway - on & off site - Sustainable travel - public transport; - Sustainable travel - walking + cycling on & off site

East Hemel Hempstead (South)

Table 3.2.15: Section 106 contributions

Contribution description	Contribution	Comments on contribution
...
Transport Infrastructure	£26,400,000	Allows for: - Strategic - LTP4 major scheme; - Local highway - on & off site - Sustainable travel - public transport; - Sustainable travel - walking + cycling on & off site

North Hemel Hempstead

Table 3.2.14: Section 106 contributions

Contribution description	Contribution	Comments on contribution
...
Transport Infrastructure	£16,500,000	Allows for: - Local highway - on & off site - Sustainable travel - public transport; - Sustainable travel - walking + cycling on & off site

7. Question 7

[i] Is the proposed site capacity appropriate taking account of constraints including the provision of infrastructure including the buffer zones and mitigations to address the Buncefield Oil Depot and pipelines? [ii] Has the Health and Safety Executive been consulted?

- 7.1 [i] Yes, the capacity is considered appropriate and it has directly considered constraints including the buffer zones and mitigations to address the Buncefield Oil depot and pipelines. The specific HSE Buncefield protection zones (indicatively from the Green Belt Review) are set out in M7ivQ7 appendix 1. The HSE technical guidance with regard to this type of facility and how it must be taken into account in Planning work is set out in M7ivQ7 appendix 2. These documents has been available and have been duly considered by SADC, DBC and the Crown Estate since the very genesis of the East Hemel considerations. Direct discussions between the landowner and the HSE have taken place to inform the approach in the Plan. As can be seen at M7ivQ7 appendix 1, the outer protection zone does not incorporate the Broad Location.
- 7.2 [ii] The Council consulted the Health and Safety Executive at Plan regulation 18 and 19 stages. A response was received as part of the regulation 18 consultation from the HSE, including

Future Consultation with HSE on Local Plans

HSE acknowledges that early consultation can be an effective way of alleviating problems due to incompatible development at the later stages of the planning process, and that we may be able to provide advice on development compatibility as your plan progresses. Therefore, we would like to be consulted further on local plan documents where detailed land allocations and use close proposals are made; e.g. site specific allocations of land in development planning documents.

- 7.3 The Health and Safety were again consulted at Regulation 19 stage. No response was received at that time. It should be re-iterated that the HSE have through separate discussions provided the information at Appendix 1 and Appendix 2, which have been fully accorded with in the Plan and the evolving Masterplan. The HSE will continue to be engaged with on an ongoing basis.

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8. Question 8

Have the implications of the site's location in relation to the Luton Airport flight path been considered?

8.1 The Council has responded in detail to the issue at question M7iQ10.

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9. Question 9

Should the specific location for the primary school within the site be identified?

- 9.1 No, the Council considers that the location of the primary school within the site should be identified at the Masterplanning stage alongside other Masterplanning considerations. The requirements for the size of school has been set out been identified in the Infrastructure Delivery Plan 2018/19 ([INFR 001](#)).

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10. Question 10

How have heritage assets been considered and is a Heritage Impact Assessment required?

10.1 The Council has directly considered heritage assets as part of the Strategic Site Selection process and the Sustainability Appraisal and in considering the draft Plan wording. The nearby Grade 2 listed buildings and an appropriate buffer that respects their setting are proposed to be retained within the Broad Location.

10.2 The Strategic Site Selection process set out a three stage process of selecting the broad locations, with stage 2 setting out;

Stage 2

2. *Suitability will set out as (Red Amber Green) if there are any issues which are overriding constraints to development – eg Access, Transport, Heritage, Biodiversity, Flood Risk. Any Red rating will rule a site out for further consideration.*

10.3 The Sustainability Appraisal, sets out as part of the SA/SEA Objectives;

10. *To identify, maintain and enhance the historic environment, heritage assets and their setting and cultural assets*

10.4 It is also noted in the Sustainability Appraisal that there are heritage assets within the vicinity of the Broad Location;

Uncertain effects have been identified for the 'historic environment' objective as development could affect the settings of Listed Buildings which are in close proximity

10.5 In consideration of the Broad Location S6 iv) it was set out in the Sustainability Appraisal Addendum that;

The site is not subject to any significant heritage or archaeological constraint. A Scheduled Monument, The Aubreys (fort/camp), is located approximately 0.75km to the north east of the site. Development could affect the setting of the Grade II Listed Buildings at Great Revel End Farm which is in close proximity to the north-east boundary of the site and also the Grade II Listed Buildings in Dacorum at Holtsmere Manor and Holtsmere End Farm.

10.6 Historic England has raised objections to the Plan, highlighting the lack of evidence to demonstrate that appropriate considerations have been given to the conservation and enhancement of the historic environment, together with a lack of policy criteria for the protection and enhancement of the historic environment in relation to these large sites. In the Councils response as set out in [Regulation 22C](#);

“Cross reference Policy L30 This supports conservation of heritage assets appropriate to their significance and seeks that development which may affect such assets is accompanied by a Heritage Statement. Such heritage assets form only a small proportion of the overall

Broad Location, are acknowledged and will be treated appropriately as part of the Masterplanning / planning application processes.”

- 10.7 A specific Heritage Impact Assessment is not considered to be required at this Plan-making stage. A Heritage Statement and a Heritage Impact Assessment will be required as part of the Masterplanning and planning application processes. These Heritage considerations have already and will continue to inform the ongoing Masterplanning being taken forward through the PPA process (see other MIQ responses).

11. Question 11

What is the justification for the 3% self-build figure?

- 11.1 As set out in the Councils response to M7i Q4, the justification is primarily based on the evidence from the Council's self-build register and also more generally from support from the public and Councillors when considering iteratively the emerging draft Plan. There are currently 444 individuals on the Council's self-build register. Some of these individuals will be able to access self-build opportunities through the normal functioning of the housing market and a number of such opportunities arise each year. However, in an area entirely washed over by the Metropolitan Green Belt and with high demand for housing and high house prices, it is evident that some will not. The Plan therefore seeks provision of 3% self-build opportunities in each of the Broad Locations. As the Broad Locations come forward, this will in due course provide for 307 self-build opportunities in the Broad Locations in the Plan period and 320 opportunities by the completion of the Broad Locations identified.
- 11.2 The PPG sets out at Paragraph: 011 Reference ID: 57-011-20160401;
- "Local planning authorities should use the demand data from the registers in their area, supported as necessary by additional data from secondary sources (as outlined in the [housing and economic development needs guidance](#)), when preparing their [Strategic Housing Market Assessment](#) to understand and consider future need for this type of housing in their area. Plan-makers will need to make reasonable assumptions using the data on their register to avoid double-counting households."*
- 11.3 The Council are also required to have regard for this demand for self-build as part of the Self Build and Custom Housebuilding Act 2015. The Council is aware that not all those on the register would come forward if a plot was made available in the Broad Locations. The Council acknowledges that it is currently uncertain exactly how much truly effective demand for self-build there is in the District. However, given the historic limitations of opportunities and the new chance provided by the first Plan since 1994, the Council does not wish to under-estimate the self-build demand and therefore makes a substantial provision of opportunities. The Council is very open to considering the matter again once this Plan is adopted and the level of take up and genuine and viable interest in self-build is better known, in a review of the Plan.

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North Hemel Hempstead (iv)

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Strategic Local Plan Background Note

Residential Density

October 2014

Background Note

Residential Density

An earlier version of this note was considered by the Council's Planning Policy Committee on 3 July 2014. This version provides additional examples. The purpose of this Note is to illustrate housing density on some well known sites across St Albans City and District and thus to give a range of comparators for typical residential layouts / designs.

Measuring housing density is a simple way of quantifying the intensity of residential development and efficiency in use of land for housing. The measurement also gives some insight into the environmental character of housing areas.

The Note gives local examples of:

Relationship between gross and net density in recent major residential development

1. Jersey Farm; 1980's
2. Hill End / Cell Barnes; 1990s
3. Napsbury; 1990 / 2000s

Net density calculations

1. New England Street area, St Albans
2. King Harry Lane (new development in progress), St Albans
3. Jersey Farm Estate, St Albans
4. Oaklands Smallford Campus (current housing application as proposed), St Albans
5. Former Oaklands College City Campus housing redevelopment, St Albans
6. Part of Marshalswick Estate, St Albans
7. Part of Chiswell Green
8. Luton Road area, Harpenden
9. Belmont Hill, St Albans
10. Elm Lawns Close, St Albans
11. Land Rear of Sandridge Road, St Albans
12. Waverley Road, St Albans
13. St Albans Hospital site
14. Station Road, Harpenden (a)
15. Station Road, Harpenden (b)
16. Redbourn Lane, Harpenden
17. Luton Road, Harpenden

Calculation and interpretation of residential density

Decisions on what housing density is appropriate for a location are influenced by many different factors.

Building height, block size and housing typology are the main factors that influence the character of an area and perceptions of density.

However, higher density does not have to mean tall buildings with small apartments that fail to relate to local character. In fact, high buildings can be less effective in maximising the use of land, especially in terms of the relationship of developed and open areas.

Good design is crucial to achieve environmental quality. Each design scheme should establish the density appropriate for a particular location taking into consideration factors such as:

- Context - density appropriate to context and allowing respect for surrounding residential character
- Quality of public realm - a legible and stimulating public realm
- Outdoor space - high quality communal space
- Private and public space mix - ability to manage spaces
- Parking - adequate and appropriate car parking levels which do not dominate or detract from the external environment

Additional factors which might determine an appropriate density level include:

- Surrounding built form
- Housing types
- Need for different types of housing
- Need to create variety of densities – density mix
- Capacity of facilities for residents

It is important to remember that density is a product of design, not a determinant of it. Residential density should aim to support local infrastructure such as shops, schools, and local transport. Homes and Community Agency (HCA) “research has shown that there is no correlation between urban quality and density. Developments driven by average densities and shaped by blanket standards (relating to privacy, open space, parking and highway geometry, for example) stultify design and tend to produce lowest-common-denominator blandness.”

In the St Albans City and District Strategic Local Plan (SLP) the factors of what ‘housing types’ and the ‘need for different types of housing’ are particularly important. The draft SLP says: “All new housing development will contribute to a mix of different housing types in residential areas, taking into account the existing pattern of housing in the area, evidence of local need and site specific factors. It will in particular require the inclusion of more small and small to medium-sized housing, including one and two bedroom flats and 2

bedroom houses, in new development schemes in suitable locations, to increase the proportion of such sized units in the district housing stock, to widen choice and to provide more relatively low cost market housing available to buy. Floorspace, as well as room numbers and bedroom numbers, will be considered in judgments of relatively low cost market housing.

The Council requires the affordable housing size, type, and mix to broadly reflect that being provided for the market element of all development.

The Council seeks the provision of a reasonable proportion of housing designed to the lifetime homes standard that can be readily adapted to meet the needs of older people and people with disabilities.

Sheltered housing and extra care housing for older people and those with special needs will be encouraged on suitable sites in areas close to a range of services.

Further detail on requirements for appropriate housing size, type, mix and proportion of lifetime homes will be given in the DLP. “

Measuring density

There are different ways of measuring density, each of which provides different information.

They include:

- Dwellings per hectare (DPH) – this a common measure to indicate residential density. However, apartments at 60dph may actually have smaller built volume than larger houses at 30dph with related garaging.
- Square meters per hectare – measuring amount of floorspace per hectare is another method to illustrate development intensity. It indicates more clearly how efficiently land is being used.
- Floor area ratio (FAR) or plot ratio – this measurement express the ratio between gross floor area and site area. It again indicates the intensity of land use and gives some indication of massing volumes.
- Bedspace per hectare – measuring bedspace per hectare indicates population capacity rather than actual use (as some dwellings may be under-occupied.)
- Habitable rooms per hectare – habitable room and bedspace densities give an indication of resident population and a calculation of population capacity. Calculating habitable rooms per hectare can be helpful in

determination of likely demand for amenities and services such as public transport.

For the purpose of this Note the simple dwellings per hectare has been adopted.

The first part of the Note illustrates how density is viewed at a gross level. It gives examples of the relationship between gross and net density calculations. Gross density calculations can be used to estimate and illustrate the potential development capacity of a site. The Green Belt Review Part 2 (SKM Enviro Consultancy Study) used the approach that up to 60% of the Gross Development Area (GDA) would be developed (termed Net Development Area) and the remaining 40% would be required to provide infrastructure, main roads, open space and public facilities.

The second part of the Note illustrates calculations of net density. A net density measurement includes access roads within the site, private garden spaces, car parking areas, incidental open space and landscape and children's play areas but normally excludes major distributor road, primary schools, open spaces serving a wider area and significant landscape buffer strips.

Net density is the measure of density used for the SKM recommended net development areas and thus is a comparable measure to that used in the illustrations in this Note.

Work on density assumptions in the draft Strategic Local Plan (SLP) is based on HCA research, in the form of a density matrix (Table 3.3 from the Homes and Communities Agency Urban Design Compendium – reference below). The matrix links typical residential densities to urban form ('creating urban structure'). It draws on examples of development across the UK and Europe. Average densities are based on case studies analysed as part of the *Sustainable Residential Quality: Exploring the housing potential of large sites* research. The matrix recommends that residential densities of 30 to 50 DPH (alongside related services) should be applied in suburban locations. This is considered to be relevant to the SKM identified sub areas assessed for the draft SLP, as they are located on the edges of existing settlements and exhibit suburban characteristics.

Illustrative areas analysed for the purpose of this study can be considered in the context of the Density Matrix.

The matrix is reproduced below:

		Option 1	Option 2	Option 3
Car Parking Provision		High 2-1.5 spaces per unit	Moderate 1.5-1 space per unit	Low less than 1 space per unit
Redominant Housing Type		Detached & linked houses	Terraced houses & flats	Mostly flats
Location	Setting			
Site within Town Centre 'Ped-Shed'	Central			240-1100 hr / ha 240-435 u / ha Ave. 2.7 hr / u
	Urban		200-450 hr / ha 55-175 u / ha Ave. 3.1 hr / u	450-700 hr / ha 165-275 u / ha Ave. 2.7 hr / u
	Suburban		240-250 hr / ha 35-60 u / ha Ave. 4.2 hr / u	250-350 hr / ha 80-120 u / ha Ave. 3.0 hr / u
Sites along Transport Corridors & Sites close to a Town Centre 'Ped-Shed'	Urban		200-300 hr / ha 50-110 u / ha Ave. 3.7 hr / u	300-450 hr / ha 100-150 u / ha Ave. 3.0 hr / u
	Suburban	150-200 hr / ha 30-50 u / ha Ave. 4.6 hr / u	200-250 hr / ha 50-80 u / ha Ave. 3.8 hr / u	
Currently Remote Sites	Suburban	150-200 hr / ha 30-65 u / ha Ave. 4.4 hr / u		

Table 3.3 Density matrix

Average densities are based on case studies analysed as part of the *Sustainable Residential Quality: Exploring the housing potential of large sites* research (LPAC, DETR, GOL, LT and HC, 2000)

(Note: This table is a direct extract from Homes and Community Agency Urban Design Compendium 1. Second row in column one should read 'predominant'.)

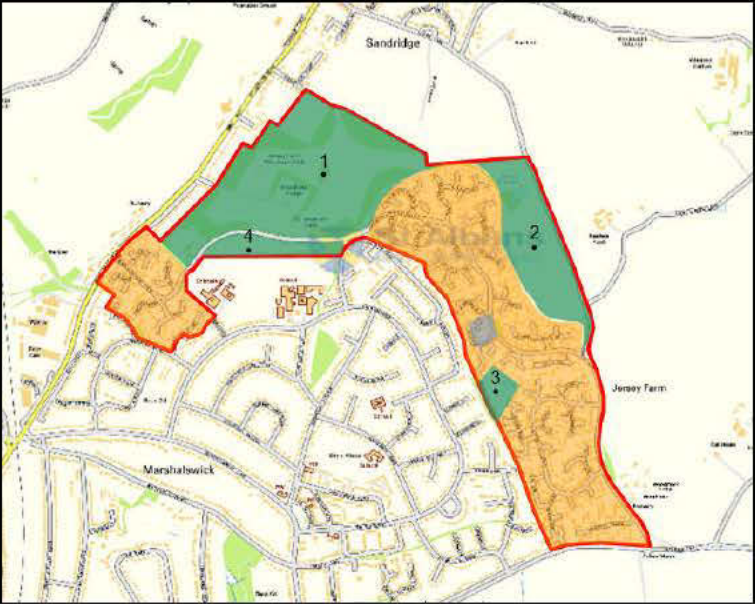
Reference:


Urban Design Compendium 2 (2007), *Delivering Quality Places* (2nd Ed), Homes and Community Agency

Relationship between gross and net density in recent major residential development – local examples

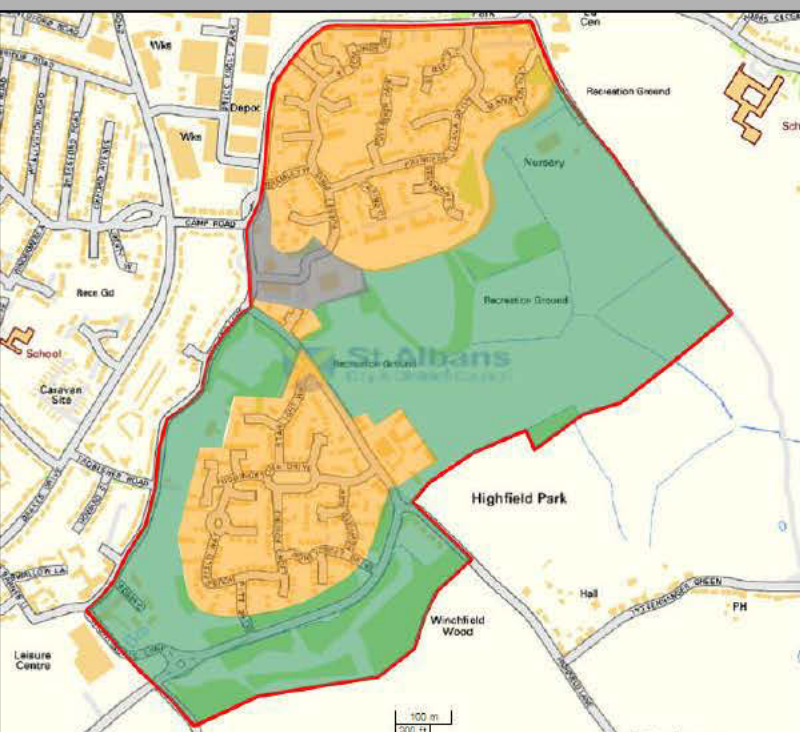
All figures are estimated / rounded (details noted below)






1. Jersey Farm 1980s


JERSEY FARM	Total area of development (Ha)	Area used for infrastructure (Ha) (mainly large open spaces, distributor roads and school sites)	Remaining area for residential development (Ha)	Dwelling numbers	Notes on assumptions / estimates
	102 ha	44 (43%)	58 (57%)	1800	<ul style="list-style-type: none"> Infrastructure taken as including schools (see below), local centre (1 Ha) woodland park / schools (32 ha) eastern OS (9.5 Ha) local centre OS (1.5 ha) Above area used for infrastructure includes approximately 25% of Wheatfields and Sandringham school sites to reflect use and expansion for the Jersey Farm estate (albeit this site

 <p> Site boundary Developed area </p> <p> Undeveloped area </p> <p> 1. Woodland Park OS 2. Eastern OS 3. Central OS 4. Part of school site OS </p> <p> Local Centre </p>					<p>is pre existing and also serves Marshalswick)</p> <ul style="list-style-type: none"> Area used for infrastructure is probably an underestimate as, for ease of calculation, parts of the distributor road corridor and Jersey Lane are not included because they would require micro level area measurement Dwelling numbers are estimated as Census super output lower level areas (SOAs 007C, 007B, 008A) and address point area adjustment. SOAs do not co-incide exactly with the estate to the NW corner. A cautious adjustment has been used
Density calculations - dwellings per Ha (dph)	Gross 1800 dwellings on		Net 1800 dwellings on		

	102 Ha = 18 DPH		58 ha = 31 DPH		
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HILL END / CELL BARNES (HIGHFIELD)	Total area of development (Ha)	Area used for infrastructure (Ha) (mainly large open spaces, distributor roads and school sites)	Remaining area for residential development (Ha)	Dwelling numbers	Notes on assumptions / estimates
 <p>The map shows the Highfield Park area with various zones. A red outline defines the main area of interest. Inside this area, there are orange-shaded regions representing infrastructure (roads, school sites, etc.) and green-shaded regions representing recreation (Highfield Park, Winchfield Wood OS, etc.). Labels on the map include 'Highfield Park', 'Winchfield Wood', 'Recreation Ground', 'Nursery', 'School', 'Leisure Centre', 'Hall', 'PH', 'Cen', 'Depot', 'Wks', 'Race Gld', 'Carnival Site', 'St Albans', '100m', and '200m' scale bar.</p>	78 ha	46 ha 59 (%)	32 ha 41 (%)	800	<ul style="list-style-type: none"> Infrastructure taken as including local centre (1.8 Ha), Highfield Park recreation areas (26 Ha) and Winchfield Wood OS (13.4 Ha). Full map of the Highfield Park facilities can be found here. The remainder is general open space and community facilities. Dwelling numbers are estimated from Census super output lower level areas (SAOs) 015A and 015B and address point data






 <div><div> Site boundary</div><div> Developed Area</div><div> Undeveloped Area</div><div> Local Centre</div></div>					adjustment. SAO 15B covers Tyttenhanger Village and parts of Colney Heath Lane schools.
Density calculations - dwellings per Ha (dph)	Gross 800 dwellings on 78 Ha = 10 DPH		Net 800 dwellings on 32 ha = 25 DPH		






NAPS BURY	Total area of development (Ha)	Area used for infrastructure (Ha) (mainly large open spaces, distributor roads and school sites)	Remaining area for residential development (Ha)	Dwelling numbers	Notes on assumptions / estimates
	60 ha	37 ha 62 (%)	23 ha 38 (%)	620	<ul style="list-style-type: none"> • Infrastructure taken as all large blocks of open space forming the setting for the residential development (37 Ha in all). These include distributor road and some small scale recreation facilities. • Area residentially developed is quite low and includes considerable additional integral amenity open space. This is due to the special character of this historic psychiatric hospital site; recognised in its conservation area designation. The

<div></div> <div><div><div></div>Site boundary</div><div><div></div>Developed area</div><div><div></div>Undeveloped Area</div></div>					design context set was in the importance of maintaining the extensive parkland setting
Density calculations - dwellings per Ha (dph)	Gross 620 dwellings on 60 Ha = 10 DPH		Net 620 dwellings on 23 ha = 27 DPH		

Net density calculations – local examples

1. New England Street area, St Albans	Map and Aerial Photographs	Photographs	Density Calculations	Notes
<p>Land enclosed by New England Street to the West, Verulam Road to the North and College Street to the South, St Albans</p> <p>This is a residential area with primarily 2 storey cottage terraced houses built in the 19th Century. Additional residential development took place at the beginning of 20th Century along Verulam Road.</p> <p>The site includes two commercial units and a social use with small pockets of open space.</p>	 	 <p>New England Street</p>  <p>Temperance Street</p>  <p>College Street</p>	<p>The site is 2.5 ha in area and there are 144 dwellings within the site.</p> <p>Net density of this site is 57 DPH.</p>	<p>Some of the space adjoining New England Street has been included in the calculations to illustrate the density with a reflection of the character of the area including some public space.</p> <p>A major factor in high density is total reliance on-street parking.</p>

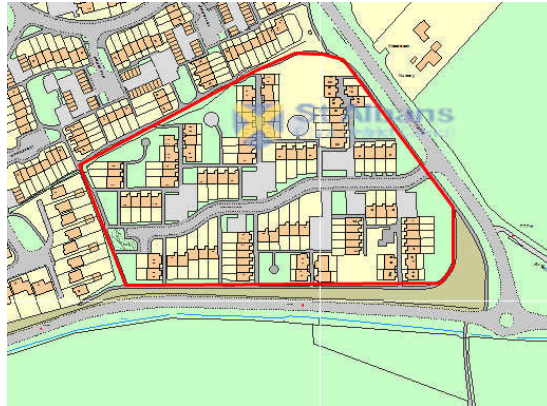
2. King Harry Lane (new development in progress), St Albans	Map and Aerial Photographs	Photographs	Density Calculations	Notes
<p>The development of this site is divided into two phases. Phase one (northern side) is a proposal for 126 dwellings (16 key worker units, 45 extra care/assisted living units and 65 units of accommodation for the over 55s).</p> <p>Outline planning permission for phase one development was granted on appeal in February 2008.</p> <p>Phase two (immediately to the south of phase one development) is a development of 150 dwellings (ranging from 2 – 2.5 storey houses) Permission for this development was granted on appeal in April 2010.</p>	 	 <p>Illustrative Masterplan for phase one development.</p>   <p>Mortimer Crescent (phase two)</p>	<p>The site is 7.8 ha in area the total number of proposed dwellings is 276.</p> <p>Based on these figures, net density for the whole site is 35 DPH.</p>	<p>This is illustrative of a recently permitted development in a suburban location but including some open spaces.</p> <p>Each site has different ownership but both sites share access arrangements and a coordinated design led approach.</p>

3. Jersey Farm Estate, St Albans	Map and Aerial Photographs	Photographs	Density Calculations	Notes
<p>Various parts of Jersey Farm Estate.</p> <p>The development of the whole estate took place across 1970s and 80s.</p> <p><u>Area 1 – North – eastern part of Jersey Farm.</u></p> <p>Permission for development of this site was granted in early the early 1980s.</p>	 	 <p>Lincoln Close</p>  <p>Pirton Close</p>  <p>Sandringham Crescent</p>	<p>Area 1 The site is 6.8 ha in area and there are 156 houses within the site.</p> <p>Net density of this area is 23 DPH.</p>	<p>The site consists of 2 storey detached houses. Average plot size is 300 to 350 m².</p> <p>All the houses have garages and off street parking.</p>

Area 2 – Southern part of Jersey Farm

This part of Jersey Farm Estate development consists mainly of 2 storey terraced houses.

Permission was granted for the development of 118 Dwellings (60 flats and 58 homes) in the 1970s.



Newgate Close



Newgate Close



Newgate Close

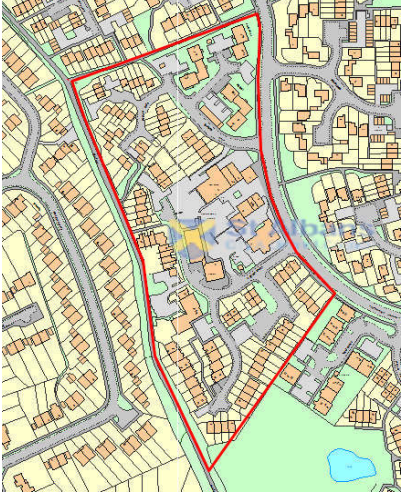



Area 2




The site is 2.8ha wide and there are 88 terraced houses within the site.




Net density for this site is **31 DPH**.





Houses are set back from the street and have relatively large front and back gardens.


There is a significant amount of designated resident parking space and pockets of green open space which explains the relatively low density for a development of terraced housing.





<p><u>Area 3 – Middle part of Jersey Farm</u></p> <p>This is a mixed use area which includes residential dwellings, commercial and community uses</p> <p>Permission for the commercial Village Centre Development was granted in the late 1970s followed by approval for adjoining residential development in the early 80s.</p>	 	 <p>Harvesters</p>  <p>Twyford Road</p>  <p>Commercial Centre</p>	<p>Area 3</p> <p>The site in total is 3.5 ha in area. Within the site there are 92 terraced houses, three blocks of flats (equivalent of 42 flats in total) and commercial centre (0.6 ha) which includes neighbourhood supermarket, five small retail units, public toilets, medical and community centre.</p> <p>After taking away the volume of commercial centre area and its parking, the net density for the site is 46 DPH.</p>	<p>This relatively high density can be explained by the high proportion of terraced housing and flats. Dwellings of this kind are often included in the design of a central area or local centre within a settlement and this will allow higher overall densities to be achieved. It also introduces variation in the character of the built environment.</p>
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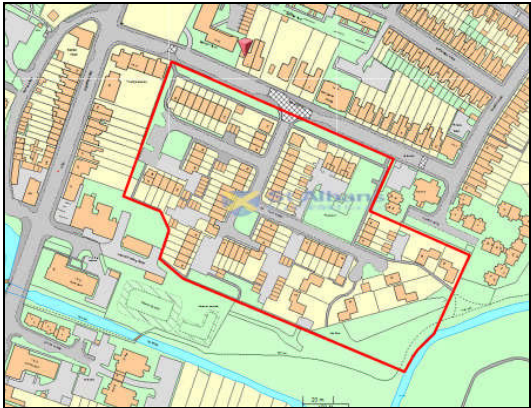




4 Oaklands Smallford Campus (current housing application as proposed), St Albans	Map and Aerial Photographs	Photographs	Density Calculations	Notes
<p>A full application for comprehensive redevelopment to provide new and refurbished College Buildings and residential development of 348 dwellings, car parking, associated access and landscaping was submitted in May 2013. The application is still under consultation.</p> <p>The area marked on the map is the area proposed by the applicant for residential development.</p>		<p>Landscape proposal</p>  <p>Proposed Residential Layout</p> 	<p>The site is 13.68 ha in area. The application proposes development of 348 residential dwellings.</p> <p>Within the design proposal there is a quite significant amount of structural open space in the northern part of the site and middle of the site.</p> <p>The overall density of the site is 26dph but after taking away the area of structural open space the net density for this development is 31 DPH.</p>	<p>The scheme proposes mainly 2 – 3 storey houses.</p> <p>Density of the site varies depending on character zones. Proposed 'Main Streets' will be lower in density in the range of 30dph. 'The lanes' will be medium density (35dph) and 'Mews Links' will be higher density ranging from 40 - 45dph.</p>





5. Former Oaklands College City Campus housing redevelopment, St Albans	Map and Aerial Photographs	Photographs	Density Calculations	Notes
<p>This is a former Oaklands College City Campus site.</p> <p>Permission for demolition of educational buildings, change of use from educational use to residential use of eight buildings, retention of two building as hall and gym and erection of 15 apartment blocks providing a total of 329 units was granted on an appeal in August 2006.</p> <p>The density calculation is for part of the development - the section now redeveloped.</p>	 <p>The top image is a map showing the site boundary in red, with various colored zones (green, orange, yellow) indicating different land uses or planning zones. The bottom image is an aerial photograph of the same site, showing the layout of buildings and surrounding greenery, with the site boundary also outlined in red.</p>	<p>Newsom Place</p>  <p>Lemsford Road</p> 	<p>The site in total is 3.3 ha in area. Within the site boundary there are 20 apartment blocks (equivalent of 281 dwellings), gym and hall.</p> <p>After taking away the area of the hall/gym buildings the net density for this development is 93 DPH.</p>	<p>The scheme proposes mainly 3 – 4 storey apartment blocks.</p> <p>Parking is at reduced level due to proximity to City services and public transport. Some of the parking is underground. This high density development is appropriate to an urban site, but there is space for extensive landscaping.</p>






6. Part of Marshalswick Estate, St Albans	Map and Aerial Photographs	Photographs	Density Calculations	Notes
<p>Land along Sandpit Lane immediately to the north of current Oaklands application. Marshalswick, St Albans.</p>		 <p>Barnfield Road</p>  <p>Southfield Way</p>  <p>Ardens Way</p>	<p>The site is 8.4 ha in area and there are 170 dwellings within the site boundary.</p> <p>Net density for this area is 20 DPH.</p>	<p>The area consists of 2 – 2.5 storey detached houses with garages/ off street parking and relatively large back gardens.</p>





7. Part of Chiswell Green	Map and Aerial Photographs	Photographs	Density Calculations	Notes
<p>Land enclosed by North Orbital Road to the East and Watford Road to the West, Chiswell Green</p>	 <p>The top image is a map showing the site boundary in red, enclosed by North Orbital Road to the East and Watford Road to the West. The bottom image is an aerial photograph of the same area, also with the site boundary outlined in red.</p>	 <p>Manor Drive</p>  <p>Watford Drive</p>  <p>Forefield</p>	<p>The site is 9.7 ha in area and there are 145 dwellings within the site boundary.</p> <p>Net density for this area is 15 DPH.</p>	<p>The site consists of a mixture of house types from 1 storey bungalows to 2.5 storey detached houses.</p>

8. Luton Road, Harpenden	Map and Aerial Photographs	Photographs	Density Calculations	Notes
<p>Land enclosed by Luton Road to the North and Tuffnells Way to the South, Harpenden</p>		 <p>Ridge Avenue</p>  <p>Wells Close</p>  <p>Tuffnells Way</p>	<p>The site is 10.8 ha in area and there are 190 dwellings within the site boundary.</p> <p>Net density for this for this site is 17 DPH.</p>	<p>There is a mixture of house types. From 1 storey bungalows to 2 – 2.5 storey terraced and detached houses.</p> <p>Plot sizes vary from 1100 m2 to 215 m2.</p> <p>Most gardens are substantial and there is generally ample off street parking.</p>

9. Belmont Hill, St Albans	Map and Aerial Photographs	Photographs	Density Calculations	Notes
De Tany Court at Belmont Hill, St Albans (former playing fields)	 	 <p>De Tany Ct and related open space (part of former playing field)</p>  <p>De Tany Ct</p>  <p>De Tany Ct</p>	<p>The site is 2.24 ha in total and there are 80 dwellings within the site.</p> <p>Main open spaces are 0.3 ha in total. These are retained parts of the former playing fields and can be regarded as more than amenity open space included in a net area.</p> <p>Density of this site is 35 DPH.</p> <p>If calculated without play area and open space (south east of the site) the density of this site is 41 DPH.</p>	<p>This is a residential area with a mix of 2-3 storey houses and maisonettes built in late 80s.</p> <p>The site includes a substantial play area and riverside open space serving the wider area and small pockets of integral open space.</p>

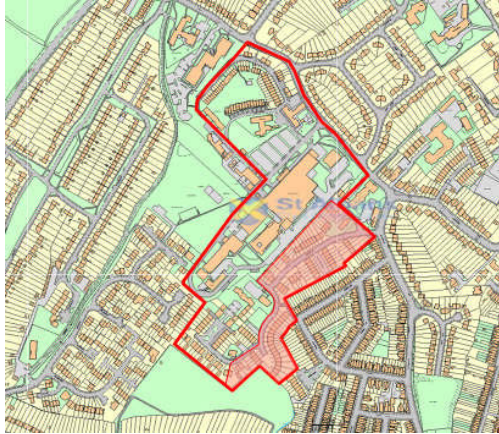
10. Elm Lawns Close, St Albans	Map and Aerial Photographs	Photographs	Density Calculations	Notes
<p>Elm Lawns Close, off Avenue Road, St Albans</p>	 	 <p>Elm Lawns Close</p>  <p>Avenue Road</p>	<p>The site is 0.4 ha in total and there are 24 dwellings within the site.</p> <p>Net density of this site is 60 DPH.</p>	<p>This residential development is a mix of 2- 3 Storey houses</p> <p>This is a small site, but it illustrates higher density development with car parking in a cul de sac layout. It comprises housing in terraced form.</p>

11. Land Rear of Sandridge Road, St Albans	Map and Aerial Photographs	Photographs	Density Calculations	Notes
Archers Fields; R/O 168 Sandridge Road, St Albans	 	 <p>Sandridge Road</p>  <p>Archers Fields</p>  <p>Archers Fields</p>	<p>The site is an urban infill of 0.75 ha in total. There are 27 dwellings within the site.</p> <p>Net density of this site is 36 DPH.</p>	<p>The site consists solely of 2 storey houses, with gardens. They are mainly terraced, but including some linked detached and detached. There is no integral / amenity open space. There is a substantial unused road frontage (south side of access road) which results in a lower density figure than the layout would achieve if the site were not urban infill, fitting into an existing urban layout.</p>

12. Waverley Road, St Albans	Map and Aerial Photographs	Photographs	Density Calculations	Notes
<p>Pegasus Place off Waverley Road, St Albans</p>	 	 <p>Pegasus Place</p>  <p>Waverley Road</p>	<p>The site is an urban infill development of 0.74 ha in total. There are 36 dwellings within the site.</p> <p>Net density of this site is 49 DPH.</p>	<p>The site consists entirely of 2-3 storey terraced houses with associated parking and landscaping. The houses have small gardens. There is no integral amenity open space.</p>

13. St Albans Hospital Sites	Map and Aerial Photographs	Photographs	Density Calculations	Notes
<p>Land adjacent St Albans Hospital, Waverley Road, St Albans.</p>		 <p>Goldsmith Way</p>  <p>Newmarket Ct</p>  <p>Waverley Road with entrance to St Albans City Hospital</p>	<p>The overall site is 9.2 ha in total. The main hospital site (shaded in red) is 3.2 ha. There are approximately 290 dwellings within the remaining site (6 Ha).</p> <p>Net density for the overall site is 48 DPH.</p>	<p>The area includes a wide range of dwelling types including some substantial blocks of small flats.</p> <p>The overall site calculation includes some significant areas of open space, the site of a hospice and other hospital related uses.</p> <p>Densities within the overall site vary greatly.</p> <p>Some sub areas where dwellings are predominantly 2 -3 storey houses are considered separately below.</p>

1. Goldsmith Way



Goldsmith Way










The site shaded in red is 2 ha in total and there are 71 dwellings within selected site.






Net density for this site is **35 DPH**



Dwellings are 2-3 storey houses. Within the site there are pockets of open space and significant amount of on-street and off-street parking.

<p>2. Newmarket Court</p>	 	<p>Newmarket Court</p>   	<p>The site shaded in red is 1.1 ha in total and there are 43 dwellings within selected site.</p> <p>Net density for this site is 39 DPH</p>	<p>The site is a mixture of houses and flats with significant amount of on and off street parking space.</p>
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14. Station Road, Harpenden (a)	Map and Aerial Photographs	Photographs	Density Calculations	Notes
Mallard Mews / Station Road / Waveney Road, Harpenden	 	 <p data-bbox="1010 499 1189 528">Mallard Mews</p>  <p data-bbox="1010 893 1211 922">Waveney Road</p>  <p data-bbox="1010 1249 1178 1278">Station Road</p>	<p data-bbox="1442 180 1738 316">The site is 0.25 ha in total and there are 15 dwellings within the site.</p> <p data-bbox="1442 352 1715 416">Density of this site is 60 DPH.</p>	<p data-bbox="1765 180 2074 451">This is an infill development with a mix of 2.5 – 3 storey flats and houses and apartments. This is a part cul de sac part street frontage development.</p>

15. Station Road, Harpenden (b)	Map and Aerial Photographs	Photographs	Density Calculations	Notes
<p>Station Road, Harpenden (flats)</p>	 	 <p>Station Road</p>  <p>Station Road</p>  <p>Station Road</p>	<p>The application site is 0.41 ha in total and there are 48 dwellings within the site.</p> <p>Net density of this site is 117 DPH.</p>	<p>This development consists of 2-3 three storey blocks of flats with associated parking spaces to rear of blocks.</p>

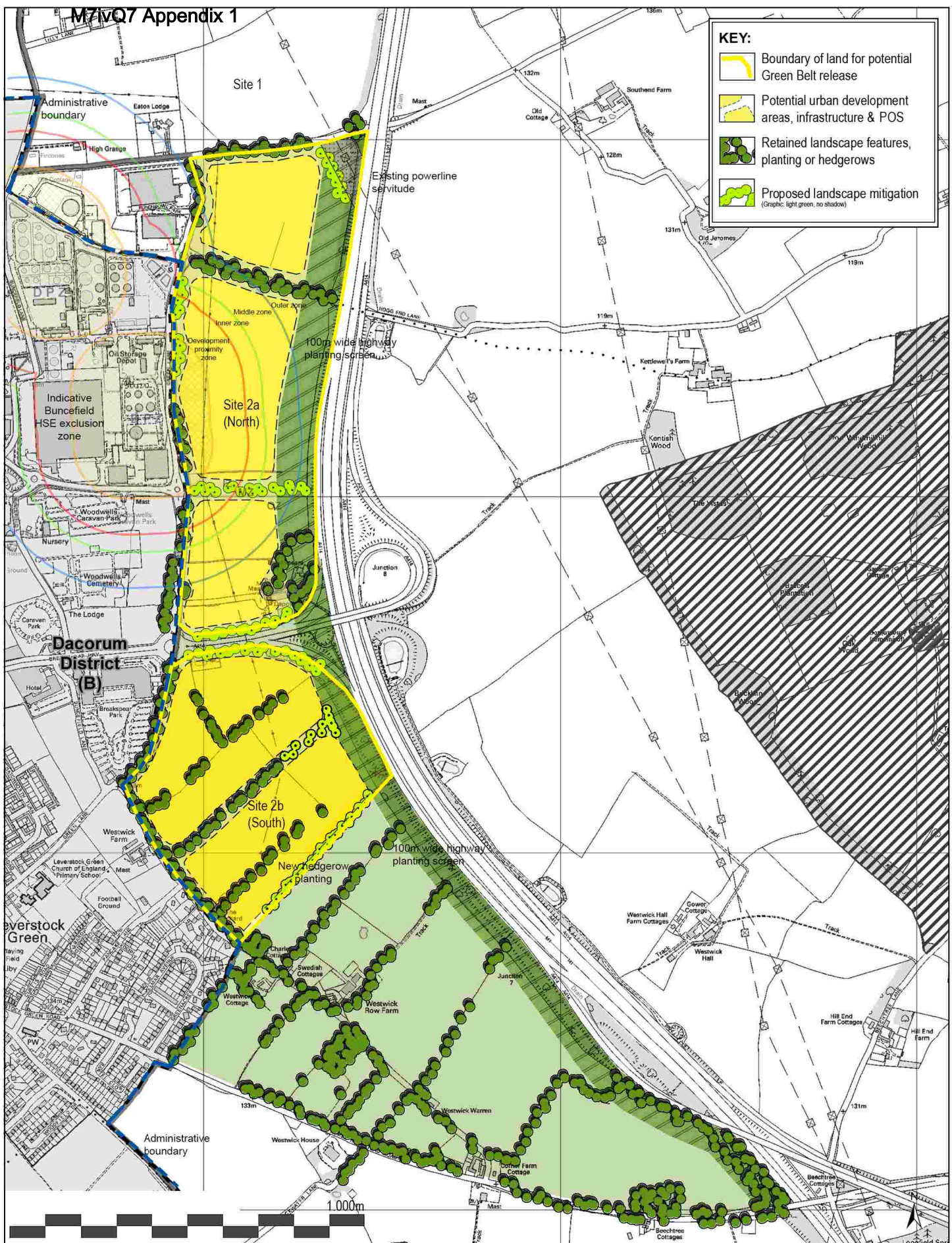
16. Redbourn Lane, Harpenden	Map and Aerial Photographs	Photographs	Density Calculations	Notes
Former Central Science Laboratories, Redbourn Lane, Hatching Green, Harpenden	 	 <p data-bbox="999 475 1167 502">Manor Close</p>  <p data-bbox="999 850 1167 877">Manor Close</p>  <p data-bbox="999 1217 1417 1281">Hatching Green (road leading to the site)</p>	<p data-bbox="1447 180 1733 316">The overall site is 1.9 ha and there are 39 dwellings within the site.</p> <p data-bbox="1447 352 1715 416">Density of this site is 20 DPH.</p> <p data-bbox="1447 453 1727 687">If calculated without the surrounding open space (approx. 0.63 Ha) then the net density of this development is 32 DPH</p>	<p data-bbox="1767 180 2074 488">This residential development includes consists 2 storey housing with a mix of terraced, linked detached and detached forms. There is a mix of on-street and off-street parking.</p> <p data-bbox="1767 525 2074 722">There is a substantial setting of open space related to the overall character of the area. This more than integral amenity open space.</p>

17. Luton Road, Harpenden	Map and Aerial Photographs	Photographs	Density Calculations	Notes
40 Luton Road, Harpenden	 <p>The top image is a map showing the site (outlined in red) located at the intersection of Luton Road and Townsend Road. The bottom image is an aerial photograph of the same area, also with the site outlined in red. Both images include a 'St Albans' logo.</p>	 <p>View from Townsend Road</p>  <p>View from Luton Road</p>  <p>Luton Road</p>	<p>The site is 0.14 ha in total and there are 9 dwellings within the site.</p> <p>Density of this site is 64 DPH.</p>	<p>This residential development consists of 9 apartments in a 3 storey building with accommodation in the roof space and undercroft parking.</p> <p>This is a small infill / redevelopment scheme, but it illustrates how higher density components within an overall area / scheme can contribute to character.</p>

8. Assessment of Infrastructure Capacity

Table 2: Infrastructure to be assessed in the IDP

Infrastructure Category	Sector	Infrastructure Type
Social & Community Infrastructure	Health Infrastructure	<ul style="list-style-type: none"> • GPs • Hospitals & Acute Provision
	Health and Community Services	<ul style="list-style-type: none"> • Adult Care Services • Mental Health Care
	Education Infrastructure	<ul style="list-style-type: none"> • Primary Education • Secondary Education • Further Education • Early Education & Child Care Provision
	Emergency Services	<ul style="list-style-type: none"> • Police Services • Fire & Rescue Services
	Leisure and Cultural Facilities	<ul style="list-style-type: none"> • Sports & Leisure Facilities • Cultural Services & Public Realm • Libraries • Cemeteries
Green Infrastructure	Strategic Green Infrastructure	<ul style="list-style-type: none"> • Forests • Country Parks • Ecological Networks • Rights of Way • River Corridors • Flood risk
	Local Green Infrastructure	<ul style="list-style-type: none"> • Allotments • Amenity Green Space • Natural & Semi-Natural Green Space • Parks & Gardens • Playing Pitches • Children's Play Areas • Teenage Provision
Physical Infrastructure	Strategic & Local Transport	<ul style="list-style-type: none"> • Road Network • Public Transport • Walking & Cycling Infrastructure • Parking
Utilities	Water Infrastructure	<ul style="list-style-type: none"> • Water Supply • Water Drainage & Sewerage
	Energy Distribution	<ul style="list-style-type: none"> • Electricity Distribution • Electric Vehicle Charging • Gas Transmission & Distribution • Onsite Energy Provision
	Digital Infrastructure	<ul style="list-style-type: none"> • Internet Access
	Waste Infrastructure	<ul style="list-style-type: none"> • Waste & Recycling



Sites and boundary study for St Albans City and District Council

PROJECT: JE30761
DATE: Nov 2013
SCALE: Indicative

STAGE 2
Rev. Jan 14/005

FIGURE 4.3 Indicative layout
Site 2a and 2b East of Hemel Hempstead (south)

HSE'S LAND USE PLANNING METHODOLOGY

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Annex 4 - Contact

Introduction

1. The Health and Safety Executive (HSE) is a statutory consultee on certain developments in the vicinity of major hazard sites and major accident hazard pipelines. HSE's land use planning (LUP) advice is based on the methodology set out in this document, and in the majority of cases HSE's advice is provided through HSE's Planning Advice Web App.

Background to HSE's involvement in land use planning

2. Major accidents at sites storing hazardous substances are rare, but when they do happen the effects on people living nearby can be devastating. This became apparent following the Flixborough incident in the UK in 1974, more recently at Buncefield in 2005 and across Europe for example at Enschede in The Netherlands in 2000. HSE first offered advice to Planning Authorities (PA) in 1972 and this was introduced across the EU by the 1996 Seveso II Directive, which was replaced in 2012 by the Seveso III Directive (See Annex 1). The simple aim is to manage population growth close to such sites to mitigate the consequences of a major accident.

3. HSE sets a consultation distance (CD) around major hazard sites and major accident hazard pipelines after assessing the risks and likely effects of major accidents at the major hazard. Major hazards comprise a wide range of chemical process sites, fuel and chemical storage sites, and pipelines. The CDs are based on available scientific knowledge using hazard /risk assessment models updated as new knowledge comes to light. Major accidents are also closely studied. The PA is notified of this CD and has a statutory duty to consult HSE on certain proposed developments within it (see Annex 2), and this should be done through HSE's Planning Advice Web App. HSE's response will be that HSE either 'advises against' or 'does not advise against' the granting of planning permission on safety grounds that arise from the possible consequences of a major accident at the major hazard. The PA must take this advice into account when they make a decision on the planning application.

4. PAs have consulted HSE for many years on planning applications and proposed developments within the CD of major hazards. In 2006/2007, HSE provided PAs with direct on-line access to a software decision support tool known as PADHI+ (Planning Advice for Developments near Hazardous Installations), based on HSE's methodology, for them to use to consult HSE for advice on the majority of planning applications rather than having to contact HSE directly.

5. In 2015, PADHI+ was replaced by the HSE Planning Advice Web App, which PAs should now use to consult HSE for advice. The Web App is also available to developers to use to identify if a proposed development site lies within the CD of a major hazard; if it does, they can also use the Web App to obtain HSE's pre-application advice on their proposal, although there is a charge for that particular service.

6. For more background information see Annex 1 – HSE's land use planning advice provision.

The principles behind HSE's land use planning methodology

7. HSE's land use planning methodology is based on the following principles:

- The risk considered is the residual risk which remains after all reasonably practicable preventative measures have been taken to ensure compliance with the requirements of the Health and Safety at Work etc. Act 1974 and its relevant statutory provisions.
- Where it is beneficial to do so, advice takes account of risk as well as hazard, that is the likelihood of an accident as well as its consequences.
- Account is taken of the size and nature of the proposed development, the inherent vulnerability of the exposed population and the ease of evacuation or other emergency procedures for the type of development proposed. Some categories of development (e.g. schools and hospitals) are regarded as more sensitive than others (e.g. light industrial) and advice is weighted accordingly.
- Consideration of the risk of serious injury, including that of fatality, attaching weight to the risk where a proposed development might result in a large number of casualties in the event of an accident.

HSE's Planning Advice Web App

8. The HSE Planning Advice Web App is the name given to the software used to provide HSE's LUP advice to PAs on proposed developments near major hazard sites and major accident hazard pipelines. It replaced PADHI+ in 2015, and uses the methodology which HSE has used since 2002, which codified the principles used by HSE in providing LUP advice since the 1970s.

9. HSE's Planning Advice Web App can also be used by PAs and developers to obtain HSE's advice on a pre-planning enquiry (PPE) provided sufficient information is available. Developers will be charged for that service. Any decision on a PPE will be conditional on the assessment of the formal planning application which will be made using the information that is appropriate and relevant when HSE is consulted by the PA.

10. Very exceptionally there may be cases of development where the use of HSE's Planning Advice Web App alone is inappropriate and HSE will take account of wider factors so that the usual criteria can be usefully complemented.

11. There are some types of development on which HSE's Planning Advice Web App is currently unable to provide advice. When such cases are identified during a consultation, the PA or developer will be advised to contact HSE directly for advice. These include:

- developments which involve more than 5 separate development types
- mixed-use developments where two or more development types share the same footprint at different levels
- developments which involve a small extension to an existing facility
- developments on a major hazard site which are under the control of the operator of the major hazard site.

What HSE's methodology does not deal with

12. There are a number of aspects of HSE's land use planning and major hazards work that HSE's methodology and HSE's Planning Advice Web App does not deal with.

Incremental development around major hazard sites and major accident hazard pipelines

13. Where HSE has previously advised against a development (particularly where there is a history of incremental development), or where there has already been a Planning Inquiry into a development, the HSE Planning Advice Web App cannot take account of such matters and it is expected that PAs will take this additional information into account when deciding whether or not to grant planning permission.

14. Para 069 of Planning Practice Guidance 'Hazardous Substances – handling development proposals around hazardous installations' advises planning authorities to be alert to encroachment of development in consultation zones, including where larger developments are divided between smaller applications to fall below consultation thresholds. Planning authorities are advised to consult HSE in such cases.

Developments within the Development Proximity Zone (DPZ) of large-scale petrol storage sites

15. Following the Buncefield incident in 2005, HSE reviewed the CDs of all sites which met the criteria for large-scale petrol storage sites, and an additional zone – a Development Proximity Zone (DPZ) was introduced 150 metres from the boundary of the relevant storage tank bunds. HSE's approach to providing land use planning advice on developments in the vicinity of such sites can be found in SPC/Tech/Gen/49 – 'Land use planning advice around large-scale petrol storage sites'. HSE's Planning Advice Web App cannot be used to determine HSE's advice on developments within the DPZ, and PAs must refer any planning applications or pre-planning enquiries which involve such a development to HSE.

Applications for Hazardous Substances Consent

16. These require the specialist skills and knowledge of HSE risk assessors to determine the potential risks and consequences from the hazardous substances in the Consent application. HSE will advise the Hazardous Substances Authority if they should grant consent and will also set a CD, usually comprising three consultation zones (inner, middle and outer – see Annex 3 for LUP purposes for these sites).

Notification of Major Accident Hazard Pipelines by pipeline operators

17. These require the specialist skills and knowledge of HSE Pipelines Inspectors to determine if the potential consequences of the pipelines being approved are acceptable. HSE will then determine the sizes of the 3 zones to be used for LUP purposes basing their assessment on the pipeline details notified to HSE by the pipeline operator.

Applications for Licensed Explosive Sites

18. These require the specialist skills and knowledge of HSE's Explosives Inspectors to determine if the potential consequences of the explosives site being approved are acceptable. They will also determine the safeguarding zones and then advise on any planning consultations within those zones.

Consultations on applications for developments in the vicinity of Licensed Explosives sites or Licensed Nuclear Installations

19. PAs should forward such consultations to HSE's Explosives Inspectorate or the Office for Nuclear Regulation (ONR) as appropriate.

Developments near Major Accident Hazard Pipelines where the pipelines have sections with additional protection measures

20. HSE's Planning Advice Web App uses the 3 consultation zones set by HSE which are based on the details given in the pipeline notification. This covers the whole length of the pipeline and the Web App is unable to accommodate any isolated local variations. If HSE advises against the granting of planning permission due to the proximity of a proposed development to a pipeline, then the option is given to check with the pipeline operator to see if the pipeline has additional protection (e.g. thicker walled pipe) near the proposed development. If so, then HSE's risk assessors are willing to reconsider the case using the details of the pipeline specification relevant to the pipeline near the development. HSE will charge for this service if it is provided as part of the pre-application advice process.

Retrospective advice on developments when a decision has been made by the planning authority

21. HSE does not give retrospective advice on planning applications where a decision has already been made by the planning authority. However, this does not remove the responsibility on the planning authority to take account of public safety in their planning decisions, which in some cases is required by European Directive. Where a decision should have been made with the benefit of HSE's advice, but was not, then it is for the planning authority to consider whether to take any remedial action, which could include revocation of any permission granted.

When to consult HSE

22. HSE should be consulted on any developments which lie within the CD of a major hazard site or a major accident hazard pipeline and which meet the criteria (see Annex 2 for details) set out in:

- the Town and Country Planning (Development Management Procedure) (England) Order 2015,
- the Town and Country Planning (Development Management Procedure) (Wales) Order 2012 and
- the Town and Country Planning (Development Management Procedure) (Scotland) Regulations 2013.

How HSE's advice is determined

23. HSE's advice is usually determined by a combination of:

- the consultation zone in which the development is located, of the 3 zones that make up the CD set by HSE around the major hazard (see paragraph 26 and Figures 1 and 2); and
- the 'Sensitivity Level' of the proposed development which is derived from HSE's categorisation system of "Development Types" (see paragraphs 34-38).

24. Additionally there are situations where 'rules' may be applied when dealing with the more complex cases in which any of the following apply:

- the development is located in more than one zone
- more than one major hazard is involved
- the proposal involves more than one Development Type (using HSE's categorisation method)
- the development involves a small extension to an existing facility.

25. A decision matrix (see paragraph 39), using the combination of the consultation zone and sensitivity level will determine HSE's response, which will be that HSE either 'Advises Against' or 'Does Not Advise Against' the granting of planning permission for the proposed development.

26. In some cases, a development may involve several different Development Types. In these situations, the combination of consultation zone and Sensitivity Level is considered for each individual Development Type. If any individual Development Type receives an 'Advise Against' response, **then HSE's response for the whole proposal will be 'Advise Against'.**

HSE Consultation distances and consultation zones

27 The consultation zones are normally determined by a detailed assessment of the risks and/or hazards of the installation or pipeline which takes into account the following factors; the quantity of hazardous substances for which the site has hazardous substances consent and details of the storage and/or processing; the hazard ranges and consequences of major accidents involving the toxic and/or flammable and/or other hazardous substances that could be present. The risks and hazards from the major hazard are greatest in the Inner Zone and hence the restrictions on development are strictest within that zone. The CD comprises the land enclosed by all the zones and the installation itself (See Annex 3 for further information).

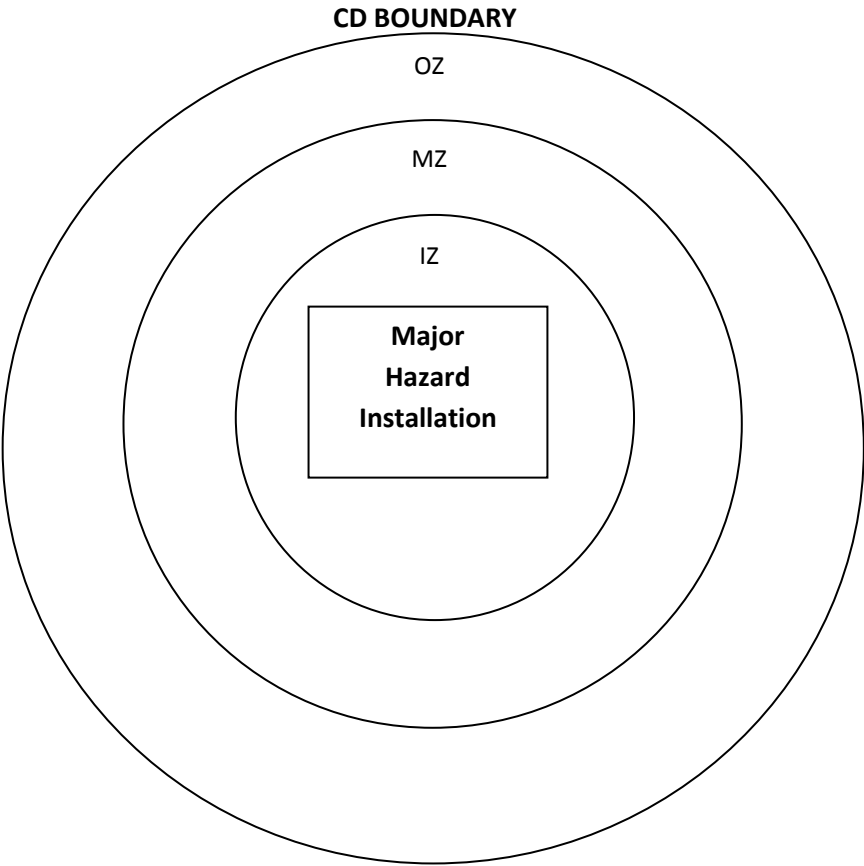


Figure 1 Three zone map

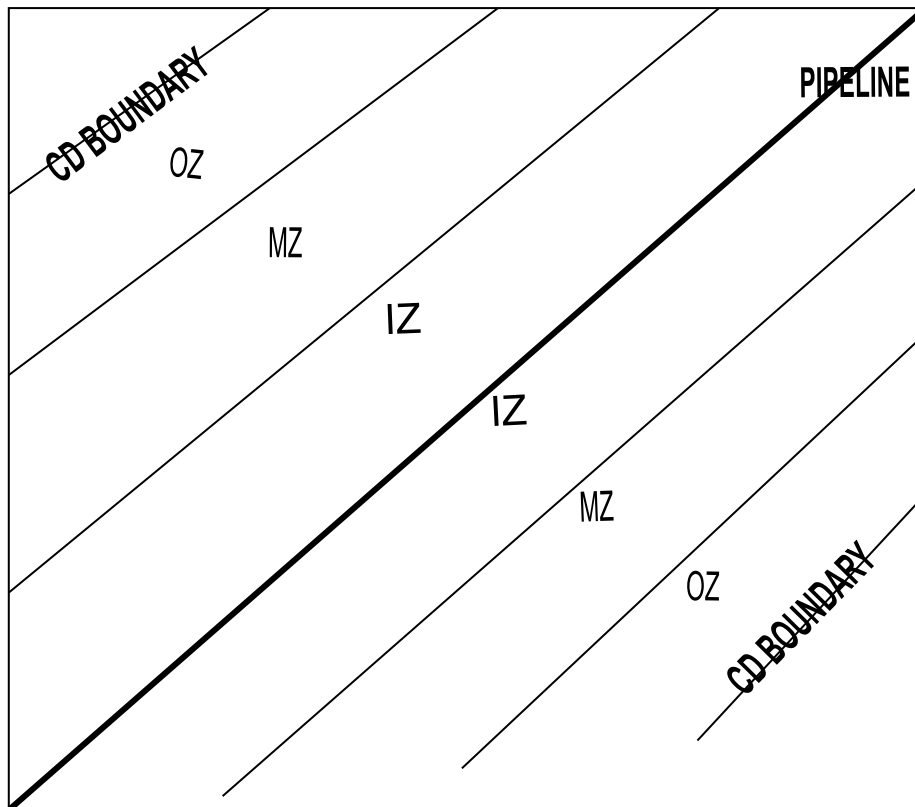


Figure 2 Pipeline zones

Development details

28. The Sensitivity Level of a proposed development will be determined by the Development Type(s) involved and the size and scale of each Development Type (see Tables 1-4).

29. A development proposal may consist of a number of different Development Types and may lie within more than one consultation zone of one or more hazardous installations or pipelines. If a Development Type lies within two or more consultation zones of the CD of a major hazard, including the outer zone and outside the CD, Rule 1 – straddling developments – will be applied to decide the zone in which the whole Development Type is considered to lie when using the decision matrix (see paragraphs 43-45). For a development involving several different Development Types, each combination of consultation zone and Sensitivity Level is considered. If any individual Development Type receives an Advise Against decision **then the overall advice for the whole proposal will be Advise Against.**

30. In certain circumstances where a development is considered to be a small extension to an existing facility, an 'Advise Against' response may be changed to 'Does Not Advise Against'; see Rule 4b (see paragraph 50).

Identifying developments

31. Where a development proposal includes more than one Development Type, all individual Development Types are identified and considered separately. All facilities that involve the same Development Type, but which are physically separated from each other, are aggregated together to determine the Sensitivity Level for that Development Type and subsequently to determine the advice. For example, a development may involve several individual buildings, each of which falls into the category of 'indoor use by the public' such as shops, a cinema and a library; these are all aggregated when determining the sensitivity level of that Development Type. However, any facilities that lie entirely outside the CD are discounted when determining the Sensitivity Level.

32. Developments with a sensitivity level of SL4 (i.e. Institutional accommodation and education and large outdoor use by public developments) are not aggregated with facilities of the same Development Type with a lower sensitivity level.

Assessing developments

33. HSE's advice is assessed for each individual Development Type, taking account of:

- the sensitivity level of the Development Type
- the zone in which the Development Type lies – after applying Rule 1 – 'Straddling developments' and/or Rule 2 - 'Multiple major hazards' if appropriate.

34. This process is repeated for each different Development Type identified. An 'Advise Against' response for any single Development Type will dominate the HSE's advice for the overall consultation and lead to the whole consultation being advised against.

Decision matrix

35. Having determined which consultation zone a Development Type falls into, after applying the straddling rule if necessary, and the Sensitivity Level of the development, the following matrix is used to decide HSE's advice.

Level of Sensitivity	Development in Inner Zone	Development in Middle Zone	Development in Outer Zone
1	DAA	DAA	DAA
2	AA	DAA	DAA
3	AA	AA	DAA
4	AA	AA	AA

DAA = Don't Advise Against development

AA = Advise Against development

36. If all Development Types in a consultation result in a DAA response, then DAA is the final HSE advice.

37. If any individual Development Type gives an AA response, then the result for the consultation is AA. If a development which HSE has advised against involves an extension to an existing facility, HSE will reconsider this advice and may revise the advice if it involves a small extension – see paragraph 50

Introduction to Sensitivity Levels

38. The Sensitivity Levels are based on a clear rationale in order to allow progressively more severe restrictions to be imposed as the sensitivity of the proposed development increases. There are 4 sensitivity levels:

- Level 1 – Based on normal working population
- Level 2 – Based on the general public – at home and involved in normal activities
- Level 3 – Based on vulnerable members of the public (children, those with mobility difficulties or those unable to recognise physical danger) and
- Level 4 – Large examples of Level 3 and very large outdoor developments.

39. Development Types are used as a direct indicator of the Sensitivity Level of the population at the proposed development. Exceptions are made for some very large or very small developments by assigning them a higher or lower Sensitivity Level than normal for that Development Type.

40. The tables below expand on the four basic Development Types:

- 1 – People at work, Parking
- 2 – Developments for use by the general public
- 3 – Developments for use by vulnerable people
- 4 – Very large and sensitive developments

41. The tables show the Development Types (first column) with examples of each type of development given in column 2 (these are only a guide – they are not exhaustive). Fuller details that are needed to determine the Sensitivity Level of any particular development proposal are given in column 3. As a general principle, the Sensitivity Level is decreased by one for small examples of a particular Development Type and increased for large and very large examples, or where particular features of the development increase the risk to the population. These exceptions are identified in the tables under the EXCLUSIONS for each type of development (and identified as x1, x 2 etc.). The Justification column shows the rationale for the allocation of the Sensitivity Level to each Development Type.

42. All facilities of the same Development Type which are completely and/or partly inside the CD are aggregated in determining the Sensitivity Level. Any facilities that are entirely outside the CD are discounted when determining the Sensitivity Level. For example all housing areas within the CD are aggregated to determine the overall Sensitivity Level of a housing development, but any housing area which lies completely outside the CD is not included. The only exception to the aggregation is Sensitivity Level 4 developments involving outdoor use by the public or institutional accommodation and education – see paragraph 47.

Development Type Tables

Table 1 Development type: People at work, Parking

DT1.1 – Workplaces

DT1.2 – Parking Areas

DEVELOPMENT TYPE	EXAMPLES	DEVELOPMENT DETAIL AND SIZE	JUSTIFICATION
DT1.1 – WORKPLACES	Offices, factories, warehouses, haulage depots, farm buildings, non-retail markets, builder's yards	Workplaces (predominantly non-retail), providing for less than 100 occupants in each building and less than 3 occupied storeys – Level 1	Places where the occupants will be fit and healthy, and could be organised easily for emergency action. Members of the public will not be present or will be present in very small numbers and for a short time
	EXCLUSIONS		
		DT1.1 x1 Workplaces (predominantly non-retail) providing for 100 or more occupants in any building or 3 or more occupied storeys in height – Level 2 (except where the development is at the major hazard site itself, where it remains Level 1)	Substantial increase in numbers at risk with no direct benefit from exposure to the risk

	Sheltered workshops, Remploy	DT1.1 x2 Workplaces (predominantly non-retail) specifically for people with disabilities – Level 3	Those at risk may be especially vulnerable to injury from hazardous events and / or they may not be able to be organised easily for emergency action
DT1.2 – PARKING AREAS	Car parks, truck parks, lock-up garages	Parking areas with no other associated facilities (other than toilets) – Level 1	
	EXCLUSIONS		
	Car parks with picnic areas, or at a retail or leisure development, or serving a park and ride interchange	DT1.2 x1 Where parking areas are associated with other facilities and developments the sensitivity level and the decision will be based on the facility or development	

Table 2 Development type: Developments for use by the general public**DT2.1 – Housing****DT2.2 – Hotel / Hostel / Holiday Accommodation****DT2.3 – Transport Links****DT2.4 – Indoor Use by Public****DT2.5 – Outdoor Use by Public**

DEVELOPMENT TYPE	EXAMPLES	DEVELOPMENT DETAIL AND SIZE	JUSTIFICATION
DT2.1 – HOUSING	Houses, flats, retirement flats / bungalows, residential caravans, mobile homes	Developments up to and including 30 dwelling units and at a density of no more than 40 per hectare – Level 2	Development where people live or are temporarily resident. It may be difficult to organise people in the event of an emergency
	Exclusions		
	Very small developments including infill and backland developments	DT2.1 x1 Developments of 1 or 2 dwelling units – Level 1	Minimal increase in numbers at risk
	Larger housing developments	DT2.1 x2 Larger developments for more than 30 dwelling units – Level 3	Substantial increase in numbers at risk
		DT2.1 x3 Any developments (for more than 2 dwelling units) at a density of more than 40 dwelling units per hectare – Level 3	High-density developments
DT2.2 – HOTEL / HOSTEL / HOLIDAY ACCOMMODATION	Hotels, motels, guest houses, hostels, youth hostels, holiday camps, holiday homes, halls of residence, dormitories, accommodation centres, holiday caravan sites, camping sites	Accommodation up to 100 beds or 33 caravan / tent pitches – Level 2	Development where people are temporarily resident. It may be difficult to organise people in the event of an emergency
	Exclusions		
	Smaller – guest houses, hostels, youth	DT2.2 x1 Accommodation of less	Minimal increase in numbers at risk

	hostels, holiday homes, halls of residence, dormitories, holiday caravan sites, camping sites	than 10 beds or 3 caravan / tent pitches – Level 1	
	Larger – hotels, motels, hostels youth hostels, holiday camps, holiday homes, halls of residence, dormitories, holiday caravan sites, camping sites	DT2.2 x2 Accommodation of more than 100 beds or 33 caravan / tent pitches – Level 3	Substantial increase in numbers at risk
DT2.3 – TRANSPORT LINKS	Motorway, dual carriageway	Major transport links in their own right i.e. not as an integral part of other developments – Level 2	Prime purpose is as a transport link. Potentially large numbers exposed to risk, but exposure of an individual is only for a short period
	Exclusions		
	Estate roads, access roads	DT2.3 x1 Single carriageway roads – Level 1	Minimal numbers present and mostly a small period of time exposed to risk. Associated with other development
	Any railway or tram track	DT2.3 x2 Railways – Level 1	Transient population, small period of time exposed to risk. Periods of time with no population present
DT2.4 – INDOOR USE BY PUBLIC	<p>Food & drink:</p> <p>Restaurants, cafes, drive-through fast food, pubs</p> <p>Retail:</p> <p>Shops, petrol filling station (total floor space based on shop area not forecourt), vehicle dealers (total floor space based on showroom/sales building not outside</p>	Developments for use by the general public where total floor space (of all floors) is from 250 m ² up to 5000 m ² – Level 2	Developments where members of the public will be present (but not resident). Emergency action may be difficult to co-ordinate

	<p>display areas), retail warehouses, super-stores, small shopping centres, markets, financial and professional services to the public</p> <p>Community & adult education:</p> <p>Libraries, art galleries, museums, exhibition halls, day surgeries, health centres, religious buildings, community centres. Adult education, 6th-form college, college of FE</p> <p>Assembly & leisure:</p> <p>Coach/bus/railway stations, ferry terminals, airports. Cinemas, concert/bingo/dance halls. Conference centres Sports/leisure centres, sports halls. Facilities associated with golf courses, flying clubs (eg changing rooms, club house), indoor go-kart tracks</p>		
	Exclusions		
		DT2.4 x1 Development with less than 250 m ² total floor space (of all floors) – Level 1	Minimal increase in numbers at risk

		DT2.4 x2 Development with more than 5000 m ² total floor space (of all floors)– Level 3	Substantial increase in numbers at risk
DT2.5 – OUTDOOR USE BY PUBLIC	Food & Drink: Food festivals, picnic areas Retail: Outdoor markets, car boot sales, funfairs Community & adult education: Open-air theatres and exhibitions Assembly & leisure: Coach/bus/railway stations, park & ride interchange, ferry terminals. Sports stadia, sports fields/pitches, funfairs, theme parks, viewing stands. Marinas, playing fields, children's play areas, BMX/go-kart tracks. Country parks, nature reserves, picnic sites, marquees	Principally an outdoor development for use by the general public i.e. developments where people will predominantly be outdoors and not more than 100 people will gather at the facility at any one time – Level 2	Developments where members of the public will be present (but not resident) either indoors or outdoors. Emergency action may be difficult to co-ordinate
	Exclusions		
	Outdoor markets, car boot sales, funfairs. Picnic area, park & ride interchange, viewing stands, marquees	DT2.5 x1 Predominantly open-air developments likely to attract the general public in numbers greater than 100 people but up to 1000 at any one time – Level 3	Substantial increase in numbers at risk and more vulnerable due to being outside
	Theme parks, funfairs, large sports stadia and events, open-air markets, outdoor concerts, pop festivals	DT2.5 x2 Predominantly open-air developments likely to attract the general public in numbers greater than 1000 people at any one time – Level 4	Very substantial increase in numbers at risk, more vulnerable due to being outside and emergency action may be difficult to co-ordinate

Table 3 Development type: Developments for use by vulnerable people**DT3.1 – Institutional Accommodation and Education****DT3.2 - Prisons**

DEVELOPMENT TYPE	EXAMPLES	DEVELOPMENT DETAIL AND SIZE	JUSTIFICATION
DT3.1 – INSTITUTIONAL ACCOMMODATION AND EDUCATION	Hospitals, convalescent homes, nursing homes. Old people's homes with warden on site or 'on call', sheltered housing. Nurseries, crèches. Schools and academies for children up to school leaving age	Institutional, educational and special accommodation for vulnerable people, or that provides a protective environment – Level 3	Places providing an element of care or protection. Because of age, infirmity or state of health the occupants may be especially vulnerable to injury from hazardous events. Emergency action and evacuation may be very difficult
	EXCLUSIONS		
	Hospitals, convalescent homes, nursing homes, old people's homes, sheltered housing	DT3.1 x1 24-hour care where the total site area on the planning application being developed is larger than 0.25 hectare – Level 4	Substantial increase in numbers of vulnerable people at risk
	Schools, nurseries, crèches	DT3.1 x2 Day care where the total site area on the planning application being developed is larger than 1.4 hectare – Level 4	Substantial increase in numbers of vulnerable people at risk
DT3.2 – PRISONS	Prisons, remand centres	Secure accommodation for those sentenced by court, or awaiting trial etc. – Level 3	Places providing detention. Emergency action and evacuation may be very difficult

Table 4 Development type: Very large and sensitive developments**DT4.1 – Institutional Accommodation****DT4.2 – Very large Outdoor Use by Public**

DEVELOPMENT TYPE	EXAMPLES	DEVELOPMENT DETAIL AND SIZE	JUSTIFICATION
[Note: All Level 4 developments are by exception from Level 2 or 3. They are reproduced in this table for convenient reference]			
DT4.1 – INSTITUTIONAL ACCOMMODATION	Hospitals, convalescent homes, nursing homes, old people's homes, sheltered housing, boarding schools	Large developments of institutional and special accommodation for vulnerable people (or that provide a protective environment) where 24-hour care is provided and where the total site area on the planning application being developed is larger than 0.25 hectare – Level 4	Places providing an element of care or protection. Because of age or state of health the occupants may be especially vulnerable to injury from hazardous events. Emergency action and evacuation may be very difficult. The risk to an individual may be small but there is a larger societal concern
	Nurseries, crèches. Schools for children up to school leaving age	Large developments of institutional and special accommodation for vulnerable people (or that provide a protective environment) where day care (not 24-hour care) is provided and where the total site area on the planning application being developed is larger than 1.4 hectare – Level 4	Places providing an element of care or protection. Because of age the occupants may be especially vulnerable to injury from hazardous events. Emergency action and evacuation may be very difficult. The risk to an individual may be small but there is a larger

			societal concern
DT4.2 – VERY LARGE OUTDOOR USE BY PUBLIC	Theme parks, large sports stadia and events, open air markets, outdoor concerts, and pop festivals	Predominantly open air developments where there could be more than 1000 people present at any one time– Level 4	People in the open air may be more exposed to toxic fumes and thermal radiation than if they were in buildings. Large numbers make emergency action and evacuation difficult. The risk to an individual may be small but there is a larger societal concern

Additional rules and how they are applied

43. The following rules have been developed to allow consideration of the more complex planning consultations.

Rule 1 – Straddling developments

44. This rule is applied (Rule 1a, then Rule 1b if applicable) when the site area of a proposed Development Type lies across a zone boundary (e.g. when a development site lies within the inner and middle zones), to decide the zone which will be used in the decision matrix. The CD is considered a zone boundary in this context.

45. **Rule 1a:** Development Types that ‘straddle’ zone boundaries will normally be considered as being in the innermost zone to the major hazard unless either of the two following conditions applies. The Development Type will be considered to be in the OUTERMOST of the zones if:

- less than 10% of the area marked on the application for that particular development type is inside that boundary, OR
- it is only car parking, landscaping (including gardens of housing), parks and open spaces, golf greens and fairways or access roads etc. associated with the development; that are in the inner of the zones.

46. **Rule 1b:** For the special case where a Development Type straddles the CD boundary (i.e. part of the site lies within the CD and part lies outside) Rule 1a is followed, then:

- If, after using the Rule 1a, the Development Type is considered to be outside the CD, then there is no need to categorise further; a 'DAA' response is appropriate.
- If, after using Rule 1a, the Development Type is considered to be within the CD then all of the facilities that make up the proposed Development Type are considered. Any that are **entirely outside** the CD are discounted when determining the Sensitivity Level. All the facilities that are **completely and/or partly inside** the CD are then considered together for the purpose of determining the Sensitivity Level. (If appropriate, the 'Multiple-use developments' rule – Rule 3 should be applied).

(Note: Rules 1a and 1b do not apply where the development type is a Sensitivity Level 2 Transport Link. Even though this type of development is likely to 'straddle' zone boundaries, it will always be considered as being in the innermost of the zones).

Rule 2 – Multiple major hazards

47. Where a proposed development lies within the CD of more than one major hazard site and/or major accident hazard pipeline, the zone within which the development lies is determined for each major hazard (after applying the straddling rule (Rule 1) if necessary). The overall advice is decided on the basis of the most onerous of any of the zones the development is in (i.e. the Inner Zone is more onerous than Middle Zone, the Middle Zone is more onerous than Outer Zone).

Rule 3 – Multiple-use developments

48. This rule is applied when a proposed development involves more than one Development Type (e.g. a mix of housing, indoor use by the public and a workplace).

- All individual Development Types are identified, as in column 1 of Tables 1-4. All facilities involving the same Development Type are aggregated to determine the Sensitivity Level of that Development Type (being aware that any facilities which are completely outside the CD boundary are not considered). **The only exception to this is an SL4 development (outdoor use by public and Institutional accommodation and education) which is not aggregated with facilities of the same development type with a lower sensitivity level.**
- The zone within which each Development Type lies is identified, using the straddling rule (Rule 1) if appropriate.
- The appropriate 'Advise Against' or 'Does Not Advise Against' response is determined for each Development Type using the decision matrix. If each individual Development Type receives a 'Does Not Advise Against' response, then that will be HSE's overall advice. If any individual Development Type receives an 'Advise Against' decision **then HSE's overall advice will be 'Advise Against'.**

- If any individual Development Type receives an 'Advise Against' response, then if appropriate, Rule 4b– 'Developments which involve a small extension to an existing facility' is applied, to decide if HSE's 'Advise Against' response should be revised.

Rule 4 – Developments which involve a small extension to an existing facility.

49. This rule is concerned with an 'Advise Against' response where the proposed development involves a small extension to an existing facility. If the proposed development is a **small** extension to the existing development, then in certain circumstances the 'Advise Against' response may be revised to 'Does Not Advise Against'. This Rule applies only to small extensions to existing facilities, and not to new developments, or to change of use on sites which may have an existing use.

50. **Rule 4a:** First **the proposed development is considered on its own merit** according to the normal procedure and rules. There are two outcome options:

- a 'Does Not Advise Against' response, in which case there is no need to apply Rule 4b. (For 'Multiple-use developments', if the application of Rule 3 results in **all** outcomes from the matrix being 'Does Not Advise Against', then that is the final advice, in which case there is no need to apply Rule 4b) or;
- an 'Advise Against' response, in which case Rule 4b is applied if appropriate. (For 'Multiple-use developments', if the application of Rule 3 results in one or more 'Advise Against' responses from the matrix, then Rule 4b is applied individually to each Development Type which received an 'Advise Against' response.)

NB: only the details supplied with the planning application or pre-planning enquiry are used to determine if, and how, Rule 4b applies.

51. **Rule 4b: Extensions (including minor modifications, alterations, or additions)**

If...	Then...
the proposal is for an extension to an existing development, and the proposed extension is of the same Development Type as the existing development that is going to be extended. And the population at the development will not increase by more than 10% (or, if the population data is not readily available, the total floor area will not increase by more than 10%),	the consultation should be treated as though the proposed extension had a Sensitivity Level one less than the Sensitivity Level of the existing (i.e. not that of the proposed) development. If this results in a reduced Sensitivity Level, which combined with the zone that the extension is in, produces a DAA response, then this will replace the initial AA response.
For 'Multiple-use developments', if the application of Rule 4b changes ALL of the AA	then this will replace the initial AA response.

outcomes to DAA	If at least one outcome remains AA, then an AA response is the final advice. Any remaining AA responses after applying Rule 4b dominates for 'Multiple-use developments' and an AA response is the final advice for the overall development.
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Rule 5 – Temporary / time limited planning permissions

52. HSE treats proposals for these the same way as any other planning permission consultations; no allowance is given for the time restriction. Existing temporary / time limited permissions are not taken into account when applying Rule 4.

Glossary

Beds – the number of residents/visitors for which sleeping accommodation is provided.

Consultation – an enquiry from a PA or a developer, usually made through the HSE Planning Advice Web App, seeking HSE’s comments on a proposed development within a CD, either on a formal planning application or a pre-planning enquiry. A consultation will involve at least one ‘Development type’.

Development – the proposed use of an area of land (e.g. housing, a school, etc.) for which planning permission is sought, or to which a pre-planning enquiry relates. A proportion of planning proposals will consist of more than one Development Type.

Development type – term used to describe proposed uses (and/or facilities) that are considered to involve a similar type of population (see the first column in the Development Type Tables 1-4).

Dwelling units – the smallest individual unit of accommodation e.g. house, apartment, caravan.

Extension – a development which involves an addition to, or the expansion of, an existing facility. This must be

- of the same Development Type as the existing facility.
- an integral part of the existing facility that is being extended. This will commonly be through physical attachment to an existing structure but, in certain cases, it might qualify by being within the control boundaries of the existing facility of which it will be an extension (e.g. a proposed physically isolated classroom within an existing school confines can be considered an ‘extension’).
- usually under the control of the same owner and have the same operator/tenant as the existing facility that is being extended (the owner and the operator/tenant of the existing facility might be different people/companies).
- unable to function independently of the existing facility that is being extended.

Most developments are expected to be developments in their own right – not extensions to existing facilities. For example, a proposed housing development would not be treated as though it is an extension to an existing area of housing. Similarly, an application for additional residential caravan plots would not be considered an application for an extension to an existing area for such use, because the residential caravan plots are able to function independently.

Major redevelopment which involves demolishing a large existing structure(s)/facility and then replacing it by building a slightly bigger version is not considered to be an extension, because the demolition is seen as providing an opportunity to review the situation. For example, if the existing facility is an ‘incompatible’ one then the proposed replacement could be rebuilt further away from

the hazardous installation. A building/facility such as a school for several hundreds of pupils would be considered a 'large' structure/facility.

Facilities – buildings and other provisions (e.g. picnic area, children's play area, park and ride bus stop) where people may congregate.

Hectare – unit of area equal to 10,000 square metres (m²) in any shape (e.g. rectangles 10m x 1,000m or 25m x 400m; square 100m x 100m; or other regular and irregular shapes)

LUP – land use planning

Multiple use development – see 'development'.

PA – planning authority

Pre-Planning Enquiry (PPE) – an informal, non-statutory LUP consultation made by a developer or a PA to determine what HSE's advice is likely to be before submitting a formal planning permission application to the PA.

Protective environment – there is provision of some element of supervision or care e.g. by a warden being available on-site or on call.

School leaving age – the minimum age at which a young person can leave school – currently 16.

Sensitivity Level – the scale used to define the vulnerability of a development population to major accident hazards. It is based on pragmatic criteria; the type of development, likely numbers present and whether any vulnerable people will be present. The scale ascends from Level 1 to Level 4: the more vulnerable the population, the higher the sensitivity level.

Total floor space – the area of buildings enclosed by the exterior walls multiplied by the number of floors (units are m²).

Vulnerable people – people who by virtue of age (children and elderly) and/or ill health may be particularly susceptible to the effects of a major accident.

Annex 1

HSE's land use planning advice provision

1. HSE's land use planning (LUP) advice is based on the recommendations of the Advisory Committee on Major Hazards (ACMH). The principles behind the recommendations are followed in guidance; see for example 'Planning Practice Guidance: Hazardous Substances – handling development proposals around hazardous installations', which is available through the Planning Portal. The principles and objectives HSE uses in giving its advice received strong support in a public consultation in 2007 (CD211 – Proposals for revised policies for HSE advice on development control around large-scale petrol storage sites). Failure to follow the principles will lead to non-compliance with Article 13 of the Seveso III Directive.
2. HSE's advice is currently delivered through HSE's Planning Advice Web App. This is a codification of the methodology used by HSE over the last 30 years or more and replaced PADHI+ which PAs used between 2006 and 2015.
3. Under Article 18 of the Town and Country Planning (Development Management Procedure) (England) Order 2015, Article 14 of the Town and Country Planning (Development Management Procedure) (Wales) Order 2012 and Regulation 25 of the Town and Country Planning (Development Management Procedure) (Scotland) Regulations 2013, decision-makers are required to consult HSE on certain planning proposals around major hazard establishments and to take into account the Executive's representations when determining associated applications. This is to ensure that the UK complies with Article 13 of the Seveso III Directive which has the specific objective of controlling specified new development to maintain adequate separation; including residential areas, buildings and areas of public use; around major hazard establishments when the development is such as to increase the risk or consequences of a major accident. In essence decision-makers should ensure that new development does not significantly worsen the situation should a major accident occur.
4. In some instances there may already be existing development which is closer to a potentially hazardous installation. In these cases HSE has recognised the views of the Advisory Committee on Major Hazards as expressed in paragraphs 108 and 109 of their Second Report which reads as follows:

'108.....The HSE is also frequently asked to comment on proposals to develop or to redevelop land in the neighbourhood of an existing hazardous undertaking where there may already be other land users which are closer and possibly incompatible. In these cases, HSE tells us that it takes the view, which we fully endorse, that the existence of intervening developments should not in any way affect the advice that it gives about the possible effects of that activity on proposed developments which may appear to be less at risk than the existing ones'.

'109.....The overall objective should always be to reduce the number of people at risk, and in the case of people who unavoidably remain at risk, to reduce the likelihood and the extent of harm if loss of containment occurs.....

5. HSE's approach balances the principle of stabilising and not increasing the numbers at risk with a pragmatic awareness of the limited land available for development in the UK. An HSE discussion document in 1989 ("Risk criteria for land-use planning in the vicinity of major industrial hazards") sets out the basis of HSE's approach at that time.

6. The Government committee of experts, the Advisory Committee on Major Hazards (ACMH), which originally proposed HSE's role in the LUP system did recognise *"the remote possibility that in some instances a local planning authority may not feel inclined, for a variety of reasons, to follow the advice of the Executive on particular applications for potentially hazardous developments or other developments in their vicinity."* As a consequence, arrangements were set up so that in this rare circumstance, a planning authority is required by 'Planning Practice Guidance: Hazardous Substances – handling development proposals around hazardous installations', Circular 20/01 (Wales), or Circular 4/1997 (Scotland) to formally notify HSE of its intention to grant against the Executive's advice. This is so that, in England and Wales, HSE can decide whether or not to request the Secretary of State to call-in the application for their own determination. In Scotland, if the planning authority is minded to grant permission they have to notify the Scottish Ministers who can decide to call-in the application.

7. HSE's consideration of call-in should not be confused with its LUP advice delivered through HSE's Planning Advice Web App; it is the latter which is provided to enable LUP decision-makers to comply with the objectives of Seveso III, Article 13. In line with Government policy, HSE normally requests call-in only in cases of exceptional concern. However if HSE decides not to make such a request this does not mean that it has withdrawn its advice against permission, which remains on file and in the future is likely to be published on our website. A decision not to request call-in does not negate HSE's LUP advice.

8. HSE's role in the LUP process is to provide independent advice on the residual risks from major accidents to people at specified proposed new developments. This is delivered through HSE's Planning Advice Web App and hence that is what planning authorities must 'seriously consider' in accordance with 'Planning Practice Guidance: Hazardous Substances – handling development proposals around hazardous installations', which advises decision-makers that:

*"In view of its acknowledged expertise in assessing the off-site risks presented by the use of hazardous substances, any advice from Health and Safety Executive that planning permission should be refused for development for, at or near a hazardous installation or pipeline **should not be overridden without the most careful consideration.**"*

9. Furthermore the Courts (Regina v Tandridge District Council, Ex parte Al Fayed, Times Law Report 28 January 1999) have decided that on technical issues, local authorities, while not bound to follow the advice of statutory bodies such as the HSE, *"should nevertheless give great weight to their advice"* when determining planning applications.

10 A published external review "Analysis of Planning Appeal Decision Reports" (HSE contract research number 262/2000) concluded *"It is clear the HSE's risk policies are largely upheld on appeal."*

It is viewed as a competent and expert body, and its advice provides considerable support to PA decisions."

Annex 2

Types of development to consult on under the Town and Country Planning (Development Management Procedure) (England) Order 2015, the Town and Country Planning (Development Management Procedure) (Wales) Order 2012 and the Town and Country Planning (Development Management Procedure) (Scotland) Regulations 2013

The following guidance and circulars provide further guidance on when HSE is a statutory consultee:

- 'Planning Practice Guidance: Hazardous Substances – handling development proposals around hazardous installations',
- SOEnD Circular 5/1993 (This document is not available on the internet)
- National Assembly for Wales Circular 20/01

They identify the following developments:

1. Within the Consultation Distance (CD) of major hazard installations / complexes and pipelines, HSE should only be consulted for developments involving:

- residential accommodation
- more than 250 square metres of retail floor space
- more than 500 square metres of office floor space
- more than 750 square metres of floor space to be used for an industrial process
- transport links (railways, major roads, etc.)
- a material increase in the number of persons working within, or visiting, a CD

and then only if the development is within the CD.

2. HSE should also be consulted on

- proposed development involving the siting of new establishments where hazardous substances may be present; or
- modifications to existing establishments which could have significant repercussions on major accident hazards; or
- proposed development that is in the vicinity of existing hazardous installations and pipelines where the siting is such as to increase the risk or consequences of a major accident

3. For licensed explosive sites the criteria are the same as above, but only if within the explosive site's Safeguarding Zone.

4. HSE will also advise Hazardous Substances Authorities prior to them determining a consent application. The HSE Planning Advice Web App cannot be used to provide HSE's advice on applications for hazardous substances consent – HSE must be consulted directly on such applications...
5. HSE does not give retrospective advice on planning applications where the decision has already been made by the planning authority.

Annex 3

HSE'S approach to land use planning

Policy & Practice

1. The aim of health and safety advice relating to land use planning is to mitigate the effects of a major accident on the population in the vicinity of hazardous installations, by following a consistent and systematic approach to provide advice on applications for planning permission around such sites.
2. Since the early 1970s, arrangements have existed for local planning authorities (PAs) to obtain advice from HSE about risks from major hazard sites and the potential effect on populations nearby. The Advisory Committee on Major Hazards (ACMH), set up in the aftermath of the Flixborough disaster in 1974, laid down a framework of controls which included a strategy of mitigating the consequences of major accidents by controlling land use developments around major hazard installations
3. Historically, HSE has based its land-use planning advice on the presumption that site operators are in full compliance with the Health & Safety at Work etc. Act 1974 (HSW Act). Section 2 of the Act places a duty on an employer to ensure, so far as is reasonably practicable, the health and safety of his employees. There is a corresponding duty in section 3 to ensure, so far as is reasonably practicable, that others (which includes the public) are not exposed to risks to their health & safety. It was presumed that the safety precautions taken by the employer to comply with Section 2 (risks to his workers) would also ensure compliance with Section 3 of the HSW Act.
4. The main legal driver now is the EU Seveso III Directive, the principal land use planning aspects of which are given effect in the UK by the Planning (Hazardous Substances) Regulations (the PHS Regulations) and associated legislation.

HSE's role

5. HSE's specific role in LUP is **twofold**:
 - i. Under the PHS Regulations, the presence of hazardous chemicals above specified threshold quantities requires consent from the Hazardous Substances Authority (HSA), which is usually also the local planning authority (PA). HSE is a statutory consultee on all hazardous substances consent applications. **Its role is to consider the hazards and risks which would be presented by the hazardous substance(s) to people in the vicinity, and on the basis of this to advise the HSA whether or not consent should be granted.** In advising on consent, HSE may specify conditions that should be imposed by the HSA, over and above compliance with statutory health and safety requirements, to limit risks to the public (e.g. limiting which substances can be stored on site, or requiring tanker delivery rather than on-site storage). HSAs should notify HSE of the outcome of all applications for consent and where consent has been granted should supply copies of the site plans and conditions.

ii. HSE uses the information contained in consent applications to establish a consultation distance (CD) around the installation. This usually comprises three zones or risk contour areas – see paragraph 8. The CD is based on the maximum quantity of hazardous substance(s) that the site is entitled to have under its consent. HSE notifies the PAs of all CDs in their areas. The Development Management Procedure Orders require the PA to consult HSE about certain proposed developments (essentially those that would result in an increase in population) within any CD. **HSE advises the PA on the nature and severity of the risks presented by the installation to people in the surrounding area so that those risks are given due weight by the PA when making its decision. Taking account of the risks, HSE will advise against the proposed development or simply note that it does not advise against it.** This advice balances the ACMH principle of stabilising and not increasing the numbers at risk, with a pragmatic awareness of the limited land available for development in the UK.

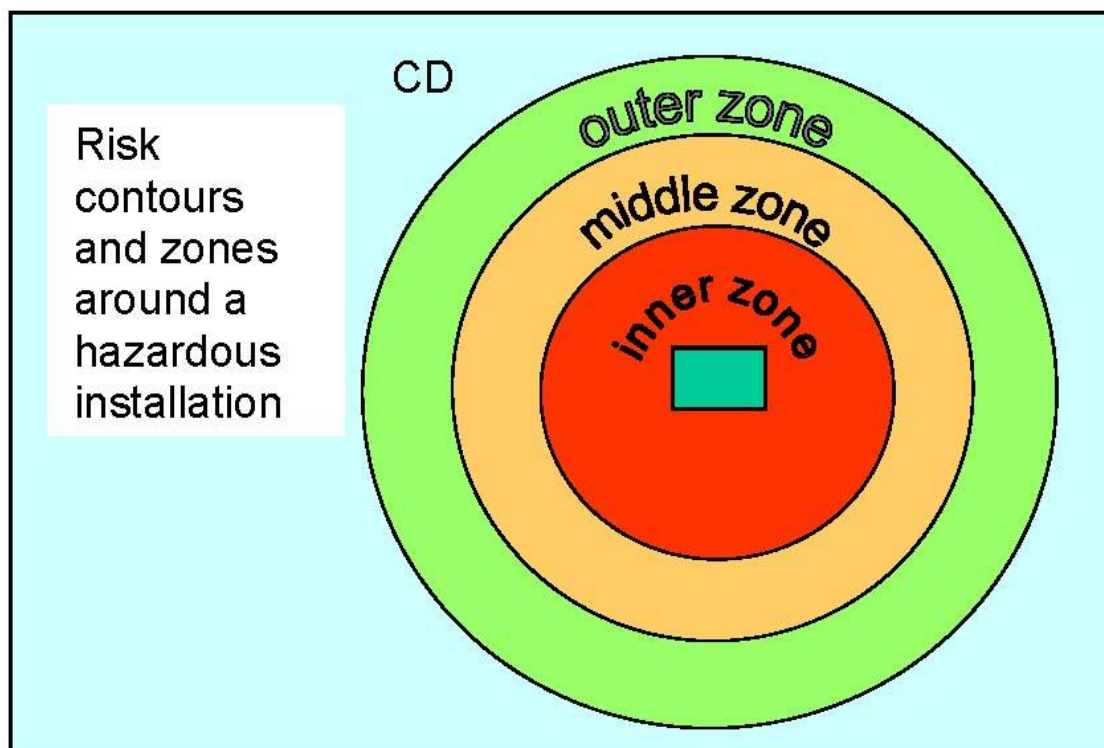
6. Like other statutory consultees, HSE's role in the land use planning system is advisory. It has no power to refuse consent or a planning application. It is the responsibility of the HSA or PA to make the decision, weighing local needs and benefits and other planning considerations alongside HSE advice, in which case they should give HSE advance notice of that intention. PAs may be minded to grant permission against HSE's advice. In such cases HSE will not pursue the matter further as long as the PA understands and has considered the reasons for our advice. However HSE has the option, if it believes for example that the risks are sufficiently high, to request the decision is 'called in' for consideration by the Secretary of State, in England and Wales (a very rare situation). In Scotland, if the planning authority is minded to grant permission they have to notify the Scottish Ministers who can decide to call-in the application.

Consultation distances and risk contours

7. Using hazardous substances consent information, HSE undertakes a detailed assessment of the hazards and risks from the installation and produces a map with three risk contours representing defined levels of risk or harm which any individual at that contour would be subject to. The risk of harm to an individual is greater the closer to the installation. In each case the risk relates to an individual sustaining the so-called 'dangerous dose' or specified level of harm. A 'dangerous dose' is one which would lead to:

- severe distress to all;
- a substantial number requiring medical attention;
- some requiring hospital treatment; and,
- some (about 1%) fatalities.

8. The three contours represent levels of individual risk of 10 chances per million (cpm), 1 cpm and 0.3cpm per year respectively of receiving a dangerous dose or defined level of harm. The contours form three zones (see below), with the outer contour defining the CD around major hazard sites.



The PA consults HSE on relevant proposed developments within this CD through the HSE Planning Advice Web App.

How HSE gives advice

9. When consulted, HSE firstly identifies which of the three defined zones the proposed development is in. Secondly, the proposed development is classified into one of four “Sensitivity Levels”. The main factors that determine these levels are the numbers of persons at the development, their sensitivity (vulnerable populations such as children, old people) and the intensity of the development. With these two factors known, a simple decision matrix is used to give a clear ‘Advise Against’ (AA) or ‘Don’t Advise Against’ (DAA) response to the PA, as shown below:

Level of Sensitivity	Development in Inner Zone	Development in Middle Zone	Development in Outer Zone
1	DAA	DAA	DAA
2	AA	DAA	DAA
3	AA	AA	DAA
4	AA	AA	AA

Sensitivity Level 1 - Example: Factories

Sensitivity Level 2 - Example: Houses

Sensitivity Level 3 - Example: Vulnerable members of society e.g. primary schools, old people's homes

Sensitivity Level 4 - Example: Football ground/Large hospital

DAA means Do not Advise Against the Development

AA means Advise Against the Development

Technical assumptions underpinning HSE methodology for land use planning

10. The installation: The quantities and properties of hazardous substances, and the descriptions of storage and process vessels, are assumed to be in accordance with the 'hazardous substances consent' entitlement for the site since this represents an operator's declaration of their entitlement to store such substances which could be introduced at any time. For each type of development HSE's advice to PAs will take account of the maximum quantity of a hazardous substance permitted by a hazardous substances consent and any conditions attached to it. Best cautious, but not pessimistic, assumptions concerning substances, locations, operating conditions and surroundings are used. For operations not described in the consent (e.g. numbers and sizes of road tanker operations, pipework diameters, pumps and other fittings) site-specific values are obtained as necessary.

11. Hazardous events: All foreseeable major accidents are considered and a representative set of events which describe a set of circumstances which, for that installation, could lead to an accidental release of hazardous substances.

12. Consequences: The previously described 'dangerous dose' concept is generally used to describe the extent of the impact of any hazardous event on the surrounding population. Protection provided to persons by being sheltered within buildings is generally taken into account by the approach, as is the likelihood of persons being outdoors at the time of the incident.

13. Ambient conditions: Local weather data is used to provide wind and stability information around the installation. Further, the surroundings are generally assumed to be flat although ground roughness can be taken into account where circumstances require it.

14. Risk assessment: The calculations produce contours of the frequency that a typical house resident would be exposed to a dangerous dose or worse. This is generally expressed in terms of 'chances per million per annum' or cpm for short, i.e. 10cpm, 3CPM cpm, 0.3cpm.

Annex 4

Contact

Any queries regarding HSE's land use planning methodology, or on how to use or access HSE's Planning Advice Web App to consult HSE in order to obtain advice on planning applications or pre-application enquiries, should be referred to lupenquiries@hsl.gsi.gov.uk or tel: 0203 028 3708.

Any queries relating to hazardous substances consent should be sent to hazsubcon.CEMHD5@hse.gsi.gov.uk