



Streetscape Design Guide

Consultation Report



Contents

1.	Background	3
2.	Summary	4
3.	Recommendations	5
4.	Methodology	6
5.	Results	7

List of Appendices

Appendix A **Information Leaflet**

1. Background

1.1 The Streetscape Design Guide (SDG) provides guidance to those involved in development and regeneration schemes in Worcestershire, to support ambitious and exciting place making. It sets out the design and construction framework that Worcestershire County Council expects to enable timely adoption of transport infrastructure, with the aim of ensuring a robust, attractive and affordable public realm. The aims of the guide are to:

- *Ensure that new development relates to its context, with transport links integrating seamlessly within the built and natural environment to the benefit of new residents, adjacent occupiers and existing communities alike;*
- *Ensure that transport infrastructure is designed to encourage alternatives to car se by providing convenient, safe and attractive provision for pedestrians, cyclists and passenger transport to key trip attractors, permeating both new developments and existing communities;*
- *Ensure that the design of streets within new developments continues to accommodate necessary vehicle movement, and facilitate car parking, but seeks to encourage traffic speeds of 20mph or less;*
- *Ensure that new development is elegant and intuitive in its approach, providing easy and safe access between highways, car parking areas and dwellings for everyone, including those with visual and mobility impairment;*
- *Ensure that new developments are designed to provide a safe, secure and sustainable environment, including embracing sustainable green infrastructure throughout the design process, recognising the central role that such infrastructure plays in delivering liveable, attractive communities; and*
- *Secure a movement network which is adoptable at a reasonable cost, with an extensive design life and proven low maintenance costs.*

2. Summary

2.1 In total, 14 pieces of written correspondence were submitted and these can be viewed in section 5. The submissions can be broken down into the following stakeholders:

- *WCC internal teams x 2*
- *Water Management x 1*
- *Design Consultants x 3*
- *Developers x 2*
- *Planning Authorities x 2*
- *Wildlife Trust x 1*
- *Sanctuary Group x 1*
- *Civic Society x 1*
- *Natural England x 1*

2.2 The main issues raised include:

- *Car Parking standards*
- *Green infrastructure;*
- *Ecology and biodiversity;*
- *Trees and sustainable drainage;*

2.3 *There were also many amendment requests, and the WCC Officer response to these can be seen in Table 5.*

3. Recommendations

3.1 Considering the outcomes, this report on the consultation exercise for the Worcestershire County Council Streetscape Design Guide recommends that:

- *The report is used to inform the Project Team and decision makers at Worcestershire County Council regarding any amendments to the document;*
- *That all responses within this report are closely examined and duly considered by the Project Team.*
- *That the report is signed off by the Project Team as an accurate summary of the process; and that*
- *All the information contained in this report is shared with the participants of the exercise by publishing the report on Worcestershire County Council website www.worcestershire.gov.uk/ltp*

4. Methodology

- 4.1 The County Council's website and direct emails were the only methods employed to promote the consultation process. Although the consultation was open to everyone, it was specific stakeholders, such as developers and local planning authorities that the exercise was particularly aimed at. Therefore the most likely methods were selected to engage this target audience.
- 4.2 The materials developed to support the implementation of the engagement methods consisted of:
- *A draft guide (see Appendix A);*
 - *Website with an email address for comments;*
 - *Email notification.*
- 4.3 The purpose of the exercise was to inform key stakeholders in particular, about the new guide and to invite comments and feedback on the proposals to help to shape its final document.
- 4.4 The exercise was open to all participants for six weeks until 30th November, 2017. The results of those respondents who chose to send in comments can be seen in Section 5.
- 4.5 Respondents were able to respond to the exercise by email: transportstrategy@worcestershire.gov.uk, or post:
The Transport Strategy Team
Worcestershire County Council
County Hall
Pavilion E1
Spetchley Road
Worcester
WR5 2NP **Website**
- 4.6 The consultation process had its own bespoke page on Worcestershire County Council's website, containing a PDF copy of the draft guide, some background information and details of how to respond: www.worcestershire.gov.uk/ltp
- 4.7 Member engagement has taken place with Cabinet Members Cllr Ken Pollock and Cllr Alan Amos.

5. **Results**

5.1 In total, 14 pieces of written correspondence were submitted, including a joint response from all local planning authorities. These can be viewed in Table 5.1

5.2 Please note whilst reading these results that:

- *None of the results have been weighted in any way;*
- *There were no compulsory questions and respondents were typically expressing their own views typically on behalf of an organisation.*

Table 5.1: Written comments received and WCC Officer response		
Respondee	Comment	WCC Officer Response
WCC Strategic Planning and Environment Policy Team	<p>Style, layout and structure</p> <p>The style of the document tends to jump from an accessible, easy-to-read style in one section, to being extremely technical in another. It may be worth splitting this into a more general guide, in plain English, supported by a more detailed technical appendix.</p> <p>A clearer and more consistent approach to the document's structure would help the reader. There should be a simple and easy-to-follow layout that moves from outlining the process, roles and responsibilities to outlining expectations, awareness raising, and providing links to further information. These sections are currently mixed together, which is unhelpful.</p> <p>The document would benefit from clearly annotated examples of good and bad design, and greater clarity concerning WCC's expectations.</p> <p>Approach to biodiversity</p> <p>In the context of the document's more detailed technical guidance (e.g. on underground services) the aspirations of mitigation and enhancement measures for biodiversity could easily be misinterpreted as 'optional', whereas there are clear statutory and policy duties placed on the authority, including under the Natural Environment and Rural Communities Act and the National Planning Policy Framework. This could be addressed through careful articulation (such as using "must" rather than "should"), the use of clear case studies which express the authority's expectations, and the use of secondary guidance (e.g. similar to the Travel Plan Guidance document) to exemplify national best practice for streetscape design and biodiversity.</p> <p>Different habitat types should be included in descriptions of street layouts. As currently drafted, the guide emphasises street trees but mostly neglects other natural features (e.g. verges, ditches, hedgerows and wildflower planting). We would like to see an emphasis on native species planting with relevance to the local area, and re-wording in places to make it sound less optional and more an expected standard.</p> <p>Closer reference throughout this document to the Worcestershire Green Infrastructure Strategy would be beneficial; it is cited in several places but could be further explained.</p> <p>Health and wellbeing</p> <p>There are only very limited mentions of health and wellbeing. The guide could help to make the links between health and good design, the promotion of walking/cycling, and the importance of an environment that is safe and perceived to be safe. We also encourage the document to refer to:</p> <ul style="list-style-type: none"> • Innovative public realm design solutions which prioritise people over motor traffic. • Making streets easier to cross to encourage more walking and to connect communities. 	<p>Noted;</p> <p>Thank you for your response. All comments are noted.</p> <p>The structure of the document will be examined and consideration will be given to splitting the technical information.</p> <p>Suggest that the Development Control Team within Worcestershire County Council, work further with the Planning and Environment Policy Team to broaden contributions in the area of biodiversity from them.</p>

	<ul style="list-style-type: none"> • Reducing the noise and air quality impacts of motor traffic by planting street trees and other vegetation and encouraging sustainable modes of travel. <p>Additionally, the document should specifically focus on designing for an age-friendly and dementia-friendly environment. In Worcestershire, the proportion of the population in older age groups is increasing rapidly. In the next 20 years, the number of people aged 65 and over will increase by 30,000. There are also 3,657 people in the county on the dementia register, equivalent to 1 in 160 people, and the numbers are expected to increase significantly. The most proactive approach to addressing these issues lies in prevention, by creating environments that promote active and healthy ageing and that help to improve people’s quality of life. This includes:</p> <ul style="list-style-type: none"> • Provision of places to stop and rest - a lack of resting places can limit the mobility of the elderly and those living with dementia. People living with dementia, for example, might take a little bit longer to remember their destination or how to get there. Benches at crossroads could give them a moment to think and make up their mind without feeling stressed and confused. • Shade and shelter – the elderly are vulnerable to extreme weather events. Placing benches under street trees to allow shading during hot summers can help to mitigate this. • Street furniture - dementia affects cognitive, sensory, social, emotional and physical functions. As a result, people may experience problems in gathering their thoughts and maintaining concentration, as well as in the way they experience and interact with the environment. Street furniture design should be kept simple and familiar, to avoid it being mistaken for other objects. • Surfacing - surfaces should be plain and non-reflective, in colours and textures that clearly contrast with walls. Dementia affects people’s perception of their surroundings and of different surfaces. Dark areas might appear to them as a hole in the ground, whilst glaring/shining surfaces can look like water and slippery surfaces. • Quiet, segregated and clearly signed walking and cycling routes – pedestrian-segregated footpaths are safer and less confusing for the elderly and people living with dementia. • Signage – avoid unnecessary signage clutter. Signs should be clear, in a simple font, and should use a tonal contrast rather than a variety of colours. Signs locating important places and buildings should be perpendicular to the wall. People living with dementia might feel confused when a lot of information is projected at them at the same time. They generally function better amongst objects and in the environment that they are familiar with. <p>Appendices The appendix is helpful on biodiversity, but information on landscape, SuDS, trees, and the historic environment would also be welcomed. It would be helpful to reference the Worcestershire Green Infrastructure Strategy</p>	<p>Issues of equality should be tackled by the developer and this is already referenced within the SDG.</p> <p>There is a health Supplementary Planning Document that is complimentary to this guide for South Worcs only as part of the SWDP, other Districts will be actively encouraged to also develop one.</p> <p>Suggest that the Development Control Team within</p>
--	--	---

	<p>and supply a hyperlink to the document.</p> <p>Section-by-section comments</p> <p>Background</p> <p>1. Mention of green space or infrastructure is only in relation to its value to human inhabitants. It is important that the biodiversity value of green space is recognised too.</p> <p>Philosophy</p> <p>2. We suggest removing the word "undisturbed" form the third and fourth paragraph, and changing "naturalised" to "natural".</p> <p>3. It is not appropriate to claim that "many" road verges in the county are Roadside Verge Nature Reserves, as there are only around 47.</p> <p>4. We welcome the encouragement of early or pre-application developer engagement on all designs - innovative or conventional. The current wording on page 7 suggests such engagement is only encouraged for innovative schemes.</p> <p>5. While we support the promotion of early engagement with ecology, we would rather see a wider green infrastructure approach, with attention also drawn to the potential of other environmental elements. Developers are often keen to include sustainable drainage within highway design, and this is promoted through national policy. This section could usefully become wider in focus to include different elements of the natural and historic environment.</p> <p>6. The philosophy does not differentiate the roles of streets in district centres, residential areas, or town centres, and yet the text refers to hosting different functions such as markets, social gatherings, etc. The document would be strengthened if it more clearly differentiated between these roles, and made clear where this type of approach is expected and where it is not appropriate.</p> <p>Integrating Infrastructure and Environmental Context</p> <p>1. The discussion of trees on pages 9 and 10 should refer to new technologies and solutions which address tree root control in proximity to underground services. There are a number of companies offering tree pit technology to contain roots or send them deeper, which removes concerns about problems trees might cause.</p> <p>2. The final sentence of page 9 should recognise the importance of a native/locally relevant species list.</p>	<p>Worcestershire County Council liaise further with the Planning and Environment Policy Team to consider additional appendix. It may be that other policies are referenced by links.</p> <p>1. This will be amended;</p> <p>2. Agreed;</p> <p>3. Agreed and will amend;</p> <p>4. Agreed and will amend;</p> <p>5. Agreed and will amend;</p> <p>6. Wording to be reviewed.</p> <p>1. Agreed, SDG will be reviewed. This will be considered in the specification on a case by case basis.</p> <p>2. This point is</p>
--	--	--

	<p>3. The statement in the second paragraph on page 10 that "Existing trees should be integrated..." should be changed to "Existing trees must be integrated..."</p> <p>4. Page 10 gives some detail on Environmental and Ecological Impact Assessment, and focusses on European species, referring specifically to white-clawed crayfish and water vole. There is no clear rationale for why these two species have been highlighted, and for most developments these species will not be relevant. There is therefore a risk that developers will ignore this section. Re-working is required to take a wider view of European protected species and notable species, and to widen the text from its focus on EIA development to include all development with the potential to impact on biodiversity. Other important considerations are also missing; there are no references, for example, to the Water Framework Directive and water quality. This text continues onto page 11 with a lot of background information provided, but little clarity on what is expected of developers, or the information we expect them to submit with any</p>	<p>acknowledged, however it may be that a 'list' will become dated. Therefore a reference will be included signposting the Developer to the WCC Tree Officer for advice on the correct species for a specific location.</p> <p>3. This is too prescriptive and may not always be possible to achieve. The SDG will be tweaked to read that trees will be integrated wherever appropriate.</p> <p>4. Suggest that we work further with the Planning and Environment Policy Team to amend this</p>
--	--	--

	<p>application. A flowchart could be helpful here.</p> <ol style="list-style-type: none"> 5. The guide should refer to the greater ecological value of a species mix rather than a mono-culture. 6. A hyperlink to the Worcestershire Habitat Inventory (WHI) should be included, either within the fourth paragraph on page 11 where the WHI is mentioned, or at the end of the document: http://www.worcestershire.gov.uk/info/20302/worcestershire_habitat_inventory 7. The final paragraph of page 11 should refer to a "Preliminary Ecological Assessment Phase 1 habitat survey", rather than just a "Phase 1 habitat survey". 8. There are no references in this section to the landscape or historic environment and the role of streets in contributing to the enhancement and preservation of areas of historic interest, including listed buildings. Streets can respond to and contribute to the local vernacular, including through materials, layout and views. Although some of this information can be found on page 12, there is no link between this and the wider GI/biodiversity text, and the document often seems to equate green infrastructure solely to street trees. The document does inform the reader of where to access information, but further information and guidance could usefully be added as to how this could be included within streetscape design. 9. The section on page 12 on 'Streetscape Design and Wildlife Mitigation Measures' needs to be much more positive. We often hear informal feedback from consultants that highways mitigation is difficult to secure. We'd like to see this completely re-worded, e.g.: "Where new or altered roads risk fragmenting contiguous natural habitats and all options to avoid this have been exhausted (and there is evidence to demonstrate this process), the County Council requires that best practice mitigation measures such as mammal passes, inset kerbs, tunnels, drains with wildlife exit routes, and arboreal hop-overs are incorporated along known wildlife corridors. Highway design is expected to take the mitigation hierarchy into account". <p>Landscaping</p> <ol style="list-style-type: none"> 1. The text on trees on page 18 could be strengthened by giving further information on native/non-native species, or parameters for choosing species such as size, longevity, fruits or flowers. This could be further supported by information on which types of planting systems or tree pits/guards WCC might consider acceptable, and which would be unacceptable. We recognise that these will change over time, but links to 	<p>section.</p> <ol style="list-style-type: none"> 5. See point 4 above. 6. Agreed. This will be included. 7. Noted and agreed. 8. Suggest that we work further with appropriate partners to review this 9. Suggest that we work further with the Planning and Environment Policy Team to amend this section. <ol style="list-style-type: none"> 1. Existing policies/guidance will be referenced here, rather than including everything verbatim in the SDG. 2. This will be
--	---	---

	<p>relevant websites could usefully be included here.</p> <p>2. It states on page 19 that "Existing hedges adjacent to the existing highway shall be transferred to frontages for maintenance". We have some concerns about this - particularly if the hedge is of high value or if it provides green infrastructure connectivity – because, once it becomes the property of a householder, there is no control over its future and it may be removed. This approach may also potentially conflict with some district council green infrastructure planning policies which exclude GI in private gardens from any calculations, solely because of this lack of control over the short or longer term. While planning conditions could potentially be considered to control the hedges, such conditions could prove to be unenforceable.</p> <p>Drainage The discussion on SuDS on page 21 should be more positive. SuDS are a requirement in major developments (as defined in the national Planning Practice Guidance) and their contribution to the streetscape and green infrastructure, as well as to flood risk management, could be extremely beneficial to both new and existing communities. There is little here to promote SuDS as a solution to drainage, or even to guide the developer towards discussion with the Lead Local Flood Authority. Developers are interested in sustainable drainage and are generally keen to include it within the streetscape. Reference should be made to permeable pavement solutions. This section could usefully be strengthened with some indicative designs or further information on the approaches the highway authority would find acceptable. There is no mention of climate change; designs should take account of climate change allowances and the need to cope with and plan for more extreme weather events.</p> <p>Innovative Street Design</p> <p>1. The expectation of a green infrastructure approach should be set on page 31.</p>	<p>tweaked to make it clearer.</p> <p>1. This will be reviewed. WCC is not opposed to innovative solutions to drainage; however, this must be adopted by the relevant statutory authority.</p>
--	--	--

	<p>Design Details for Main Streets/Residential Distributors/Residential Streets</p> <ol style="list-style-type: none"> 1. We welcome the inclusion of biodiversity and landscape in the sections on pages 32-34, but there is no mention of management of highway drainage or surface water through SuDS. We are also concerned that, as the statements are mainly generic, they may not give developers sufficient detail or examples to actually deliver the objectives. WCC may need to give greater clarity as to what is being sought. As green infrastructure is referred to as being provided for outside the limits of the adoptable highway, developers may take the view that it is not relevant to them, and there is a risk that no green infrastructure will be provided. 2. Under 'Design Details for Main Streets' on page 32, the text in the landscaping row should be changed from "The landscaping should consider..." to "The landscaping should reflect..." The text in the biodiversity row should require more than just trees. Verges, ditches, and hedges are all key features for biodiversity. 3. Under 'Design Details for Residential Distributor' on page 33, the words "wherever possible" should be deleted from the landscaping row. Green infrastructure should not be optional on a new street. There should also be a sentence on the requirement for native species planting along these roads. 4. Under 'Design Details for Residential Street' on page 34, it should again be noted that GI is more than just trees. Native species planting is important, as is retaining and enhancing/linking existing features. 5. Under 'Private Shared Drives and Courtyard Parking Areas' on pages 35 and 36, it should make clear that 	<ol style="list-style-type: none"> 1. Comments are noted here. However, we do not agree. We would be looking to encourage the developer to be creative here – rather than being too prescriptive. 1. There are many District policies that would give assurance and guidance here so a generic reference within the SDG is adequate. 2. The word 'consider' will be changed to 'reflect'. We will review the features that WCC would consider to be suitable within the biodiversity
--	--	---

	<p>such areas should incorporate linear features for biodiversity to enhance links across a development site. Hedgerows, trees and vegetated ditches can easily be incorporated. It should also require the use of native species.</p> <ol style="list-style-type: none"> 6. There is no mention of the opportunities for SuDS, landscape, biodiversity or the historic environment in the section on private shared drives and courtyard parking, which seems like a missed opportunity. 7. The Biodiversity and Landscape row in the table must specify locally relevant native species planting and that design needs to help minimise disturbance of natural areas. <p>Car parking</p> <ol style="list-style-type: none"> 1. We strongly urge that further discussions on this are held with the district, city and borough councils. This level of parking will have a serious impact on housing densities, and therefore on the ability of these councils to bring forward the required housing numbers on allocated sites. This may also have 	<p>section.</p> <ol style="list-style-type: none"> 3. The wider wording will be reviewed in this section. Street trees should be considered within the wider context of green infrastructure provision. 4. See above 5. Not within scope of the SDG. 6. These elements will be handled by the relevant local planning authorities. 7. See above. 1. Car parking standards will be reviewed as an outcome of this consultation. 2. See above
--	---	--

	<p>wider impacts on site viability, potentially affecting the number of units that can be delivered, the level of developer contributions and also, potentially, house prices. The proposed parking levels could also potentially compromise Local Plan policies including those on design, green infrastructure and housing delivery.</p> <p>2. The approach to parking is apparently based on the assumption that every resident of a property - regardless of age - has a car. This could potentially conflict with the promotion elsewhere in the guide (and in the LTP) of more sustainable forms of transport, including walking and cycling. The high levels of parking provision also appear at odds with the later text on car-free development, and not providing any parking. As a minimum, greater clarity is required as to the approach to be taken, and on where each approach might be appropriate.</p>	
<p>Kirsten Huizer Senior Water Management Officer North Worcestershire Water Management</p>	<p>With this email North Worcester Water Management would like to respond to the Streetscape Design Guide Consultation from a water management perspective on behalf on behalf of Bromsgrove District Council, Redditch Borough Council and Wyre Forest District Council.</p> <p>The vision of our team is to reduce flood risk while protecting and enhancing the water environment and encouraging sustainable water management. Where new streetscapes are being designed and implemented opportunities arise to improve the current situation, by implementing drainage systems that control and treat the runoff from that specific area. We believe that the provision of Sustainable Drainage Systems (SuDS) has an important role to play and in accordance with both national and local policies we actively promote the implementation of SuDS wherever possible. We are therefore happy to note that the draft Streetscape Design Guide includes references to SuDS. We do however feel that the attitude towards the use of SuDS within the adoptable highway limits and the benefits to the adoptable highway itself should be set out more clearly within the document. We also believe that a hierarchy for specific types of SuDS should be included in the document, as should reference to the required minimum design return period. We have included below our detailed comments upon the sections of the Guide that reference SuDS.</p> <p>Page 10: Trees And Sustainable Drainage Solutions (SuDS)</p> <p>The development of the design details for the street should incorporate water-sensitive design. The design needs to ensure:</p> <ul style="list-style-type: none"> • There is allowance for some precipitation to reach the tree-rooting environment, • Full advantage of the capacity of the trees rooting environment is taken into account to help manage storm water runoff, and 	<p>Comments noted. The SDG document will be made clearer in this area.</p> <p>WCC welcomes SUDS but does not currently adopt SUDS systems. WCC only accepts adoptable</p>

	<ul style="list-style-type: none"> • Trees are explicitly integrated in the surface water drainage plan for the site in accordance with SuDS best practice. Further guidance on the delivery of SuDS can be found in The SuDS Manual (C753). The updated SuDS Manual incorporates the very latest research, industry practice and guidance. In delivering SuDS there is a requirement to meet the framework set out by the Government’s ‘non statutory technical standards’ and the revised SuDS Manual complements these but goes further to support the cost-effective delivery of multiple benefits. <p>Together with Dannie Degville (WCC) we are working on SuDS Design and Evaluation Guides. They are near completion and we would welcome a reference to these documents.</p> <p>Page 21: Sustainable Urban Drainage Solutions</p> <p>While issues exist as to the acceptance of Sustainable Drainage Solutions (SuDS) by various bodies, Worcestershire County Council expects developers to incorporate storage, attenuation and filtration measures in accordance with ‘SUDS - A Guide for Developers’ by the Environment Agency and ‘SUDS - A Design Manual for England and Wales’ by CIRIA. Worcestershire County Council will examine all proposals for SUDS and judge them on their merits. Permeability tests and hydrology surveys will be required to verify the suitability of the designs and commuted sums will be required for ongoing maintenance of the systems. The amount of the commuted sums will be calculated by the Council and will reflect the special maintenance requirements of the proposed system.</p> <p>The SUDS proposals for a development shall be submitted along with geology and hydrology information, at planning application stage. Any proposals for outfalls into existing watercourses or ponds shall be accompanied by an environmental impact report and obviously such outfalls will need Consent to Discharge from the Environment Agency.</p> <p>Private SUDS drainage shall drain into the water authority surface water sewers and any infiltration will be into private land. SUDS for the highway shall drain into the highway drain network and any infiltration will be within highway/public areas.</p> <p>We would welcome the first sentence to be rephrased, as in our experience it is the adoption of SuDS which causes issues and not the general acceptability. Also, it might be better to mention this further down in the section rather than to open the section with this.</p> <p>We are not clear whether WCC would accept or even expect adoptable roads to be drained via SuDS...It is national policy and Council policy (imbedded in Local Plans) that all developments explore the use of SuDS, and we don’t think that an exception should be made for streetscapes.</p> <p>We would prefer reference to SuDS manual and if possible also the emerging SuDS Design and Evaluation</p>	<p>highway drainage that connects directly into systems that are maintained by a statutory body (e.g. Severn Trent).</p> <p>The SDG document will be amended and made clearer.</p>
--	---	--

	<p>Guides mentioned above.</p> <p>We already require all major planning applications to contain a drainage strategy which should include drainage of the proposed road(s). We don't know whether this sections aims to ensure drainage details are submitted as We believe that it is unrealistic and excessive to require any proposals for outfalls into existing watercourses or ponds to be accompanied by an environmental impact report. Provision of a water quality assessment as part of the drainage stratagem would be a more appropriate requirement, as per the SuDS Manual.</p> <p>Not all outfalls will require a consent to discharge and depending on the structure and the construction method, a land drainage consent (ordinary watercourse, local authority) or an environmental permit (main river, Environment Agency) may or may not be required.</p> <p>There are no references to infiltration->watercourse->surface water sewer hierarchy. This hierarchy requires that discharge to via infiltration should be ruled out first before discharge to a watercourse or an existing storm sewer or combined sewer will be considered. No discharge of surface water to a foul sewer will be allowed.</p> <p>=> We do not understand the sentence referencing private SUDS discharging to the water authority surface water sewers, as Private SuDS could also discharge to the ground or to a watercourse. Do you want to make the point that Private SuDS should not connect to the Highway drainage system, or in other words, that there shall be separate (SuDS) systems serving the highway and the rest of the development?</p> <p>=> There is no reference at all to design return periods? Recognising the damage that flooding can bring, both financially and emotionally, it is required that new developments design their drainage system so no flooding will occur at all up to 1 in 30 year return period. This is more onerous than the current design standards for roads. We would urge that the new streetscape design guide addresses this discrepancy.</p> <p>We note the current inconsistent use of terminology. Should be 'Sustainable Drainage Solutions' and 'SuDS' (not Sustainable Urban Drainage or SUDS)</p> <p>Page 38: Design Details for Industrial Access Roads</p> <p>Green infrastructure has a strong role to mitigate the impacts of major industrial/employment uses on the adjacent landscape. The landscaping can be integrated with SuDS drainage using swales and tree planting to provide additional GI benefits as part of a site wide SuDS and GI strategy. Wherever possible, this should be accommodated outside the limits of the adopted highway.</p> <p>We are not clear whether the drainage of the adoptable highway itself can go to SuDS?</p> <p>We would be more than happy to discuss any of our comments with you.</p>	
Alison Osborne-Brown CMLI Technical	Your Streetscape Design Guide states clearly in the introduction that in the latter half of the twentieth century there have been several examples of poorly planned development, which has resulted in relatively isolated, car-dominated estates ... as well as gradual attrition of green space in our urban areas, which detracts from the	Car parking standards will be reviewed as an outcome of this

<p>Director Landscape and Urban Design One Creative Environments Ltd</p>	<p>quality of the historic built environment.</p> <p>In your chapter on the new approach you acknowledge that designing highways has changed. It is no longer the common practice to make vehicles the dominant feature of a road. This message is echoed throughout central government design guides and documents. The 'Manual for Streets' notes significant flaws in past road hierarchies stating that: "In the past, road design hierarchies have been based almost exclusively on the importance attributed to vehicular movement. This has led to the marginalisation of pedestrians and cyclists in the upper tiers where vehicular capacity requirements predominate..... 'Street Design for All – An update of national advice and good practice' is a well-regarded document on street design with an emphasis on the public realm.</p> <p>However your proposals for new parking standards at the end of the document is staggeringly poor, appears unsupported by technical evidence and is completely at odds with the fundamental streetscape design principles you are promoting.</p> <p>IMPACT</p> <p>To allow these new parking standards would have a hugely damaging, wide spread impact upon our Worcestershire towns and cities and the quality of our built environment and is completely at odds with the adopted SWDP policies on sustainability, higher density development in the urban area to make greater efficiency of land use, the built environment and reducing reliance on cars.</p> <p>For residential developments having 1no. parking space per bed and garages not counting towards a parking space, will result in, for example, a 4 bed house having 4 parking spaces which is very land hungry and will take up much more space per unit, and likely to result in an unsustainable low density development with a predominance of tarmac and hard pave.</p> <p>From a developers perspective this will render many sites, particularly brownfield, unviable since they will not get the returns they require if the densities are too low.</p> <p>This is likely to impact upon SWDP not meeting its 5 year housing land supply, with a resultant influx of speculative development applications that are likely to go to appeal and cost the Council considerable costs.</p> <p>From an urban design perspective it will result in a major adverse visual effect on our built environment. There will be a predominance of a sea of car parking, tarmac and drives, leaving little/no opportunity for a high quality, positive streetscape to be achieved. It will marginalise any opportunity for street trees and front garden planting - all vital to the visual appearance of a new development since they provide a leafy framework that softens and integrates new built form sensitively into the environment and provides enhanced biodiversity to our wildlife habitats.</p> <p>This will also impact upon the aggregate costs of draining these hard surfaces both financially and</p>	<p>consultation</p>
--	--	---------------------

	<p>environmentally. I urge you to reject these parking standards due to their potentially huge detrimental impact upon the future viability, vitality and appearance of our towns and environment.</p>	
Tom Berrows IDP Group	<p>I would like to comment on your Streetscape Design Guide which I believe is currently in consultation. I am a professional with over 20 years' experience of designing, studying and experiencing new housing schemes, I also have post graduate qualifications in Urban Design so feel I am very well placed to comment on this document. My concerns are primarily focussed on the parking requirements set out in your document.</p> <p>The allocation of parking spaces is common practice throughout the country, however, the levels of minimum parking seem very high considering there is also an additional requirement for 1 visitor parking space for every 5 dwellings.</p> <p>The suggested minimum standards set out on page 39 do appear to conflict with the aspirations of your document on page 5:</p> <p>“Ensure that transport infrastructure is designed to encourage alternatives to car use by providing convenient, safe and attractive provision for pedestrians, cyclists and passenger transport to key trip attractors, permeating both new developments and existing communities;”</p> <p>Whereas Section 4.2 (page 39) states that</p> <p>“there is no direct relationship between car parking provision and the choice of transport mode”</p> <p>The aspiration and the reality of the standards proposed appear to be written by two different people. The statement that there is no direct relationship between parking provision and choice of transport mode is not substantiated with any evidence and isn't encouraging alternative modes of transport. Through experience, I'd suggest the relationships would be largely determined by the availability of other transport modes and the location of the development, i.e. an urban development would have very different transport options available compared to a rural development. Surely the standards would need to be reduced in an urban context or at least be flexible to adapt to the development setting and transport modes available?</p> <p>The aspirations on page 5 also state:</p> <p>“Ensure that new development relates to its context, with transport links integrating seamlessly within the built and natural environment to the benefit of new residents, adjacent occupiers and existing communities alike;”</p> <p>Again this conflicts with the rigid minimum parking standards set out on page 39 which have no bearing to context at all, rural requirements will be different to urban ones, this needs to be covered.</p> <p>The streetscapes document references good practice documents like 'Parking: What works where" which is encouraging, but then appears to completely disregard the heart of all the research within the document by allocating such high minimum standards.</p> <p>Page 6 of Parking: what works where discusses the importance of how and not how many, following this the</p>	Car parking standards will be reviewed as an outcome of this consultation

research within the document makes it “clear that to design on a plot-by-plot basis for average car ownership ignores significant variations within and wastes space by allocating bays to people who won't need it.”

On page 18 of Parking: parking what works where, your streetscape document should consider the 'Golden Rules', in particular the following rules:

1. Go for the quality of the street above all else. So where you put parking is more significant than how much.

6. Avoid allocating more than half of the parking spaces. Research by Noble and Jenkins show that the more spaces you allocate, the more you have to provide.

I understand and support the intentions of the document, developers and local government need to work together much more to create better places, but the standards being imposed on page 39 will only recreate more poorly designed developments which will become car dominated, not as we've seen in the past but of a different kind, but equally as poor in their own right.

Having developments with swathes of allocated parking is not progressive thinking nor innovative, research suggests that there needs to be a sensible level of allocated parking then an equal amount of visitor spaces, this creates developments that can cater for the fluctuating levels of car ownership in differing households and avoids wastage. Not every 5 bed household has 5 cars, I highly doubt many do at all, Parking: what works where, suggests only 4% of households own more than 3 cars, so surely the most sensible way to deal with this is to use the advice given in the good practice guidance and allocate less space to dwelling and create much more visitor spaces.

This will also force developers to think about who they deal with the issue of visitor spaces and will need to integrate them into developments, this will then further enable local authorities to consider the qualitative aspects of street design rather than ticking a box because the right amount of allocated parking has been provided.

There is also a concerning requirement on page 41 whereby residential car parking spaces should be 3.2m x 6m because circulation space is required. Spaces this size are the equivalent of having a disabled space per car, which quite frankly is bordering on ridiculous. Provision should be made within residential developments so that people can access their homes safely, and that access to their property should not be via their parking space, however this can be achieved in a manner of ways without such over the top requirements. Enforcing requirements such as this, together with the minimum allocated parking provision, will clearly lead to hard paved and car dominated environments which I cannot be the intention. I strongly hope this is re-worded or omitted as it suggests every car parking space is to be this size.

I do see why these requirements are being suggested, but they are going to create more problems than they will solve, the rules for car parking numbers and excessive spatial standards need to be much more flexible. I

	<p>would suggest than minimum standards of allocated parking space are much lower but you increase the provision for much more unallocated spaces (up to 50%), this allows float and flexibility. Parking issues are generally not created from an under provision per household, it is an overall under provision of unallocated spaces that is the issue, I strongly urge and hope you reconsider the way you are looking at parking standards I fear implementation of these standards is reactive and not progressive, it will not create quality developments but more so developments of houses within car parks. I would highly recommend looking how places such as Wokingham or Basingstoke and Deane manage their standards, as they are much more progressive and in line with the current thinking set out in Manual for Streets and Parking: What works where.</p> <p>I will leave you with this thought and sincerely hope you consider the comments above...</p> <p>The standards proposed require that every bedroom, within every house has an allocated parking space that only that household can use, can you imagine how many of the occupants of those bedrooms actually own cars? Research suggests a figure of around 50%, so this leaves potentially 50% of parking spaces on your future developments being unused, wouldn't they be better as visitor spaces for everyone to use? Or land that could be used as open space / amenity?</p>	
<p>James Hughes Lead Adviser West Midlands Planning Team Natural England</p>	<p>Natural England is a non-departmental public body. Our statutory purpose is to ensure that the natural environment is conserved, enhanced, and managed for the benefit of present and future generations, thereby contributing to sustainable development.</p> <p>Our remit includes protected sites and landscapes, biodiversity, geodiversity, soils, protected species, landscape character, green infrastructure and access to and enjoyment of nature.</p> <p>While we welcome this opportunity to give our views, the topic this Streetscape Design Guide covers is unlikely to have major effects on the natural environment, but may nonetheless have some effects. We therefore do not wish to provide specific comments, but advise you to consider the following issues:</p> <p>Green Infrastructure</p> <p>This SPD could consider making provision for Green Infrastructure (GI) within development. This should be in line with Worcestershire's Green Infrastructure Strategy</p> <p>The National Planning Policy Framework states that local planning authorities should plan 'positively for the creation, protection, enhancement and management of networks of biodiversity and green infrastructure'. The Planning Practice Guidance on Green Infrastructure provides more detail on this.</p> <p>Urban green space has the potential to provide multi-functional benefits if well designed. It can contribute to coherent and resilient ecological networks, allowing species to move around within, and between, towns and the countryside with even small patches of habitat benefitting movement. Urban GI is also recognised as one of the most effective tools available to us in managing environmental risks such as flooding and heat waves.</p> <p>Greener neighbourhoods and improved access to nature can also improve public health and quality of life and</p>	<p>Thank you for your comments, which are noted.</p> <p>The Development Control Team is currently working with internal colleagues to ensure that the SDG correctly addresses the issue of GI.</p>

reduce environmental inequalities.

There may be significant opportunities to retrofit green infrastructure in urban environments. These can be realised through:

- extensive green roof systems and roof gardens;
- green walls that enhance biodiversity and provide insulation, shading and cooling;
- rain gardens to enhance biodiversity, provide urban vegetation, green space and manage surface water
- tree planting or altering the management of land (e.g. management of verges to enhance biodiversity).

You could also consider issues relating to the protection of natural resources, including air quality, ground and surface water and soils within urban design plans.

Further information on GI is include within The Town and Country Planning Association's "Design Guide for Sustainable Communities" and their more recent "Good Practice Guidance for Green Infrastructure and Biodiversity".

Biodiversity enhancement

This SPD could consider incorporating features which are beneficial to wildlife within development, in line with paragraph 118 of the National Planning Policy Framework. You may wish to consider providing guidance on, for example, the level of bat roost or bird box provision within the built structure, or other measures to enhance biodiversity in the urban environment. This may also include designing in habitats for a greater range of species including birds and pollinators and identifying local biodiversity priorities to inform species choice in planting. An example of good practice includes the Exeter Residential Design Guide SPD, which advises (amongst other matters) a ratio of one nest/roost box per residential unit.

Landscape enhancement

The SPD may provide opportunities to enhance the character, resilience and local distinctiveness of the surrounding natural and built environment; use natural resources more sustainably; and bring benefits for the local community. Green infrastructure provision can ensure that the design enhances biodiversity and delivers more benefits for people including access to and contact with nature and adaptation to weather extremes. Landscape characterisation and townscape assessments, and associated sensitivity and capacity assessments provide tools for planners and developers to consider how new development might makes a positive contribution to the character and functions of the landscape through sensitive siting and good design and avoid unacceptable impacts.

For example, it may be appropriate to seek that, where viable, trees should be of a species capable of growth to exceed building height and managed so to do, and where mature trees are retained on site, provision is made for succession planting so that new trees will be well established by the time mature trees die.

	<p>Other design considerations</p> <p>The NPPF includes a number of design principles which could be considered, including the impacts of lighting on landscape and biodiversity (para 125).</p> <p>Strategic Environmental Assessment/Habitats Regulations Assessment</p> <p>A SPD requires a Strategic Environmental Assessment only in exceptional circumstances as set out in the Planning Practice Guidance here. While SPDs are unlikely to give rise to likely significant effects on European Sites, they should be considered as a plan under the Habitats Regulations in the same way as any other plan or project. If your SPD requires a Strategic Environmental Assessment or Habitats Regulation Assessment, you are required to consult us at certain stages as set out in the Planning Practice Guidance.</p> <p>Should the plan be amended in a way which significantly affects its impact on the natural environment, then, please consult Natural England again.</p> <p>Please send all planning consultations electronically to the consultation hub at consultations@naturalengland.org.uk.</p>	
--	---	--

Barratt Homes	<p>Barratt Homes West Midlands and David Wilson Homes Mercia request that the following representations are considered as part of the emerging Worcestershire Streetscape Design Guide Consultation.</p> <p>The Barratt Homes West Midlands and David Wilson Homes Mercia divisions (henceforth referred to as BDW) operating areas include Worcestershire County. The introduction of a streetscape design guide will therefore influence how both divisions bring forward development sites in the future.</p> <p>In recent years, BDW have developed/are developing the following sites.</p> <ul style="list-style-type: none">- 316 dwellings, Norton Farm - Bromsgrove District Council- 216 dwellings, Stoke Prior – Bromsgrove District Council- 211 dwellings, Webheath – Redditch District Council- 28 dwellings, Alvechurch – Bromsgrove District Council- 502 dwellings (as part of a consortium), Offenham – Wychavon District Council- 75 dwellings, Post Office Lane, Kempsey – Malvern Hill District Council- 138 dwellings, Alexandra Hospital – Redditch Borough Council <p>The principle of a design guide document from a County Highways perspective could be a useful tool. However, we strongly object to the introduction of the proposed prescriptive parking standard for residential development.</p> <p>Further reasoning on this matter is set out in more detail below. We would welcome dialogue with County Highways, if this would be beneficial.</p> <p>Section 4 – Planning for Parking</p> <p>The document states that the 'Planning for Parking' guidance has been prepared in a manner that embraces the NPPF. The guidance also refers to a Ministerial Statement published 27th March 2015 updating paragraph 39 of the National Planning Policy Framework providing further detail on the application of parking standards.</p>	Car parking standards will be reviewed as an outcome of this consultation
---------------	---	---

As award winning volume house builders, BDW are acutely aware of our customers' needs and demands in respect of parking and our sites are designed accordingly. We agree with the aforementioned Ministerial Statement, in this regard, and strongly believe that the market is best placed to decide on parking standards.

Section 4.2 seeks to impose a blanket-parking standard by requiring a minimum number of parking spaces relative to bedrooms.

The justification for this standard is not detailed and is contrary to the Ministerial Statement referred to in section 4.1 of the design guidance, which explicitly states that **'The market is best placed to decide if additional parking spaces should be provided'**. Paragraph 39 of the NPPF now includes the following paragraph:

'Local planning authorities should only impose local parking standards for residential and non-residential development where there is a clear and compelling justification that it is necessary to manage their local road network'.

The design guidance does not provide 'clear' or 'compelling' justification that a local parking standard is necessary. It is therefore unreasonable to apply a blanket minimum parking standard across all of Worcestershire. This is contrary to paragraph 39 of the NPPF.

Perversely the design guidance also seeks to exclude garages from counting as a parking standard 'due to the ability to convert them into habitable accommodation'. The practice of removing permitted development rights from garages to prevent their conversion into habitable accommodation, if necessary, is widely accepted. This approach should continue to apply and therefore each local planning authority, on a site-by-site basis, can make a decision.

In addition, excluding garages from contributing towards a parking provision due to potential conversion into habitable accommodation is only realistically applicable to integral garages. Therefore, this standard cannot reasonably be applied to detached garages, further supporting the position each site should be assessed on a site-by-site basis.

Notwithstanding the principle of setting a minimum parking standard, this requirement would have significant implications for the design and layout of future residential developments. Consequently, we believe that this would make less efficient use of land.

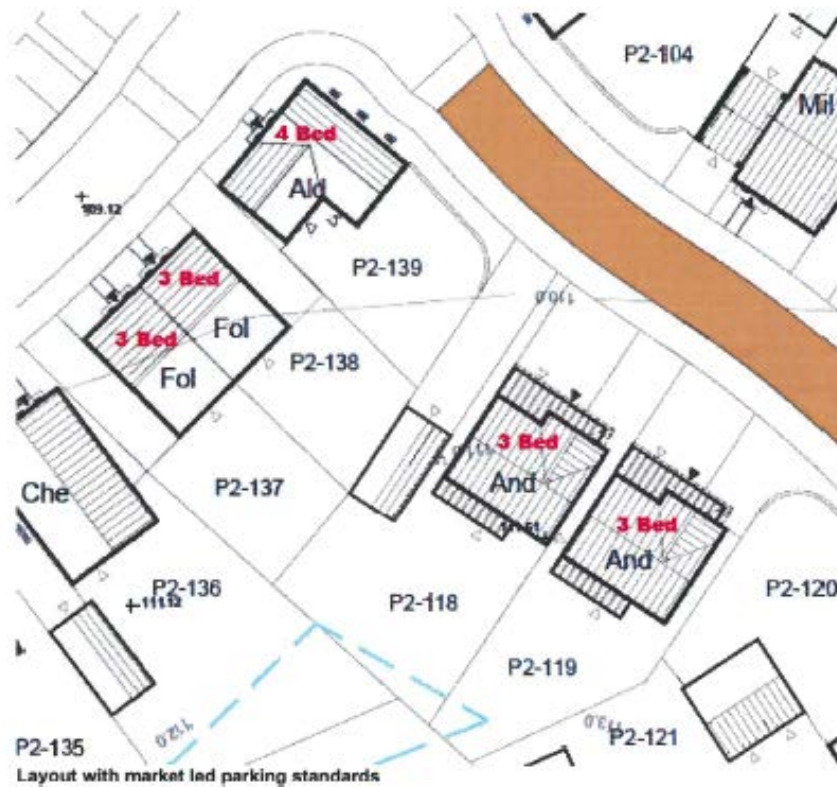
The following example, taken from a BDW layout in Worcestershire, demonstrates the design and visual impact that the proposed parking standard would have on residential layouts.

Below is a description of the house types used on the plans.

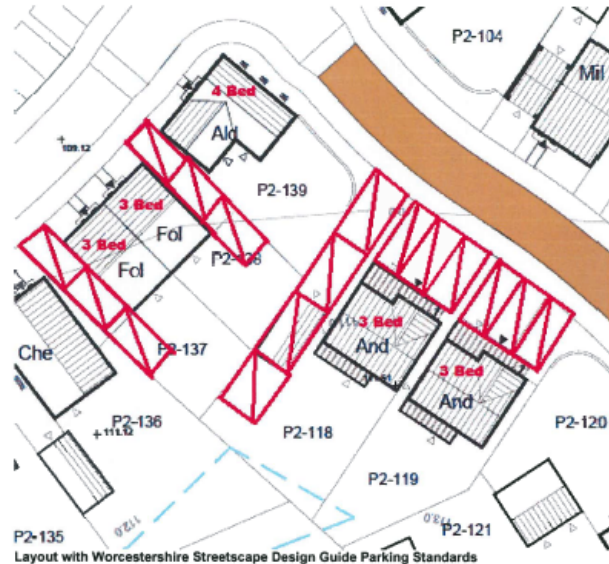
FOL – is a three bedroom semi-detached house with two parking spaces

ALD – is a four-bedroom corner-turning dwelling. It comes with two spaces and a detached garage.

AND – is a larger three-bedroom detached dwellings. It has an integral garage with a front driveway for two spaces.



In accordance with the proposed Streetscape Design Guide minimum parking standards, the layout for these dwellings would be as follows;



FOL – the number of spaces would increase from two to three. This would encroach into the private amenity space.

ALD – the numbers of spaces would increase from three to four and the single detached garage would need to be removed from the layout.

AND - Driveway spaces would be increased from two to three removing the possibility of providing any front garden space and consequently dominating the frontage with parking. The integral garage would not count towards the parking provision.

It is probable, from a design perspective, that these parking arrangements won't be satisfactory to a local planning authority. Any amendments to the design and layout of the housing, to accommodate additional parking, would make less efficient use of land and detract from the overall design quality. Although this example only examines a layout at a micro level the implications are much more significant in terms of the effective use of land should all residential developments across Worcestershire be required to apply these minimum-parking standards.

In summary, Worcestershire County Council have sought to prepare a document to support business and residential development in a manner that embraces the NPPF.

The proposed introduction of a minimum parking standard, without a clear and compelling justification, is contrary to paragraph 39 of the NPPF following the Ministerial Statement dated 27th March 2015. Accordingly, we consider that the proposed parking standard, set out in section 4.2 of the proposed Streetscape Design Guide, is not justified and should be removed from the guidance.

We look forward to receiving your response to the above.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Mark Elliot', written in a cursive style.

Mark Elliot
Planning Manager

<p>Taylor Wimpey</p>	<p>We write on behalf of Taylor Wimpey Midlands and North Midlands, who have significant land interests across Worcestershire, to make representations in response to Worcestershire County Council's consultation on the Worcestershire Streetscape Design Guide (the 'Design Guide'). The representations have been set out broadly in the order that the topics appear in the consultation document.</p> <p>Our client's overarching response is that as currently drafted the Design Guide is too prescriptive and does not allow for sufficient flexibility <i>"to support ambitious and exciting place making."</i> This could potentially impact the viability and deliverability of development schemes in the County. Paragraph 153 the National Planning Policy Framework ('NPPF') establishes that:</p> <p><i>"Any additional development plan documents should only be used where clearly justified. Supplementary planning document should be used where they can help applicants make successful applications or aid infrastructure delivery, and should not be used to add unnecessarily to the financial burdens on development."</i></p> <p>The document should be redrafted to provide greater flexibility to ensure that development across the County, including much needed housing, is not delayed by overly onerous requirements. We have not, in these representations, sought to identify each paragraph which should be amended to provide greater flexibility but we set out below amendments to key paragraphs which should be made. Amendments should be made to the following paragraphs:</p> <ul style="list-style-type: none">• Paragraph 2.3 – Green Infrastructure: <p><i>Where appropriate proposals for investment in infrastructure must should incorporate green infrastructure as an integral part of the development or to replace traditional infrastructure approaches with green infrastructure solutions where retro-fit improvements to highways are planned.</i></p>	<p>Thank you for your comments.</p> <p>Green Infrastructure The Development Control Team is currently working with internal colleagues to ensure that the SDG correctly reflects the comments received to ensure that the requirements are not 'unnecessarily</p>
----------------------	---	---

- Paragraph 2.3 –Trees In The Streetscape Environment:

*Worcestershire attaches great importance to the contribution that suitable tree planting can make to our environment. **Where appropriate**, existing trees should be integrated within ~~any~~-new development proposals*

- Paragraph 2.3 – Trees and Sustainable Drainage Solutions:

Where appropriate the development of the design details for the street should incorporate water-sensitive design.

Our client requests that the Council undertakes a full review of the consultation document to ensure that the requirements are clearly justified and not unnecessarily onerous.

The Design Process

This section of the document provides guidance on integrating infrastructure and consideration of the environmental context and thresholds for transport assessments and statements.

Guidance on Thresholds for transport Assessments and Statements

The table on page 13 of the Design Guide sets out the threshold limits which will trigger the requirement for a Transport Statement or Transport Assessment. The table on page 14 outlines 'other considerations' and when a Transport Assessment and Travel Plan will be required.

Our client considers that the requirement for a Transport Assessment and Travel Plan for "any development proposed in a location where the local transport infrastructure is inadequate" is overly onerous. This would require a Transport Assessment and Travel Plan to be submitted for only two dwellings if it was considered that the existing roads were substandard or pedestrian / cyclist facilities were poor. This requirement is too prescriptive, it does not allow for a judgement to be made on whether it is necessary, and would place an unreasonable financial burden on development. This approach does not accord with paragraph 153 of the NPPF.

The threshold for the requirement for a Travel Plan does not correspond with the threshold requirements for a Transport Statement or Transport Assessment to be produced. The consultation document requires a Personalised Travel Plan to be provided "for all residential development of 50 or more dwellings" compared with the threshold for a Transport Assessment being 80 dwellings or more. A Welcome Pack is required for developments of 50 dwellings or fewer although there is no requirement for a Transport Statement and a Travel Plan to be produced for this quantum of development.

The Design Guide should be reviewed to ensure a consistent approach is taken between where a Transport Statement or Assessment is required, and when a Travel Plan is triggered.

Layout and Connectivity

This section of the Design Guide provides guidance on layout and connectivity within the development.

Establishing Access from the Existing Network

The Design Guide requires developers to "demonstrate that the junction arrangement proposed represents the best use of available capacity." Whilst our client recognises the importance of making the best use of available capacity this should not come at the expense of highway safety and provision for vulnerable road users including pedestrians and cyclists. This is supported by paragraph 35 of the NPPF which establishes that developments should create safe layouts which minimise conflicts between traffic and cyclists or pedestrians. Testing the acceptability of a junction through highway capacity assessments

onerous'.

The Design Process
The requirements replicate national practice which was previously policy in GTA 2007. WCC is comfortable with the explanations provided in the draft SGD document.

is a predict-and-provide led approach, rather than a placemaking and highway safety led approach and is contrary to Manual for Streets, Manual for Streets 2 and national transport policy.

Adopting a position which does not support the use of traffic signals when capacity analysis demonstrates a priority junction will accommodate demand fails to recognise the benefits traffic signals can deliver, such as; accommodating safe pedestrian and cyclist movement through a junction; assisting in traffic management; and contributing to overall highway safety and speed control. It is recommended that this part of the Design Guide is removed.

Paragraph 3.4 – Turning Heads:

The Design Guide requires T-form turning facilities to maintain a distance of 26 metres across the T to facilitate manoeuvres by HGV sized vehicle. It is unreasonable to apply this blanket approach to all development, particularly in new residential proposals.

The number of HGV movements in residential areas is limited. Therefore the use of a 'T-form' turn should not dictate the design and layout of the site, which could appear over-engineered and produce a poor street scene.

Paragraph 3.5 – Landscaping

The Design Guide requires cycle ways and footpaths that serve the development to be "sympathetic to the Authority's wishes." Our client recognises that an example has been provided, however further information and guidance from the Council is necessary to ensure that when development proposals are evolved this requirement is taken into account from the outset. Meeting the Council's expectations, where possible, from the initial design stages will ensure that further design revisions are not required later in the determination process which could lead to the delays of the determination of the application.

The Design Guide requires that "highway landscape features should be maintained by the developer for a period of 5 years". This requirement would be included in a Section 106 Agreement with the relevant District Council. It is unnecessary for it to be repeated within the Design Guide.

Paragraph 3.11 – Innovative Street Design

As drafted it is our client's view that the Design Guide will not deliver imitative street design given its prescriptive nature. Our client therefore recommends that the following text is amended as set out below to provide for further flexibility:

"Where innovative designs are proposed for adoption as public highways, the following guidance ~~must be followed~~ should be followed where possible"

The third bullet point requires "design speeds should be a maximum of 10 mph and street furniture and landscaping should be used to achieve this." The images on this page show town centre / high street locations only. It is unclear whether the Council are proposing that this requirement is applied to residential developments or city / town / village centre locations only.

This requirement should apply to town centre / high street locations only. A design speed of 10 mph is very low and difficult to maintain and enforce in residential developments. It is recommended that it is made clear that this requirement applies to high street scenarios only.

Paragraph 3.12 – Main Streets

Our client requests that the guidance makes clear that 'main streets' are limited to town centres, district centres and local centres only.

Layout and Connectivity

This statement will be amended to include a reference to safety for vulnerable road users.

Turning Heads: This is a standard dimension, however, other options will be considered on a case by case basis where tracking is provided. The document will make this clear.

Landscaping
Noted and agreed, although WCC is comfortable with the explanation provided in the draft SGD document.

Para 3.11: The SDG will be amended to provide consistency.

This 10 mph applies to all locations and this will be made clearer in the document.

	<p>The Design Details in the table on page 32 of the Design Guide require the provision of a minimum footway width of 3.5 metres and parallel on street car parking bays to be a minimum of 2 metres x 6 metres with an additional 1 metre 'pull out strip'. The requirement for an additional 1 metre pull out strip is excessive given the low design speed of such streets. This requirement is not in accordance with paragraph 58 of the NPPF and would have a negative impact on the street scene and the requirement should be deleted.</p> <p>Such a strip could also adversely impact the viability, and ultimately deliverability of a development given the amount of land take that would be necessary.</p> <p>Paragraph 3.13 – Residential Distributor Paragraph 3.13 defines a residential distributor as carrying traffic flows higher than 100 vehicles per hour.</p> <p>This threshold is too low and there is no evidence to justify it. The threshold should be increased to flows higher than 200 vehicles per hour which is more reflective of a residential distributor road.</p> <p>The design details set out in the table on page 33 of the Design Guide require parallel bays to be 2 metres x 6 metres with a 1 metre 'pull out' strip. In line with our clients response to paragraph 3.12 this requirement will have a detrimental impact on the streetscene and compromise design and placemaking principles.</p> <p>Paragraph 3.14 – Residential Street Paragraph 3.14 establishes that residential streets should not exceed 100 vehicles per hour.</p> <p>Similar to above this threshold is too low and it is unjustified. The threshold should be increased to flows higher than 200 vehicles per hour.</p> <p>The requirement of the 'Residential Street' to achieve a design speed of 15mph, as opposed to 20mph of the 'Residential Distributor', is not clear and again is not supported by any evidence.</p> <p>Paragraph 3.15 – Private Shared Drives and Courtyard Parking Areas Paragraph 3.15 establishes that "a private driveway can serve one or more properties, up to a maximum of six". No clear justification, including any examples, is provided for this requirement and therefore the Design Guide is not in accordance with paragraph 153 of the NPPF. Our client recommends that this is increased from 6 dwellings to 10 dwellings which will provide greater flexibility in the design of residential developments.</p> <p>The requirement for more than one access for communal parking areas in excess of 12 spaces is considered excessive and should be removed. Similarly, the Council should remove the requirement for 'a shared surface serving 2 or more properties to be a minimum of 4.1m for the first 15m behind the back of carriageway to allow two vehicles to pass'.</p>	<p>WCC is comfortable with the explanation provided in the draft SGD document and does not consider that there is conflict with Para 58 of the NPPF.</p> <p>Residential Distributor: This paragraph will be reviewed (i.e. the 100 vehicles per hour will be removed).</p> <p>Residential Street: WCC is comfortable with the explanation provided in the draft SGD document</p> <p>Private Drives: This paragraph will be reviewed</p>
--	---	---

The standards for all dwelling houses effectively equate to the provision of 1 parking space per bedroom and for a 5 bed house 5 spaces would be required. As an example, if this requirement was to be applied to our client's site at Perry Wood Walk, Worcester which has reserved matters approval for 215 dwellings then the site would be required to deliver 684 car parking spaces This is contrary to local and national planning policy which seeks to encourage the use of sustainable transport modes and reduce reliance on the use of the private vehicle.

Paragraph 4.2 – Specifications

The Design Guide requires car parking spaces on residential developments to be designed to 3.2m x 6m. Garages are required to be provided to the same internal dimensions (i.e. 3.2m x 6m). The earlier part of this section of the Design Guide confirms however that "garages are excluded from the car parking calculations". If garages are required to be designed to 3.2m x 6m (i.e. the same as a surface level car parking space) then there is no reason to justify not including them in car parking calculations.

Our client therefore recommends that the guidance should clarify that if garages provide an internal space of 3.2m x 6m, then they will be included in car parking calculations. If the Council has concerns that garages can be converted to living accommodation then this should be managed by the use of planning conditions to remove the relevant permitted development rights.

A 5 bed house, inclusive of a garage or double garage would require 100sq.m of space to deliver the car parking requirements established in the draft design guide. This is a greater area than the dwelling would occupy severely compromising good urban design, and would necessitate large areas of hardstanding which would dominate residential developments.

The table below identifies that the typical level of car ownership in Worcestershire is circa 1.4 cars per household.

	Households	Vehicles
All categories: Car or van availability	239,717	337,302
No cars or vans in household	39,855	0
1 car or van in household	96,498	96,498
2 cars or vans in household	76,841	153,682
3 cars or vans in household	18,970	56,910
4 cars or vans in household	7,553	30,212
Average Vehicles Per Household (estimate)		1.4

The table below illustrates the average number of bedrooms per dwelling in Worcestershire:

Number of People in Household	Households	Bedrooms	Parking Provision
1 person in household	67,789	67,789	67,789
2 people in household	90,409	180,818	180,818
3 people in household	36,789	110,367	110,367
4 people in household	31,330	125,320	125,320

Car parking standards will be reviewed as an outcome of this consultation.

Manual for Streets indicates that garages are generally not included as a parking space. This paragraph will be made clearer to remove the reference to dimensions. WCC will allow a garage to be counted as a parking space if it is equipped with an electric vehicle charging point and dimensions will be stipulated in this instance.

Number of People in Household	Households	Bedrooms	Parking Provision
5 people in household	9,782	48,910	48,910
6 or more people in household	3,618	21,708	21,708

Applying the standards set out in the consultation document to current dwellings in Worcestershire would result in an average of 2.9 car parking spaces per dwelling when the evidence confirms that car ownership levels are only 1.4 cars per dwelling. This would result in a provision of **double** the evidenced level of spaces.

The table below summarises the breakdown of 5 bedroom dwellings in Worcestershire by the number of occupants and demonstrates that in 80% of the cases more parking spaces would be provided than occupants.

Number of People in Household	Number of Dwellings (95 bedrooms)	Proportion of 5-bedroom dwellings
1 person in household	1,100	9%
2 people in household	3,846	31%
3 people in household	2,244	18%
4 people in household	2,765	22%
5 people in household	1,472	12%
6 or more people in household	953	8%

The Council should therefore review the proposed car parking standards and apply a more flexible approach, which should take into consideration the proximity of development sites to existing services and facilities, the proposed transport strategy, and the mix and housing tenure proposed.

The minimum standards set out in the document seek to remove all on-street parking. Whilst our client recognises that in some instances this approach has merits, when carefully designed and managed on-street parking can contribute to a positive residential environment. The Council should not seek to totally exclude this as a potential design response.

The SPD requires all properties to be equipped with Ultra Low Emission Vehicles. This is not in accordance with the NPPF which states that developments should incorporate facilities for charging plug-in and other ultra-low emission vehicles **where practical** (paragraph 35 of the NPPF). Such a requirement could also have significant impact on the viability of a scheme. A more balanced approach would be for the Design Guide to seek the provision of charging points on new development where appropriate and economically viable.

There are no standards provided for cycle parking other than for flats requiring 1 cycle parking space for 1 bedroom flats, and 2 cycle parking spaces for 2 bedroom flats. Further guidance should be provided for the requirements of cycle parking for dwelling houses also.

Planning for Passenger Transport

The Design Guide asserts that *"it is critically important that development seeks to strengthen the commerciality of the passenger transport network."*

WCC accepts that visitor parking can occur on-street, however, residents parking should be within curtilage.

WCC is comfortable with the explanation provided in the draft SGD document relating to EV charging points

WCC is comfortable with the explanation provided in the draft SGD document relating to cycle storage.

WCC is comfortable with the explanation provided in the draft SGD document relating to walk

	<p>Paragraph 5.1 of the consultation document requires developers to “consider passenger transport access at a very early stage in the development process and set out a costed passenger transport access strategy”. Bus operators usually require costs for running a service to remain commercially confidential.</p> <p>Paragraph 5.2 – Bus Routes The consultation document requires “a mean average walk distance for all properties within a development to scheduled bus stops of 400 metres, up to an absolute maximum of 800 metres. Our client considers that this requirement is too prescriptive. It is not based on any guidance or robust evidence. It does not take into account the frequency of a bus service which may encourage users to walk further as the level of service increases.</p> <p>Paragraph 5.4 – Real Time Passenger Information (‘RTPI’) Paragraph 5.4 requires developers to make a financial contribution towards the provision of RTPI displays at bus stops. Due to the increasing role of technology, including tablet devices and smartphone applications which can display this information, this technology is unlikely to be necessary. For this reason the Design Guide should only seek for such technology to be provided where it is necessary.</p> <p>Summary As currently drafted the Design Guide is overly onerous and will have a negative impact, both in terms of viability and delivery of housing, and the design of developments. Paragraph 47 of the NPPF establishes that Local Planning Authorities should “boost significantly the supply of housing”. In order to achieve this, it is imperative the Design Guide is less prescriptive and provides greater flexibility to ensure that the deliverability of the residential developments is not delayed.</p> <p>Furthermore, in certain instances the current wording of the design guide will not deliver a positive streetscape design, contrary to the purpose of the document. We are therefore unsure whether there is any merit in publishing the document in its current form.</p> <p>The Design Guide should therefore be amended to address the comments and concerns raised in these representations.</p> <p>We trust that these representations will be given full consideration as part of the consultation process. If you have any queries or would like to discuss these representations further, please do not hesitate to contact either Anna Papazoglou (anna.papazoglou@turley.co.uk) or myself.</p>	<p>distance to bus stops.</p> <p>WCC is comfortable with the explanation provided in the draft SGD document relating to RTIP.</p> <p>The SDG will be amended as per the responses outlined above.</p>
<p>WCC Development Management Team</p>	<p>The below comment is made on behalf of the Development Management team who are the appointed representatives of Worcestershire County Council in its role as the Highway Authority.</p> <p>The draft streetscape design guide is a successor document for the highway design guide and it is seen to be a progressive document which embraces concepts within Manual for Streets 1 and 2 in order to provide a public realm which can address the road user hierarchy. It is clear that the document seeks to be a happy medium of the different concepts of providing design certainty and allowing for innovation and this will allow designers</p>	<p>Car parking standards will be reviewed as an outcome of this consultation.</p>

the scope to provide layouts that fit into the principle of "freedom within boundaries".

However the consultation document also seeks to amend parking levels for new residential and commercial development. It is considered that the non-residential arrangements are in keeping with paragraph 39 of the National Planning Policy Framework however the residential provision for C3 dwelling houses has increased and C4 Houses of Multiple Occupation has been embraced into this standard. There is potentially a significant difference in the persons who would be resident in these residential units and their transport decisions so it is simply not the case that these planning uses can be combined and they should be separated out to allow for the specific needs to be more closely matched. Additionally there is no reasoned justification to explain how the proposed C3/C4 standards are reflective of demand. There must be an evidence base to justify the standard and ensure the provisions are suitable for the locality. It is essential for developers, planning authorities, Councillors, objectors, officers and the planning inspectorate to be able to understand the reasoning for the provisions so that they will stand up to the test of challenge. As a result officers of the Development Management team have sought evidence to support the proposed provisions. The following reviews have taken place:

Review of 2011 census data on car ownership and number of bedrooms for existing dwellings for all Districts in Worcestershire. This has been considered in the context of a rural and urban environment.

A survey of cars parked within a residential curtilage of a proxy site

A survey of cars parked within the curtilage of 14 Houses of Multiple Occupancy

These 3 assessments allow for a local parking standard to be derived. Below is presented the conclusions of this review, and the raw data and analysis can be presented to support this position.

The 2011 census data is readily available from the office for national statistics. It is the most up to date area wide survey and is of such a scale to be statistically significant. Additionally such a large data set allow for variations in residents personal behaviours to be accounted for.

Based on this data set the required parking standard is below.

	Urban		Number of Bedrooms Proposed				
			1	2	3	4	5
District	Bromsgrove		1	1	2	2	3
	Redditch		1	1	2	2	3
	Malvern Hills		1	1	2	2	3
	Worcester City		1	1	2	2	3
	Wychavon		1	1	2	2	3
	Wyre Forest		1	1	2	2	3
Rural		Number of Bedrooms Proposed					
		1	2	3	4	5	
District	Bromsgrove		1	2	2	3	3
	Redditch		1	2	2	3	4
	Malvern Hills		1	2	2	3	3
	Worcester City		1	2	2	3	4
	Wychavon		1	2	2	3	3

	Wyre Forest	1	2	2	3	3
--	-------------	---	---	---	---	---

A survey of Meadowbank Drive, Worcester was undertaken on Wednesday 10th November 2017, 22:00 until 23:15. This was considered to be reflective of a time when the number of cars would be reflective of ownership. 150 dwellings were surveyed and other publically available data used from the Local Planning Authority and property websites to show the number of bedrooms each property had.

Based on this survey a required parking standard is below.

Derived Parking Standard		
Bedrooms	Spaces Required	Rounded to Practical Spaces
1	0.46	1
2	0.93	1
3	1.39	2
4	1.86	2
5	2.32	3

The Meadowbank Drive survey clearly validates the census data (comparison of Worcester Urban calculation), and this shows that proposed parking standard exceeds the level of parking the local evidence indicates.

With regards to Houses of Multiple Occupancy 2 surveys where undertaken at 16 licenced HMO's. 2 sites were excluded due to site specific circumstances, but 14 residential properties of various number of occupants were surveyed. These surveys were conducted on Wednesday 10th November between 21:00 and 22:00, and

Thursday 18th November between 21:00 and 22:00.

Based on this survey a required parking standard is below.

Number of Residents	Spaces Required (2dp)	Spaces Required to Practical Space
3	0.88	1
4	1.17	2
5	1.46	2
6	1.75	2
7	2.04	2
8	2.33	3
9	2.63	3
10	2.92	3
11	3.21	4
12	3.50	4

The results show that a ratio of 1 space per 3 occupants is justified. It is acknowledged that it is not the case that 1 bedroom equates to 1 person, however this is mostly to be the case given the nature of the accommodation.

Again this evidence shows that the proposed 1 space per bedroom approach is not justified.

	<p>It is clear that the over provision of car parking has many environmental, social and economic problems for developers and residents, and overall is unlikely to contribute to sustainable development. Officers consider that the proposed car parking levels could not stand up to challenge in the event of a planning appeal and their use could be considered to be unreasonable and expose the Local Planning Authority to a cost award against them.</p> <p>It is also a poor use of a limited officer resource to try to defend the situation when the above data can easily be accessed by an applicant or appellant, to the point where the above evidence would be adequate to justify a departure from the proposed higher parking provision and render it a useless standard.</p> <p>Additionally the number of cycle parking spaces for C3 and C4 uses has been excluded from this document and needs to be included.</p> <p>To concluded, the Streetscape Design Guide is welcomed as a progressive document which allows for flexibility to the benefit of the wider public, but the proposed parking standard are un-evidenced or justified and the freely available data in the public domain shows that a lower level is appropriate, the result would be low density development which would require more land to achieve the required housing number, at greater expense and detracts from the promotion of sustainable travel. It is essential that there is evidence to support whatever standard becomes adopted to allow for transparency within the development management process, an un-evidenced approach would be exposed to challenge and result in wasted public resource. It is therefore recommended that the parking standards be provided as per the results of the 2011 Census.</p>	
<p>Combined response from all planning authorities</p>	<p>Introduction</p> <p>1. In the opening Introduction/ background (p5) the draft design guide highlights the rich mix of landscapes and streetscapes (para 1.1) and the “quality of the natural and historic built environments” and their importance in terms of the “visitor-focussed economy” and as being a “cherished environment in which to live and work”. Paragraph 1.1 also highlights the need for development to “integrate seamlessly with the built and natural environment” and to embrace “sustainable green infrastructure throughout the design process”. This approach is fully supported however greater emphasis should be put on place making in relation to new development.</p> <p>3. In the opening background p5 it would be a welcome addition if reference could be made more generally to</p>	<p>1. Noted. The document will be revised to include reference to 'place making'</p> <p>3. Noted.</p>

	<p>creating quality environments with a strong sense of place that are pleasant environments for the pedestrian. As currently drafted the focus of this document seems to be that of a highway design manual and procedure note rather than a streetscape design guide.</p> <p>4. P6 context, the district council’s development management teams should be mentioned specifically including an explanation as to their role in the design process including pre-planning application stage.</p> <p>5. 1.5 p7 Philosophy line 1 – it would be better if WCC actively encourages creativity rather than just welcoming it. As written it suggests that WCC is only reactive. There are too many references to other documents, it will be difficult for developers to collate a suite of documents to refer to.</p> <p>6. The third paragraph on page 7 highlights the importance of hedgerows, trees and grassland in verges as wildlife corridors. This seems to be encouraging the planting of trees in verges for the benefit of wildlife. This approach is to be welcomed however if the design guide is adopted it should be followed at all stages of the design process, not just at the pre-planning stage, right through to adoption. The sentence “trees must not be planted near structures or services” (page 18) seems to contradict the positive approach to new planting. Clarity is required. What is meant by “trees must not be planted near structures or services”? This could mean a pavement, a kerb, a garden wall, a house. If this were the case then this brings into question whether any such planting would be possible.</p> <p>7. Issues around adoption and future maintenance costs and the clear benefits of green infrastructure do not appear to be fully resolved within the design guide and this will lead to confusion and lack of consistency. The design guide needs to explain how such issues will be reconciled in Worcestershire and provide good examples of the sort of successful outcomes the county council is looking for.</p> <p>The Design Process</p> <p>8. On page 11 the document mentions “an extensive mapping data resource” at: http://www.worcestershire.gov.uk/info/20002/community_and_volunteering/442/geographic_information_system_maps . The information available is rather limited with regards to GI and the natural environment.</p> <p>9. The use of the phrase “phase 1 habitat survey” (page 11) has long since been outdated. “preliminary ecological appraisal” should be used instead.</p>	<p>Document will be amended.</p> <p>4. Noted. Will review.</p> <p>5. Noted. Document will be amended.</p> <p>6. Noted. Document will be amended and clarity will be provided.</p> <p>7. Suggest that we work further with the Planning and Environment Policy Team to amend this section. Although the County Council is not responsible for the maintenance of green infrastructure unless it is directly associated with</p>
--	---	--

	<p>10. Although the possible impacts on landscape character are mentioned (page 12), there is no mention of visual impact or the need for a visual impact assessment.</p> <p>11. The paragraph on “streetscape design and wildlife mitigation...” (page 12). It fails to identify that crossing structures and passes are only part of the solution. It should also emphasise the importance of functional GI and wildlife corridors. Not just those present but how new features are to be created.</p> <p>12. It would be good to have a correct balance of place making against GI. It is understood that it needs to be mentioned but it seems to have a great emphasis in paragraph 2.3.</p> <p>13. SuDS – North Worcestershire Water Management are providing comments on behalf of Wyre Forest District Council & Redditch & Bromsgrove District Council.</p> <p>14. Paragraph 2.4 – guidance on TA – other considerations – “any development not conformity...” it is not understood why a TA and TP needed for this. Similarly with the other categories – surely it is better to less specific and leave the scope in the third para of 2.4 to allow a TA/TS to be requested.</p>	<p>the operation of the highway.</p> <p>8. Noted.</p> <p>9. This will be checked. If it is out of date it will be amended.</p> <p>10. This is not appropriate for a Highways Design Guide and should be addressed by the relevant planning authorities.</p> <p>11. See above response for point 10.</p> <p>12. This will be reviewed for balance.</p> <p>13. Noted</p> <p>14. WCC is comfortable with the explanations provided in the draft SGD</p>
--	---	--

	<p>Layout and Connectivity</p> <p>15. Paragraph 2 on page 19 is out of date. The “protected zone” should use the 12 times the stem diameter calculation for BS 5837 (2012).</p> <p>16. Section 3.7 regarding drainage seems to contradict the earlier discussions regarding SuDS on page 10. The guidance in the CIRIA SuDS manual is wide-ranging. and I suspect a great deal different from other guidance mentioned on page 19. The earlier emphasis on innovation should be continued through the design guide otherwise creativity will be lost. Although a SuDS approach is introduced later, it should be higher up the order of appearance. SuDS in the streets that benefit the trees/vegetation, also in the streets, should be a starting point rather than, as is all too often the case, retro-fitted and then later removed because it raises technical issues that could have been overcome if it had been designed in from the start.</p> <p>17. As an example of contradiction, the design guide appears to dismiss the idea of SuDS in the streetscape under “scenario 5” on page 25. That states that “structures should ideally be located away from the carriageway”. There are many innovative schemes where SuDS are in the street.</p>	<p>document re TA/TP.</p> <p>15. This will be checked and updated as appropriate.</p> <p>16. WCC welcomes SuDS but does not currently adopt SuDS systems. WCC only accepts adoptable highway drainage that connects directly into systems that are maintained by a statutory body (e.g. Severn Trent).</p> <p>17. WCC is comfortable with the explanation provided in the draft SGD document re Scenario 5.</p>
--	--	---

	<p>18. Under “key factors” in the street hierarchy section (page 30), there is no mention of in street GI or tree planting yet, in the three photos on page 31, all of these images, presumably well designed streets, contain trees.</p> <p>19. Bullet point 5 on page 31 appears negative and is a rather sweeping statement. The opposite may also be true.</p> <p>20. Under “design details” (page 32) for main streets it states that “New trees should be planted as part of the footway furniture zone”. The design guide needs to explain where this zone is.</p> <p>21. Under 3.13 (page 33) it states “Green infrastructure can significantly add to the quality of the streetscape. Wherever possible, this should be accommodated outside the limits of the adopted highway”. This will be seen as giving with one hand and immediately taking with the other. This is a further example of contradiction within the document and is inconsistent with the introductory section, principles, aims and objectives.</p> <p>22. Under 3.17 (page 38), not having GI within adopted streets is not properly explained or justified.</p>	<p>Maintenance of these structures within the highway could represent a significant issue for resident access in future and should be located outside of the carriageway.</p> <p>18. WCC is not responsible for street GI outside the adopted highway.</p> <p>19. This will be amended.</p> <p>20. This will be revised.</p> <p>21. WCC is only interested in GI where it is associated with the highway. However, the introductory section will be</p>
--	---	---

	<p>Planning for Parking</p> <p>23. The consultation response of Worcester City Council to Chapter 4 is attached as Appendix 1 and was unanimously endorsed by the Planning Committee at the meeting on 23rd November 2017.</p> <p>24. Recognition that previous design guidance has in some cases led to “car-dominated estates” is welcome and the express intention to ensure that “transport infrastructure is designed to encourage alternatives to car use by providing convenient, safe and attractive provision for pedestrians, cyclists and passenger transport to key trip attractors, permeating both new developments and existing communities”, is commendable but the design guide does not explain how this is to be achieved. How are designs supposed to ensure that walking is an attractive option and be a preferable and viable option compared to car use? The guide does not explain how cycling should be accommodated and prioritised in layout design for new development. There does not appear to be any mention of cycle parking or cycle priority junctions. Although cycling and pedestrians are mentioned in a number of places in the document they tend to be mentioned as an afterthought to the provisions for motorised vehicle transport and parking. On page 8 of the document, the following table appears: The overall emphasis in the design guide is about cars rather than pedestrians and cyclists.</p> <p>25. Reference is made to ‘Appropriate Cycle facilities’. However, it is not clear whether these are going to be set as a standard or left to the developer/LPA to decide what is appropriate.</p> <p>26. Paragraph 4.2 proposed residential parking standards are likely to lead to unintended consequences and do not appear to be compatible with South Worcestershire Development Plan policy regarding design and development density. The proposed parking standards as drafted would undermine place making aims and objectives. Before adopting any new standards, they should be tested by producing example development layouts. The proposed standards are likely to impact on development financial viability and require testing.</p> <p>27. Signposting to other documents can be helpful for the draft design guide but relies too heavily on work produced by others. Local distinctiveness will be difficult to achieve if the design guide does not include original work and is not more specific to Worcestershire.</p> <p>General</p>	<p>reviewed.</p> <p>22. See comment 21</p> <p>23. Car parking standards will be reviewed as an outcome of this consultation.</p> <p>28. Noted</p> <p>29. Noted and will be considered in the parking review.</p> <p>30. Noted and we may consider this as part of future reviews.</p> <p>31. Noted</p> <p>32/33. Noted and will update the document</p>
--	---	---

	<p>28. The design guide also needs to recognise better the need to consider the historic built environment in terms of streetscape design. Streetscape design should have regard conservation areas, scheduled ancient monuments, listed buildings and their settings.</p> <p>29. Consideration should also be given to providing guidance on electric vehicle charging points, especially as promotion of electric vehicles received prominent mention in the 2017 Budget.</p> <p>30. The Worcestershire districts would like to encourage WCC to consider the following design guide produced by Urban Design London which includes the type of innovative, imaginative street design that we should be encouraging in Worcestershire Urban Design London's Slow Streets Sourcebook. Rather than just signpost to this document, the WCC Streetscape Design Guide should follow the same format.</p> <p>31. If the flexible approach to street design that is advocated in the SPD is to be delivered, it is considered that this needs to be joined up in terms of the assessment and processing of s278 and s38 agreements.</p> <p>32. Contact details for Wychavon District Council should be: planning@wychavon.gov.uk and telephone number (01386) 565565.</p> <p>33. Contact details for Wyre Forest District Council should be: www.wyreforestdc.gov.uk and worcestershirehub@wyreforestdc.gov.uk.</p> <p>Please note that the above comments from Malvern Hills District Council and Wyre Forest District Council are provided as an Officer response only.</p> <p>Additional Comments</p> <p>The following additional comments have been submitted by Councillor Louis Stephen, Battenhall Ward, Worcester:</p> <p>"1) Ultra central locations.</p> <p>In ultra city centre positions (for example between City Walls Road, Deansway, Castle Street and Sansome Walk) these are highly sustainable locations with excellent links to public transport and local amenities. These areas will be potentially yield some Living Over The Shop type of accommodation and we would not want to choke off these types of schemes coming forward. Propose that a central BID area of Worcester city centre is</p>	<p>1. Provision is already made in the draft SDG document for car free locations.</p> <p>2. The WCC stance is included in section 4 of the draft SDG.</p>
--	---	---

exempted from any mandatory off road car parking.

2) Electric Car Charging

a) Off road parking. The government's very positive intentions on supporting electric vehicles is becoming increasingly clear. No future development containing off road parking should be built that does not have the possibility of an electric car charging point being installed or at the very least making it possible to install easily in the future.

b) On road parking. A barrier to some people taking up electric cars is an absence of on-street electric car charging points as seen in many European cities. 'Where appropriate' developers will work with county council and utility companies to provide on road electric car charging points."

Appendix 1

Report to: Planning Committee 23rd November 2017

Report of: Deputy Director of Economic Development & Planning

Subject: WORCESTERSHIRE COUNTY COUNCIL STREETScape DESIGN GUIDE – BRIEFING PAPER FOR CONSULTATION RESPONSE (SECTION 4 – PLANNING FOR PARKING).

Recommendation

1.1 The Deputy Director of Economic Development & Planning recommends that the Planning Committee endorse the report as the basis for a formal consultation response.

Background

2.1 The Worcestershire Streetscape Design Guide (WSDG) has been published for consultation by the County Council.

2.2 The Worcestershire Streetscape Design Guide aims to provide guidance to those involved in development and regeneration schemes in Worcestershire, to support ambitious and exciting place making. It sets out the design and construction framework that Worcestershire County Council expects to enable timely adoption of transport infrastructure, with the aim of ensuring a robust, attractive and affordable public realm.

2.3 The Worcestershire Streetscape Design Guide includes the following chapters:

The Design Process
Layout and Connectivity
Planning for Parking
Planning for Passenger Transport
Planning for an Adoptable Public Streetscape

2.4 Consultation responses are required by 30th November 2017.

3. Comments of Deputy Director of Economic Development & Planning

3.1 Officers are generally supportive of the aims and interests that the Streetscape Design Guide seeks to promote. However, Officers do have particular concerns with the proposed parking standards for residential development set out in Chapter 4 - Planning for Parking. A copy is attached as Appendix 1. These are proposed to replace the current interim parking standards of the County Council published in 2016 that are currently used for Development Management decision-making purposes. A copy of the interim standards is attached as Appendix 2.

3.2 The opening paragraph of Chapter 4 of the WSDG states:

“On 27th March 2015, a Ministerial Statement updated Paragraph 39 of the National Planning Policy Framework, providing further detail on the application of parking standards.”

3.4 In fact, the Ministerial Statement referred to is the Ministerial Statement on Planning Measures by the then Secretary of State for Communities and Local Government, Eric Pickles MP, that was issued on 25th March 2015 regarding, amongst other matters, car parking in which it is stated that too many local authorities are

continuing to impose maximum standards for parking provision on new developments, despite these being abolished in 2011. The statement stipulates that the following text now needs to be read alongside paragraph 39 of the NPPF:

“Local planning authorities should only impose local parking standards for residential and non-residential development where there is clear and compelling justification that it is necessary to manage their local road network.” (My emphasis)

3.5 The proposed car parking standards for residential development are set out in paragraph 4.2. However, in direct contravention of the Written Ministerial Statement and the NPPF the proposed standards are considered to be unjustified and unsupported by any evidence and are unsupported by objective analysis; go against evidence of how sustainable development can be achieved and would serve to undermine positive changes in car ownership and driving trends, reducing health and wellbeing and increasing traffic and congestion in the long term. Furthermore, it is considered that the proposed standards would result in a consequent increase in air pollution, due to increased car travel, contrary to the clear obligation on the City Council to reduce air pollution in all areas of the city to within legal limits as soon as possible.

3.6 The proposed standards are also purported to relate to Houses of Multiple Occupancy. The City Council’s adopted HMO SPD includes parking standards from the previous City of Worcester Local Plan and, as such, are now superseded. Nevertheless, paragraph 5.17 of the HMO SPD states that:

‘Notwithstanding the parking provisions in Table 6, it is important for each planning application to be assessed on an individual basis, especially in relation to on-street parking. For example, on-street parking may be permissible on a wide and quiet street, but this may not be the case on a narrow street that already incurs problems with on-street parking. Tandem parking will not be acceptable due to the potential of fellow occupants not being available for the removal of obstructing vehicles, giving rise to on-street parking for convenience.’

3.7 The first sentence here is important. The second simply provides an example into how and where on-street parking may be convenient, but ultimately the views of the Highway Authority are important in the final decision for each individual application on its own merits. The interim parking standards help guide decisions on planning applications, but paragraph 5.17 of the HMO SPD clearly demonstrates that there may be cases

where an element of discretion is needed.

3.8 Moreover, the proposed standards would only relate to proposals for the construction of new Houses of Multiple Occupation and not to proposals for the conversion of existing premises. Existing site conditions are normally thought of as physical attributes, but planning permissions or development rights related to land may also be viewed as material considerations which have an important input to decision making. Such considerations are normally known as the “fallback position”, and failure to take into account development which could take place even if a current planning application were refused or an appeal dismissed, has been a matter upon which the courts have ruled on several occasions.

3.9 The fall-back factor is normally regarded as an important element in decision making which must be rationalised, although the weight to be given depends on the real likelihood of any fall-back actually being exercised in the event of refusal. Several cases demonstrate this point. In particular, in the case of *Burge v SOS & Chelmsford BC* 14/7/1987, the court held that the inspector should have considered the fall back situation if this was a real likelihood. In order for this argument to succeed it has to be shown that there is a reasonable likelihood of the fallback development being implemented if permission is denied.

3.10 With regard to applications for the conversion of residential properties to Houses of Multiple Occupancy such considerations apply. A refusal based on a lack of provision of car parking in accordance with the proposed standards could not be substantiated where there would be no increase in demand for car parking between the existing and proposed use of a property. For these reasons too I do not consider there would be cogent grounds to substantiate an objection on grounds relating to inadequate car parking to serve the conversion of properties to HMOs.

3.11 Indeed, this approach has been consistently applied by the Highway Authority and Local Planning Authority and accepted by the Planning Committee in relation to applications for HMO’s and other forms of development. There have only been two applications for HMOs that have been refused on car parking grounds

since the adoption of the Article 4 Direction and the HMO SPD:

- *The first was in relation to planning application P14A0575 for the conversion of 22A Barbourne Road from a 2 bed flat to a 3 person House of Multiple Occupation. In this case, whilst no car parking provision was available to serve the existing flat and none was proposed or available within the site to serve the proposed HMO, nevertheless the car parking requirements of the proposed HMO exceeded those of the existing flat;*
- *Planning application P15D0448 for the change of use from a 5-bed dwellinghouse (Use Class C3) to a 5-bed House of Multiple Occupation (Use Class C4) at 4 Hamilton Road. In this case, there was no capacity within the site to accommodate provision for any car parking. Planning permission was refused by the Planning Committee at the meeting on 21st January 2016, contrary to Officer's recommendation, on grounds that the proposal would lead to increased pressure for roadside parking on Hamilton Road and adjacent streets. A subsequent appeal was allowed. In reaching his decision the Inspector gave significant weight to the fall-back position and re-iterated the provisions of the Written Ministerial Statement of March 2015 as a significant material consideration.*

3.12 Further concerns relate to the relationship with the South Worcestershire Development Plan, both in terms of its aspirations to reduce car dependence and promote high quality design but also in terms of the densities required within the plan. There is a significant concern that the site allocations will not be able to deliver the number of homes required within the site specific policies and deliver the car parking standards required within this document. The reduced density required to achieve the parking standards proposed could increase house prices as the land per dwelling is higher and could also reduce the delivery of affordable housing through S106 as the return on schemes is reduced by delivering lower densities.

3.13 In terms of urban design, concerns are also expressed that achievement of the proposed car parking standards would be likely to have a detrimental impact on the visual and environmental quality of schemes and would have the potential to render layouts over-dominated by the car. The parking standards as drafted would compete with the whole ethos of place making, provision of Green Infrastructure and streetscape which is

	<p>promoted in the first part of the document. Additionally, the Design SPD which is due for adoption in January needs to be given consideration in this regard as the principles set out within it will be difficult to achieve with the level of parking required by the proposed standards.</p> <p>3.14 With regard to householder extensions the proposed standards could also have significant impacts. For example, the removal of boundary walls and the loss of front garden areas to accommodate the level of parking required with a consequent impact on and loss of neighbourhood character and residential amenity.</p> <p>3.15 There would also be significant implications on heritage assets, including development schemes within conservation areas where the provision of car parking in accordance with the proposed standards could have a substantial impact on the wider character, appearance and setting to the detriment of appraisal objectives.</p> <p>3.16 The intended status of the Design Guide, and in particular the proposed car parking standards, is also unclear as it would not form part of the current Local Development Framework for the City and South Worcestershire. As such, it would attract little, if any, weight as a material consideration for Development Management purposes. Clarity in this regard will therefore be required for the purposes of Section 70(2) of The Town and Country Planning Act 1990 and Section 38(6) of the Planning and Compulsory Purchase Act 2004.</p> <p>3.17 For the above reasons Officers raise objection to the proposed parking standards set out in Chapter 4 of the consultation document and request that Members endorse the consultation response accordingly.</p> <p>Wards: All Contact Officer: Alan Coleman –Tel: 01905 722523 Email:alan.coleman@worcester.gov.uk Background Papers: Worcestershire Streetscape Design Guide</p>	
Bromsgrove and Redditch District Councils	In advance of the consultation deadline of 30th November, please see the following brief comments on the Streetscape Design Guide on behalf of the strategic planning team at Bromsgrove and Redditch Councils. Please note this is an Officer expressed response only.	

	<p>Comment on para.2.4 (p.14) – “any development that is not in conformity with the adopted development plan” (would require a Transport Assessment and Travel Plan). Most development proposals will have some small level of conflict with the development plan. It therefore seems strange to require a TA/Travel Plan for e.g. a very small development with no particular traffic generation, just because it may conflict with a policy on an unrelated issue. Unless this requirement is only referring to not being in conformity specifically with transport policies within an adopted development plan – in which case could this be made more explicit / clear?</p> <p>Comment on para.4.2 (p.39) – the parking standards listed appear overly onerous and somewhat unrealistic. This is particularly the case concerning dwellings of 4 bedrooms and above. If these standards are proposed to deal with a specific issue, e.g. housing in multiple occupation (HMOs), this should be made more explicit in the document. This may allow flexibility for non-HMO residential proposals to demonstrate that meeting the upper end of these standards would be unnecessary in the context of trip generation / car ownership per household. There is also no reference to the evidence used to inform these standards.</p> <p>Appendix A (p.52) has Bromsgrove District Council address listed as previous offices at Burcot Lane, Bromsgrove. This should be changed to Parkside, Market Street, Bromsgrove, B61 8DA</p>	<p>WCC is comfortable with the explanations provided in the draft SGD document re TA/TP.</p> <p>Car parking standards will be reviewed as an outcome of this consultation</p> <p>Noted: The address will be updated.</p>
Worcestershire Wildlife Trust	<p>Thank you for giving us the opportunity to comment on this important document. As key partners in the Worcestershire Green Infrastructure Partnership we are very encouraged by the recommendations it makes in terms of Green Infrastructure (GI) and biodiversity and we look forward to further iterations of the guidance in due course. In light of our broad support for the tenor and intent of the guide we wish to make the following comments. These are referenced according to the relevant section of the document.</p> <p>Section 1.5 Philosophy.</p> <p>We are pleased to note the commentary on species and habitats in this section. We fully endorse the comments regarding the need for design to safeguard and create habitats, take appropriate steps to protect species, engage with professional ecologists and seek net biodiversity gain where possible. We also support the commentary on suitable management of the green features associated with transport corridors. Protection and enhancement of hedges and verges associated with roads can increase their contribution to our county-wide GI network and so we believe that promoting sensitive design and management of the roadside network is a fundamentally important part of the Design Guide’s role.</p> <p>Section 2.3. Integrating Infrastructure and Environmental Context.</p>	<p>Section 1.5 Thank you for your comments which are noted.</p>

	<p>We are pleased to support the commentary on integrating GI and in particular the aspiration to deliver improved GI through road improvements. This has significant potential to help restore previously fragmented ecological corridors and landscapes and therefore to deliver against many of the county's GI ambitions. In connection with this we note and support the comments under 'Streetscape Design and Wildlife Mitigation Measures' and we would recommend moving this section up the document to fall after trees and SUDS but before the historic landscape paragraphs. We think this would offer a more logical fit to the positive guidance given.</p> <p>We also welcome the guidance in relation to street trees. We agree that these features offer a range of significant benefits (including to wildlife) and so appropriate consideration should be given to increasing the tree stock wherever possible. We are pleased to see the sensible links to SUDS benefits set out in the guide and we hope this helps you to support positive designs in future.</p> <p>Environmental and Ecological Impact Assessment (beginning p10). We are pleased to endorse the guidance given in this section but we would recommend that you replace the term 'Phase One Habitat Survey' with the more up-to-date 'Preliminary Ecological Appraisal' as this would be more in line with current biodiversity practice.</p> <p>Section 3.5. Landscaping. We note the very positive commentary presented in paragraph one of this section in relation to trees (and other relevant features) and we support the stance taken.</p> <p>Section 3.6. Street Lighting. We welcome the bullet point relating to minimising environmental impact. This is a significant issue in some places, and for some species in particular, and so careful attention needs to be paid to this element of design. With that in mind it may be worth adding wording to the effect that the environmental impact as it relates to wildlife should be informed by appropriate survey information as set out previously in section 2.3.</p> <p>Sustainable Urban Drainage Systems (p21). We note the positive commentary set out in this section and we support the use of 'soft' SUDS wherever possible. In relation to this we are concerned that the use of SUDS may on occasion be compromised by the adoption rules set out earlier in the document. It would therefore be extremely helpful to investigate more flexible approaches, particularly in relation to large schemes where a variety of SUDS adoption mechanisms may come into play. We would be pleased to discuss this issue if that would be helpful but in the meantime it</p>	<p>Section 2.3: These comments will be considered and the document revised as appropriate.</p> <p>Noted.</p> <p>Noted and will update.</p> <p>Section 3.5. Noted.</p> <p>Section 3.6. This is covered by planning legislation.</p> <p>WCC welcomes SUDS but does not currently adopt SUDS systems. WCC only accepts adoptable highway drainage that connects directly into systems that are maintained by a</p>
--	--	---

	<p>would be useful to consider this matter in relation to sites with GI Concept Statements in progress (through the Worcestershire GI partnership) as these sites may offer good test cases for alternative approaches and your engagement would be very helpful.</p> <p>Design criteria for streets (beginning in table p32).</p> <p>We are pleased to support the specifications set out for Landscaping and Biodiversity in Main Streets. We would suggest that the specification for biodiversity be repeated for residential distributors as well, as it is for residential streets. Where relevant the priorities for enhancement should be guided by the Worcestershire GI Strategy.</p> <p>Design details for active travel routes (table p37).</p> <p>We note and support the specification for landscape and biodiversity set out in the table. Where relevant priorities for enhancement should be guided by the Worcestershire GI Strategy.</p> <p>Design details for industrial access roads (table on p38).</p> <p>We note and broadly support the specifications for landscape and biodiversity set out in this table. Given the strong overlap in guidance here it may be helpful to blend the Landscape and Biodiversity sections together as has been done elsewhere. We recommend that where relevant the priorities for enhancement should be guided by the Worcestershire GI Strategy. We note the positive commentary on SUDS away from the adoptable highway and this is one example of where the drainage adoption strategy may need to be more flexible than is currently the norm so that locally adopted drainage networks can receive water from the highway without causing adoption issues for the highways department.</p> <p>I hope that these comments are of use to you but please do not hesitate to contact us if we can offer clarification or more information. We would be pleased to discuss any of the issues we've raised if that would be helpful.</p>	<p>statutory body.</p> <p>Design criteria for streets: This section will be amended and the Worcestershire GI strategy will be referenced if appropriate.</p> <p>Active Travel Routes; Noted</p> <p>Industrial Access Roads. This section will be amended and the Worcestershire GI strategy will be referenced if appropriate. WCC Development Control to liaise with the Strategic Planning team.</p>
Sanctuary Group	<p>Sanctuary Group welcomes Worcestershire County Council's (WCC) provision of guidance to all those involved in development and regeneration schemes and the opportunity to comment on the Streetscape Design Guide during the consultation period. Ensuring an appropriate and appealing streetscape is a key principle of our design process. Our streetscape designs aim to incorporate an attractive public realm and sufficient green infrastructure, however we believe these key design features will be jeopardised by the introduction of WCC's proposed parking standards and conflict with other local planning policies.</p> <p>WCC's design guide identifies a common goal amongst developers "to avoid isolated, car-dominated housing</p>	<p>Thank you for your comments which all refer to car parking standards. These standards will be reviewed as an outcome of this consultation</p>

estates with limited identity causing gradual attrition of green space”, yet the proposed change to parking standards will make it increasingly difficult to prevent this. The proposed inclusion of 1 car parking space per bedroom in all units types (up to a 5 bed house), is far higher than the current need for parking in the Worcestershire area. In 2014, a survey conducted by Royal Mail on car ownership was completed on the WR7 & WR6 areas of Worcestershire, the average amount of cars per household was 1.95 and 1.93 respectively. In view of the fact that 85% of properties in these areas are 2 bed terraced properties or bigger, the current demand for parking does not match the proposed supply.

In the conception of a new scheme, SWDP 21 (Design) ensures that developers and architects consider the design relationship between the proposed units and their surroundings. It is a pre-requisite of the planning process that development proposals complement the character of the area. Whilst we acknowledge the importance of providing adequate car parking (on the basis of evidence), poor design and car dominated layouts detract from the finished product, whilst having a negative impact on land values, property prices and the environment in general.

Compliance with the proposed changes will result in the reduction of green infrastructure in every newly designed development, due to the amount of land required for car parking (including a minimum of 1 visitor space per 5 dwellings). SWDP 38 (Green Space) outlines the importance of retaining public open space and green infrastructure within new developments. Providing attractive and functional open space is an essential component for high quality of housing, this will be compromised by these car parking standards. In addition to this, we believe it should be allowable that a garage constitutes one of the spaces (assuming they are sized correctly) to be provided under these new planning obligations. Garages are now required to have minimum dimensions of 3.2m by 6m, the same as the proposed new dimensions for residential car parking spaces and yet it is not permissible that this serves as an allocated parking space.

We acknowledge the environmental and social rationale for encouraging parking-free developments where appropriate, however the positive outcomes achieved will be vastly outweighed by the cumulative effects of these proposed parking changes in none-parking-free developments. SWDP1 (Sustainability) identifies the social role of strengthening the distinctive and cultural qualities of towns and villages. The inclusion of parking standards to the proposed degree will lessen the traditional character seen in many Worcestershire towns, villages and hamlets, whilst damaging the natural landscape. The provision of 5 car parking spaces, plus a garage for a 5 bed house is not representative of sustainable development.

	<p>We welcome the provision that it may be acceptable on town and city centre sites not to provide car parking. We would suggest that in urban settings, where developments are highly sustainable with excellent links to public transport and amenities within walking distance, the inclusion of any onerous parking standards would result in an inefficient use of land. Additionally, even in non-urban settings a well designed scheme that makes use of existing local infrastructure and amenities will be adversely compromised by the proposed standards and could discourage use of sustainable means of getting around.</p> <p>Lastly, local authorities need to continue their 5 year supply of housing land. In order to do this, maximising unit numbers on allocated and newly consented sites will assist in the delivery of higher volumes of affordable and open market housing. SWDP 13 (Effective Use of Land) identifies the need to use developable land (a finite resource) effectively and efficiently, however the increased parking standards will mean that site density is decreased to cater for it. Combined with policies such as 40% green infrastructure the physical coverage of new development on any piece of land could become extremely inefficient and result in poor residential design. Ultimately the outcome of this is that more pressure is placed on the natural landscape and countryside as more land is required to achieve the same amount of units, or in some cases housing units will have to be sacrificed to accommodate for the additional parking. In terms of the latter, this is also likely to cause a viability issue on some developments which may need higher unit numbers to ensure feasibility.</p> <p>Where new developments aim to comply with SWDP policies e.g. 40% affordable housing and 40% green infrastructure as well as high levels of financial contributions under s106 agreements, the additional requirement to meet onerous parking standards will undoubtedly increase the number of viability assessments submitted to the local authority.</p> <p>As a developing housing association and in discussion with our professional design consultants Sanctuary would advocate to a review of these proposed parking standards to reduce the requirements to a more deliverable level.</p>	
Worcester Civic Society	<p>Generally we welcome the publication of a document to provide further guidance to developers in achieving high quality design for schemes within the county. The overall sentiment and aims of the document are laudable, particularly commitments to the public realm, biodiversity, green space and trees and also the local character of Worcestershire. However, we are concerned that within the detail of the document there seems to be little or no attention given to the historic environment and it's character. Whilst there is general reference to Worcestershire's Landscape Character And Historic Landscape Characterisation, there is little in the detailed design guidance as to how this should be used.</p>	<p>WCC is comfortable with the explanations provided in the draft SGD document relating to historic environment and character.</p>

	<p>Additionally, we do not feel that this reference alone is robust enough to encourage highways design to respect the detailed historic character and features of areas. All too frequently, detail important to the historic character and grain of an area is removed in new highways schemes. There needs to be much clearer guidance on how details can be retained and how local detail and character can be used as a foundation for new development. There is need to be more explicit reference to the Historic England 'Streets for All' guidance which has recently been out for consultation. It is disappointing ton note that for most roads macadam only is specified as the preferred material, this does not seem to offer scope to consider historic materials or other modern alternatives that are more in character with existing historic streetscapes. This is an opportunity for Worcestershire highways to be right up to date with its guidance and improve its track record in this area.</p> <p>It would also be helpful if there was clearer reference in the document in terms of how it relates to the recently adopted LPT4 and also the SWDP Residential Design Guidance that was recently out for consultation. It is important that all these documents work constructively together in terms of their aims and guiding details.</p>	<p>SDG is part of the Local Transport Plan compendium of documents.</p>
<p>Phil Jones Associates</p>	<p>Consultation Response to the Worcestershire Streetscape Design Guide The Worcestershire Streetscape Design Guide (WSDG) has been published for consultation by Worcestershire County Council (WCC). The WSDG seeks to provide 'guidance to those involved in development and regeneration schemes in Worcestershire, to support ambitious and exciting place making. It sets out the design and construction framework that WCC expects to enable timely adoption of transport infrastructure, with the aim of ensuring a robust, attractive and affordable public realm.' The WSDG includes the following chapters:</p> <ul style="list-style-type: none"> • <i>The Design Process;</i> • <i>Layout and Connectivity;</i> • <i>Planning for Parking;</i> • <i>Planning for Passenger Transport; and</i> • <i>Planning for an Adoptable Public Streetscape.</i> <p>Phil Jones Associates (PJA) is a specialist transport planning and urban design consultancy with a significant amount of experience working on development sites and transport infrastructure within Worcestershire and the surrounding area. Our managing director, Phil Jones, was part of the team that produced Manual for Streets (MfS) and Manual for Streets 2 (MfS2) and he has carried out research for Government and local authorities on residential car parking and cycling infrastructure design. We therefore feel well placed to comment on the</p>	<p>Thank you for your extensive response.</p>

	<p>content of WSDG.</p> <p>In addition to the views of PJA, this response is produced on behalf of a number of developers working within Worcestershire, including Persimmon Homes, St Modwen and Bloor Homes.</p> <p>Overview</p> <p>PJA and the developers are generally supportive of the aims and philosophy behind the WSDG. The document reinforces the messages of MfS and MfS2, that coordinated design processes are essential for successful development.</p> <p>The general philosophy of both WSDG and the MfS documents are not to dictate absolute standards and requirements on development and street design, but to allow a level of flexibility and interpretation on a case by case basis. However, both PJA and the developers do have serious concerns with the proposed parking standards for residential development as set out in Chapter 4 of WSDG.</p> <p>The remainder of this document provides comments (where necessary) on the content of WSDG.</p> <p>Layout and Connectivity – Design Details of Active Travel Routes</p> <p>Section 3.16 of the WSDG sets out the specification for Active Travel Routes. It is understood that Active Travel Routes will be shared by cyclists and pedestrians with markings on the routes separating the two modes.</p> <p>PJA would recommend that WCC review the ‘shared-use’ specification for Active Travel Routes. We would point to the recently published Oxfordshire Cycling Design Standards (OCC, 2017)¹ as a preferable and more progressive standard for cycling. The following quotes from the Oxfordshire standards address shared paths: “Shared-use footways alongside spine roads should not be provided, only pedestrian footways. Priority for cycle users at side road junctions is critical. Stepped cycle tracks... or completely segregated cycle lanes are to be provided, not cycle lanes...” – (OCC, 2017, pg. 11)</p> <p>“In general, shared paths should not be divided with painted lines. Where these have been divided in the past, they are often ignored by both pedestrians and cycle users and provide little benefit.” - (OCC, 2017, pg.24)</p> <p>PJA recommends that separate provision for both cyclists and pedestrians should be regarded as preferential to shared paths and shared-use footways.</p> <p>Planning for Parking – Proposed WSDG Parking Standards</p> <p>The proposed parking standards for residential development are set out in section 4 of the WSDG. We wish to raise serious concerns with the proposed parking standards and raise an objection to the adoption of these standards as part of the WSDG.</p> <p>The proposed car parking standards are considered to be onerous, contrary to the NPPF, unsupported by an evidence base and wholly unjustifiable.</p> <p>Paragraph 4.1 of the WSDG states:</p> <p>“On 27th March 2015, a Ministerial Statement updated Paragraph 39 of the National Planning Policy Framework,</p>	<p>This will be reviewed and the document will be revised as appropriate.</p> <p>Car parking standards will be reviewed as an outcome of this consultation</p>
--	--	--

providing further detail on the application of parking standards.”

The Ministerial Statement on Planning Measures by the Secretary of State for Communities and Local Government referred to here, stated that too many local authorities are continuing to impose maximum standards for parking provision on new developments, despite these being abolished in 2011.

The statement stipulates that the following text now needs to be read alongside paragraph 39 of the NPPF: “Local planning authorities should only impose local parking standards for residential and non-residential development where there is clear and compelling justification that it is necessary to manage their local road network.”

As a starting point, a comparison of the proposed standards with the previous LTP3 maximum standards and the more recent WCC Interim minimum parking standards has been undertaken. The results are summarised in Table 1

Table 1: Comparison of WSDG parking standards with previous standards

Type of Dwelling	LTP3 (2011) WCC Maximum Parking Standards	WCC (2016) Interim Minimum Parking Standards	SDG (2017) Minimum Parking Provision
1 Bedroom Flat*	1 Car Space, 2 Cycle Spaces	1 Car Space, 1 Cycle Space	1 Car Space, 1 Cycle Spaces
2 Bedroom Flat *	1 Car Space, 2 Cycle Spaces	2 Car Spaces, 2 Cycle Spaces	2 Car Spaces, 2 Cycle Spaces
1 Bed House	1 Car Space, 2 Cycle Spaces	2 Car Spaces, 2 Cycle Spaces	Minimum 2 Car Spaces
2 Bed House	1 Car Space, 2 Cycle Spaces	2 Car Spaces, 4 Cycle Spaces	Minimum of 2 Car Spaces
3 Bed House	2 Car Spaces, 4 Cycle Spaces	2 Car Spaces, 4 Cycle Spaces	Minimum of 3 Car Spaces
4 Bed House	2 Car Spaces, 4 Cycle Spaces	3 Car Spaces, 6 Cycle Spaces	Minimum of 4 Car Spaces
-	Thereafter, 3 spaces + 1 space per additional bedroom > 5 E.g.:	Thereafter, minimum provision is 3 Car Spaces, 6 Cycle Spaces	Thereafter, 0.5 for each additional bedroom E.g.:
5 Bed House	3 car spaces, 6 cycle spaces	-	Minimum of 4.5 Car Spaces (5)
6 Bed House	4 car spaces, 6 cycle spaces	-	Minimum of 5 Car Spaces
7 Bed House	5 car spaces, 6 cycle spaces	-	Minimum of 5.5 Car Spaces (6)
8 Bed House	6 car spaces, 6 cycle spaces	-	Minimum of 6 Car Spaces
9 Bed House	7 car spaces, 6 cycle spaces	-	Minimum of 6.5 Car Spaces (7)
10 Bed House	8 car spaces, 6 cycle spaces	-	Minimum of 7 Car Spaces

*with communal parking area

The comparison shows a marked increase in the required parking spaces, particularly around for 2/3/4 bed house which form the majority of residential developments. This requirement would have a significant impact on development viability, and does not support the creation of sustainable placemaking, as endorsed by NPPF

and MfS.

The remaining comments relate to the proposed parking standards in the context of:

- *Development masterplanning/layouts;*
- *On-street parking provision;*
- *Dwelling size; and*
- *Other parking.*

Development Masterplanning/Layouts

The proposed parking standards would render development layouts unviable and undeliverable. There would be increased pressure on dwelling densities and public open space, and a number of common developer house types would be obsolete.

Notwithstanding the viability and delivery point, the increased parking standards will ultimately create a streetscape which is unacceptable to the urban designers at the local planning authorities, where parking areas and garaging will be completely out of scale with the housing. This therefore creates a clear conflict when designing layouts and in determining applications.

Furthermore, the environmental and visual amenity of residential developments would also be severely impacted, as a result of car dominated layouts. This is contrary to evidence of how sustainable development is achieved as set out in NPPF and MfS.

On-Street Parking Provision

WSDG accepts that visitor spaces are permitted on-street, however states that one space per five dwelling should be provided off-street. It is accepted that an over provision or reliance on on-street parking can lead to congestion and accessibility problems, however MfS accepts that on-street parking does make a valuable and flexible contribution to the overall supply of parking and need not be problematic.

Good street design can maximise the use of areas specifically designed for static vehicles while reducing the likelihood of indiscriminate and obstructive parking (CIHT, 2012).

In major new development areas, it may be appropriate to design for some of the parking demand (both resident and visitor spaces) to be accommodated on-street in accordance with MfS. Where this is the case, the requirement for off-street spaces may be reduced accordingly.

Dwelling Size

We note that the number of bedrooms within a dwelling is used as the sole indicator of dwelling type. The sole use of bedrooms as a proxy for dwelling type is a crude methodology, and takes no account of the varying demographic profile for different areas within Worcestershire and the resultant demand for parking.

We would therefore suggest adopting an evidence based parking calculator such as the DCLG methodology (taken from 'Residential Car Parking Research' paper, 2007), which considers car parking based on car ownership, type of tenure of dwelling and dwelling size. This is considered to be a more appropriate method of determining parking requirements. A copy of the DCLG paper is appended to this letter.

Other Parking

Shared Drives, Courtyards and Unallocated Parking

PJA is familiar with "Car Parking, What Works Where" (English Partnerships) which is listed in Section 4 of the WSDG as a reference document. English Partnerships references work by Alan Young and Phil Jones on allocating car parking spaces.

English Partnerships state clearly that allocating spaces makes car parking less efficient. Therefore, shared drives and courtyard parking areas with unallocated parking are more efficient and require fewer parking spaces per dwelling. However, this is not currently referenced or acknowledged in the WSDG. It is therefore recommended that WCC review the WSDG in the context of unallocated parking (also considered in the DCLG paper).

Garages and Ultra Low Emission Vehicle Charging Point Provision

In the WCC interim parking standards published in 2016, garages were considered as additional parking spaces within the curtilage of a dwelling, where Ultra Low Emission Vehicle (ULEV) charging points were provided. Having reviewed the WSDG this appears to no longer be the case.

It would be useful to have clarification as to why this is, especially as the WSDG goes on to say that WCC: "strongly encourages all properties to be equipped with ULEV charging points."

PJA believe that WCC should re-consider allowing garages to be included as parking provision where a garage of suitable specifications with a ULEV charging point is supplied.

Summary

PJA and the developers we represent are generally supportive of the aims and philosophy behind the WSDG. The document reinforces the messages of MfS and MfS2 that coordinated design processes are essential for successful development. However, we strongly object to the proposed parking standards for residential development set out in Chapter 4 of WSDG and make the following comments to the Transport Strategy Team at WCC:

- *PJA considers that separate provision for both cyclists and pedestrians is preferential to shared paths and shared-use footways;*
- *The proposed parking standards in the WSDG as drafted are onerous and wholly unjustifiable, without an evidence base, and would render development layouts unviable, undeliverable and would create*

	<p><i>conflict between urban designers at local planning authorities;</i></p> <ul style="list-style-type: none"><i>• The WSDG does not currently consider that good street design can accommodate on-street parking and reduce the requirement for off-street spaces - contrary to MfS;</i><i>• The use of bedrooms as the sole proxy for dwelling type is a crude methodology, and gives no flexibility for different areas within Worcestershire;</i><i>• WCC should re-consider allowing garages to be included as parking provision where a garage of suitable specifications with a ULEV charging point is supplied; and</i><i>• An evidence based approach to parking provision such as the DGLG research paper methodology (2007) is considered more appropriate.</i>	
--	---	--



Streetscape Design Guide



Contents

1.	Introduction	5
2.	The Design Process	8
3.	Layout and Connectivity	15
4.	Planning for Parking	39
5.	Planning for Passenger Transport	42
6.	Planning For An Adoptable Public Streetscape	44

Making Places In Worcestershire

Welcome to the Worcestershire Streetscape Design Guide.

This document provides guidance to those involved in development and regeneration schemes in Worcestershire, to support ambitious and exciting place making.

It sets out the design and construction framework that Worcestershire County Council expects to enable timely adoption of transport infrastructure, with the aim of ensuring a robust, attractive and affordable public realm.

The Streetscape Design Guide should be read in tandem with the Worcestershire Streetscape Infrastructure Specification, which sets out the construction standards for adoptable highway.

Both the Streetscape Design Guide and the Streetscape Infrastructure Specification will be reviewed periodically to ensure that they accurately reflect contemporary policy and guidance, received feedback and changes to working practice. Both documents will be made accessible, exclusively online on the County Council's website:

www.worcestershire.gov.uk

Users are advised to make a note of the version number, date and time of access, and reference this in any dialogue with the County Council.

If you would like to provide feedback on either document to be included in the next planned review, please contact us at: transportstrategy@worcestershire.gov.uk or write to us:

Transport Strategy Team
County Hall,
Spetchley Road, Worcester,
Worcestershire,
WR5 2NP

1. Introduction

1.1 Background

Worcestershire has it all; each era of history from the prehistory to the present day has left a lasting mark on the county, leaving a rich mix of attractive landscapes and streetscapes. It is the quality of both the natural and historic built environments which supports (in part) Worcestershire's vibrant visitor-focused economy, whilst providing a cherished environment in which to live and work.

In the 1930s, 40s and 50s, historic urban areas grew to cater for the aspirations of residents, resulting in a number of larger housing estates, often with attractive green infrastructure and services to support a higher quality of life.

However, in the latter half of the twentieth century, there have been several examples of poorly planned development, which has resulted in relatively isolated, car-dominated estates with limited identity and ugly modernist buildings in central areas, as well as gradual attrition of green space in our urban areas, which detracts from the quality of the historic built environment.

These aspects provide both a unique and exciting opportunity to prospective developers, to integrate new development into the existing built environment in a way which respects heritage assets and learns from the mistakes of the past.

Worcestershire challenges prospective developers to create attractive, accessible communities which deliver a high quality of life; places where people want to live, work and invest. To achieve this, the following aims for the consideration of transport infrastructure and services in new development:

- Ensure that new development relates to its context, with transport links integrating seamlessly within the built and natural environment to the benefit of new residents, adjacent occupiers and existing communities alike;
- Ensure that transport infrastructure is designed to encourage alternatives to car use by providing convenient, safe and attractive provision for pedestrians, cyclists and passenger transport to key trip attractors, permeating both new developments and existing communities;
- Ensure that the design of streets within new developments continues to accommodate necessary vehicle movement, and facilitate car parking, but seeks to encourage traffic speeds of 20mph or less;
- Ensure that new development is elegant and intuitive in its approach, providing easy and safe access between highways, car parking areas and dwellings for everyone, including those with visual and mobility impairment;
- Ensure that new developments are designed to provide a safe, secure and sustainable environment, including embracing sustainable green infrastructure throughout the design process, recognising the central role that such infrastructure plays in delivering liveable, attractive communities;
- Secure a movement network which is adoptable at a reasonable cost, with an extensive design life and proven low maintenance costs.

1.2 The Streetscape Design Guide in Context

The Streetscape Design Guide is written to provide necessary local detail, and should be considered in conjunction with national guidance including the Manuals for Streets 1 and 2 (referred to in this document as Manual for Streets), the Design Manual for Roads and Bridges, as well as a wide range of best practice documents covering different aspects of development design and protection of valuable natural resources. The SDG seeks to strike the right balance between allowing designers the flexibility needed to create distinctive high quality developments, whilst also ensuring that planned transport infrastructure is resilient, stands the test of time and is cost-effective to maintain.

The Manual for Streets reinforces the message that a coordinated design process is essential for successful development. Worcestershire County Council strongly advocates this approach and supports the early establishment of development teams to promote proactive joint working.

1.3 Management of the Transport Network

Worcestershire County Council is the Local Highway Authority for Worcestershire, as set out in statute law. It is responsible for managing the following aspects of the transport network:

- All public highways with the exception of the Trunk Road network, which is managed by Highways England (see below);
- Public Rights of Way;
- On-street car parking;
- Some public off-street car parking (where associated with Council-run facilities such as Country Parks);
- Some bus services;
- Community Transport schemes.

Worcestershire County Council's Development Management Team is responsible for coordinating the Local Highway Authority's response to consultations received on planning applications and new development proposals in respect to highways and transport issues. The Development Management Team can advise designers on a variety of matters, including responsibilities for transport infrastructure.

Worcestershire County Council's Sec. 38/278 Development Control Team is responsible for managing the delivery of developer led schemes for the creation of new highways and improvements to the existing highway network, involving technical checking and approval of submissions and supervision and inspection of the site works. The Sec. 38/278 Team can advise designers on a variety of detailed highway design matters.

1.4 Application of Design Standards

The Manual for Streets 2 and the Design Manual for Roads and Bridges provide a framework for the design of new transport infrastructure and are the default resources for priority junctions and accesses.

The Design Manual for Roads and Bridges sets out design standards for the carriageway and this should be used as the starting point, however, a road will always be situated within an existing environment. As a result, it is not enough to consider the carriageway in isolation. There are many more guidance documents to support designers and land owners to produce highway infrastructure plans which respond positively to the surrounding environment and to the users of the space. This SDG provides the signposting to these documents.

In the event of confusion, Developers are encouraged to make contact with Worcestershire County Council, as the Local Highway Authority, to obtain clarification in writing.

1.5 Philosophy

Worcestershire County Council welcomes creativity in the approach to designing highway infrastructure. Innovative designs which challenge the status quo whilst still meeting requirements set out in relevant statutory legislation and non-statutory guidance will be considered on a case by case basis. However, it is strongly advised that any proposals are discussed at an early stage with the County Council, to avoid prolonged inefficient dialogue later in the planning process. Any such designs will need to be supported by evidence to show how these designs meet relevant guidance and consider the safety of users, and any maintenance implications whilst safeguarding and supporting the creation of natural habitats for wildlife.

New highways and modification to existing infrastructure can cause major impacts to protected and declining species via severance and destruction of valuable habitats. Early engagement with an Ecological Consultant is key to reducing costly delays by incorporating mitigation into highway design and ensuring developments comply with the necessary legislation and best practice (reference Appendix C). National policy requires that all proposals should aim to achieve a “net gain” in biodiversity and be integral to the scheme. Schemes that cannot achieve this will need to demonstrate why it has not been possible.

In addition to allowing people and goods to travel from one location to another, the transport network caters for a much wider range of activities, particularly in urban areas. At any one time in a typical urban street, it is quite possible to see a mixture of people using the route on foot, cycling, or driving a mobility scooter, a car, a van, or a lorry, in going about their daily business. All such users are using the street as a link; a means of getting from one place to another. Similarly, wildlife may use the hedgerows, trees and

grassland in verges along the carriageway as undisturbed means of dispersing to larger areas of naturalised habitat forming important wildlife corridors or stepping stones. For example wildflower verges currently provide invaluable stepping stones for declining pollinators, so the permeability of the landscape should be maintained and enhanced by new development and act to support national initiatives such as [National Pollinators Strategy](#).

Furthermore, many such streets also accommodate other functions. For example, the street may be used by people to host events, markets, demonstrations, social gatherings, somewhere to eat and drink and for sightseeing; these functions are all uses of the street as a place. Additionally, these road verges may, due to their undisturbed nature, have intrinsic value for wildlife by providing opportunities for overwintering, breeding, foraging and taking refuge, many within the county being designated as Roadside Verge Nature Reserves (www.worcestershire.gov.uk). Even where a verge is not of immediate biodiversity value, they can provide a critical ‘stepping-stone’ function to surrounding sites of nature conservation value. With appropriate design and management the verges can serve to link local populations of wildlife throughout the county.

Consideration of a route’s link and place function is an essential part of the development process, which directly contributes towards creating successful and attractive spaces which also benefit wildlife. Worcestershire County Council suggests that Developers specifically consider this in the context of statutory legislation and non-statutory guidance (reference Appendix C), and agree proposals with the DM team at an early stage of the development process.

2. The Design Process

2.1 Introduction

Designing highways has changed. It is no longer the common practice to make vehicles the dominant feature of a road. This message is echoed throughout central government design guides and documents. The 'Manual for Streets' notes significant flaws in past road hierarchies stating that:

“In the past, road design hierarchies have been based almost exclusively on the importance attributed to vehicular movement. This has led to the marginalisation of pedestrians and cyclists in the upper tiers where vehicular capacity requirements predominate. The principle that a road was primarily for motor traffic has tended to filter down into the design of streets in the bottom tiers of the hierarchy... Streets should no longer be designed by assuming 'place' to be automatically subservient to 'movement'”
(P18: Manual for Streets, DfT, 2007)

The Department for Transport's Manual for Streets goes on to state that the design of any new road or improvements to an existing road should follow a user hierarchy as set out below:

	Pedestrians
	Cyclists
	Public Transport Users
	Specialist Service Vehicles (e.g. emergency services, waste etc.)
	Other Motor Traffic

There is ever evolving guidance for the wide variety of road types. The following list some of the most commonly used guidelines for highway design:

- Design standards for highway layouts are prescribed in Design Manual for Roads and Bridges. It is important to note that Design Manual for Roads and Bridges has been prepared for

Trunk Roads and may not always be appropriate low speed urban and local roads.

- Manual for Streets 1 and 2 (Manual for streets) aims to transform the quality of road design, breaking away from the standardised, risk-averse approaches. It provides designers with advice on how carriageway widths, alignments and cross-sectional details can be designed in a way that better respects local context and the needs of users other than motor traffic.
- 'Traffic in Villages – A toolkit for communities' is a publication produced by Dorset AONB Partnership and is a toolkit to help Parish Councils and local groups understand the core principles for reducing speed, improving safety and retaining local distinctiveness. The Toolkit extends the key principles of Manual for Streets and Manual for Streets 2 to support rural communities coping with the impact of traffic in villages and small towns of which Worcestershire is home to many.

2.2 Further Guidance

A flow chart, which sets out the various stages of the design process is available for download on the Worcestershire County Council website: www.worcestershire.gov.uk/SDG.

'Street Design for All – An update of national advice and good practice' is a well-regarded document on street design with an emphasis on the public realm. Produced by PRIAN it is commended for use by the DfT (Department for Transport) and the CIHT (Chartered Institute of Highways and Transportation). The section on road safety is particularly useful for understanding driver perception and should be read and understood by all designers involved in highway design.

Beyond the carriageway, for urban and rural areas alike, the integration of the footway user along the county's roads must be given high consideration and importance in the development of designs. This is the place of most activity from non-motorised users. Conflicts can arise between pedestrian flows and desire lines, street furniture, cycleways, crossing points.

For high pedestrian footfall areas such as along high streets, [Pedestrian Comfort Guidance for London \(2010\)](#) provides further guidance on the integration of footway users with the highway. It describes the footway as having four different zones, these being the: Kerb zone, Furniture zone, Footway clear zone and the Frontage zone. It explains how to collect data to determine the configuration of the footway zone for each development type through a comfort assessment in order to achieve appropriate footway widths for users of the footway.

2.3 Integrating Infrastructure and Environmental Context

Consideration of the environmental context of the site will provide many opportunities for enriching the streetscape experience.

Green Infrastructure

Integration of green infrastructure has proven health, environmental and economic benefits. Worcestershire County Council published its Green Infrastructure Strategy in 2013 and its vision is that:

Worcestershire's high quality natural and historic environment will fulfil a multi-functional role. It will enable sustainable growth of the economy, improve the community's experience of natural and historic places, deliver benefits to health and well-being and underpin the county's resilience to climate change.

Proposals for investment in infrastructure must incorporate green infrastructure as an integral part of the development or to replace traditional infrastructure approaches with green infrastructure solutions where retro-fit improvements to highways are planned.

Figure 11 of Worcestershire's Green Infrastructure Strategy sets out the principles to consider when integrating green infrastructure within new development.

Trees In The Streetscape Environment

Trees found within the urban environment can make a significant contribution to promoting economic value, a sustainable integrated infrastructure approach, climate change adaptation and human health and well-being. A significant part in absorbing noxious emissions from combustion. The increasing spatial flexibility of streetscape design context should prompt a design approach that explores greater diversity in the tree assemblage. There is a logic (not least visual) to planting single species street trees in Avenues and Boulevards. By contrast, with the street there is an opportunity to introduce a range of species of different structural characteristics and heights to further soften the overall character and create temporal view points for people walking along the Street. Varying height, structure and the appearance of trees (leaf colour, bark texture and flowering season) can create a greater sense of depth and filtered views, therefore, adding to the experience of these particular places that sets them apart from more formal streetscapes.

It is commonly perceived by local authorities and developers that the installation and maintenance of trees requires high capital investment and high maintenance costs. Trees in Hard Landscape A Guide for Delivery (TDAG) is a publication commended by the Minister of State for Transport. It explains the collaborative process to be adopted in designing with trees, provides technical design solutions and species selection criteria. The aim of the guidance is to ensure the right tree and right technical design solution is included in street design. The process and installation and maintenance need not be costly if integration and adequate provision for trees in the planning and adoption processes is secured from the outset.

Worcestershire attaches great importance to the contribution that suitable tree planting can make to our environment. Existing trees should be integrated within any new development proposals. It is important to engage an arboriculturist to carry out a tree survey in accordance with the British Standard BS: 5837 2012 Trees in relation to design, demolition and construction – Recommendations at the commencement of developing plans of any new highway infrastructure. This will establish the health, longevity, root zone and tree works required of existing trees and should aid in the decision making of any road alignment. The removal of trees should be a last resort and should only occur following a collaborative process to determine that a tree's retention is impossible.

Trees And Sustainable Drainage Solutions (SuDS)

The development of the design details for the street should incorporate water-sensitive design. The design needs to ensure:

- There is allowance for some precipitation to reach the tree-rooting environment,
- Full advantage of the capacity of the trees rooting environment is taken into account to help manage stormwater runoff, and

- Trees are explicitly integrated in the surface water drainage plan for the site in accordance with SuDS best practice.

Further guidance on the delivery of SuDS can be found in The SuDS Manual (C753). The updated SuDS Manual incorporates the very latest research, industry practice and guidance. In delivering SuDS there is a requirement to meet the framework set out by the Government's 'non statutory technical standards' and the revised SuDS Manual complements these but goes further to support the cost-effective delivery of multiple benefits.

Environmental And Ecological Impact Assessments

Some of Worcester's scarcest species have populations reliant on the careful management of the county's highway networks, for example urbanised and peri-urban run-off which can negatively affect white clawed-crayfish and water vole populations. Appropriate levels of ecological assessment should be carried out to work as an iterative process with the development of any streetscape design. Where necessary Environmental Impact Assessment (EIA) should be undertaken by the promoters of certain types of development to identify and assess the significant environmental effects of certain public and private projects before development consent is given.

The EIA Directive specifies the process by which statutory EIA should be undertaken. All developments listed under Annex I of the EIA Directive must be subject to statutory EIA in every case. Developments listed under Annex II may need to be subject to statutory EIA depending on whether the proposal qualifies as a 'relevant project' (that is, if it meets certain criteria and thresholds defined in Annex II) and gives rise to significant effects. The potential to generate significant environmental effects are described within Annex III of the EIA Directive.

In England and Wales, the requirements of the EIA Directive with regards to road projects has been transposed into UK statute by Section 105 of the Highways Act 1980 ,as amended by the Highways (Environmental Impact Assessment) Regulations 2007.

Developments classified as relevant under the EIA Directive Annex II will therefore need further assessment in accordance with the Design Manual for Roads and Bridges Volume 11, to establish whether significant environmental effects are likely to arise during its construction and operation. The environmental assessment for developments should be undertaken in accordance with the Design Manual for Roads and Bridges Volume 11, and any relevant Interim Advice Notes (IAN).

To inform the baseline of these assessments Worcestershire County Council resources and datasets should be referred to with specific focus on the Green Infrastructure Framework 2 report which will assist in establishing the baseline conditions at a sub-regional context and provides guidance on the process of carrying out Ecological Impact Assessment (EclA). Worcestershire County Council provides and maintains an extensive mapping data resource at an overall spatial level, which can be accessed at: gis.worcestershire.gov.uk.

The broad biodiversity context for Worcestershire is presented in the Worcestershire Biodiversity Analysis 2009 Base Map which enables developers to identify the biodiversity importance of Land Cover Parcels (LCP) within the region. This map was created using information from the Worcestershire Habitat Inventory (WHI) which provides an important baseline of ecological information. Both maps are accessible to developers and will be used by the Council to make the best possible decisions regarding the protection and enhancement of biodiversity in our countryside. Both WHI raw data and analysis data can be utilised to identify areas and specific sites of biodiversity importance and areas which are functionally well connected, this will highlight possible

constraints to planning and development and will also assist the council to appropriately target green infrastructure and biodiversity effort. Developers should use this resource to help ensure they meet their duties in relation to the Natural Environment and Rural Communities Act (2006)

For guidance on treatments for embedded mitigation where woodland resources are to be affected by developments the Trees and Woodland in Worcestershire guidance document should be referred to, which is also available at gis.worcestershire.gov.uk . This document provides detailed recommendations on the pattern, size and location of woodland planting, along with advice on which species to choose to best reflect the natural woodland communities prevalent in the area. Information within this document on the of the conservation priorities of each Ecological Zone and typical National Vegetation Assessment (NVC) plant communities found therein should be used by developers to ensure that appropriate mitigation for any loss of habitat is put in place. Any proposed new planting should be carried out in line with the cautionary notes which advise on non-woodland habitats within the Ecological Zones with ecological interest that should be maintained.

In addition to this, it is also expected that any planning application made by a developer would be accompanied by evidence of appropriate surveys of the site and its context. These should include at least a Phase 1 Habitat Survey which would identify the site specific nature of species present within the site. This data should be used to inform the design and any species list proposed for the site.

Worcestershire's Landscape Character And Historic Landscape Characterisation

As a fundamental aspect of the County's environmental infrastructure, the historic landscape has a major role to play in Worcestershire's future. The historic landscape is sensitive to change and needs to be properly understood before change is planned, to ensure its effective management and enhancement, so that it can make its full contribution in shaping sustainable communities.

New development and highway infrastructure often impacts upon the existing landscape. To avoid detrimental effects on the landscape character a full assessment of the existing character and its ability to accept change needs to be established. [Worcestershire's Landscape Character Assessment](#) provides guidelines for the protection and enhancement of the rich and varied landscape character types. It indicates where pressures for change are occurring and what future planning and management needs to be incorporated into development plans.

Similarly, [Worcestershire's Historic Landscape Characterisation](#) provides a framework for informing landscape strategies, spatial planning and development control. It is being used by the County Council or District Council strategic planning or conservation staff especially who have responsibility for setting frameworks for change or making decisions that might affect the County's historic landscape character.

Streetscape Design And Wildlife Mitigation Measures

In order to support the county's approach to avoid habitat fragmentation in road construction, the County Council would welcome proposals which incorporate best practice design of wildlife crossing structures such as mammal passes, inset-kerbs, arboreal hop-overs along known wildlife corridors.

2.4 Guidance on Thresholds for Transport Assessments and Statements

The following thresholds are for guidance purposes and should not be read as absolutes. Local authorities may interpret them in light of their own circumstances. There are several qualitative factors that need to be taken into account and that are not captured by this document. There will also be site-specific issues that assessments will need to cover.

In some circumstances, a Transport Assessment may be appropriate for a smaller development than suggested by the thresholds. In others, a Transport Statement may be appropriate for a larger development than suggested by the thresholds. Early pre-application discussions between a developer and the relevant authorities are strongly recommended. In these, it is important for highway authorities to combine the appropriate quantitative and qualitative thresholds in deciding the level of assessment that may be required.

Thresholds are normally applied for initiating a Transport Assessment. Developments below these thresholds still have an impact on the local transport network and so will normally be required to provide a Transport Statement, unless exempted from this requirement, in writing, by the Development Management Team. Developers are advised to check at an early stage with Worcestershire County Council to establish what level of information is required. The County Council actively encourages pre-application meetings in order to address any potential issues at an early stage. In some rare cases, a Transport Assessment will be required for smaller developments, to reflect specific circumstances. The Development Management Team will advise developers where this is the case.

The following threshold limits apply:

Land Use	Size	No Assessment Required	Transport Statement Required	Threshold for Transport Assessment
A1 – Food Retail	Gross Floor Area	<250 square metres	>250 <800 square metres	>800 square metres
A1 – Non-Food Retail	Gross Floor Area	<800 square metres	>800 <1500 square metres	>1500 square metres
A2 – Financial and Professional Services	Gross Floor Area	<1000 square metres	>1000 <2500 square metres	>2500 square metres
A3 – Restaurants and Cafes	Gross Floor Area	<300 square metres	>300 <2500 square metres	>2500 square metres
A4 – Drinking Establishments	Gross Floor Area	<300 square metres	>300 <600 square metres	>600 square metres
A5 – Hot Food Takeaway	Gross Floor Area	<250 square metres	>250 <500 square metres	>500 square metres
B1 – Business	Gross Floor Area	<1500 square metres	>1500 <2500 square metres	>2500 square metres
B2 – General Industrial	Gross Floor Area	<2500 square metres	>2500 <4000 square metres	>4000 square metres
B8 – Storage or Distribution	Gross Floor Area	<3000 square metres	>3000 <5000 square metres	>500 square metres
C1 – Hotels	Bedroom	<75 bedrooms	>75 <100 bedrooms	>100 bedrooms
C2 – Residential Institutions – Hospitals and Nursing Homes	Beds	<30 beds	>30 <50 beds	>50 beds
C2 – Residential Institutions – Residential Education	Student	<50 students	>50 <150 students	>150 students
C2 – Residential Institutions – Institutional Hostels	Resident	<250 residents	>250 <400 residents	>400 residents
C3 – Dwelling Houses	Dwelling Unit	<50 units	>50 <80 units	>80 units
D1 – Non-residential Institutions	Gross Floor Area	<500 square metres	>500 <1000 square metres	>1000 square metres
D2 – Assembly and Leisure	Gross Floor Area	<500 square metres	>500 <1500 square metres	>1500 square metres

Other considerations	Transport Assessment and Travel Plan Required
Any development that is not in conformity with the adopted development plan.	<input type="checkbox"/>
Any development generating 30 or more two-way vehicle movements in any hour.	<input type="checkbox"/>
Any development generating 100 or more two-way vehicle movements per day.	<input type="checkbox"/>
Any development proposing 100 or more parking spaces.	<input type="checkbox"/>
Any development that is likely to increase accidents or conflicts among motorised users and non- motorised users, particularly vulnerable road users such as children, disabled and elderly people.	<input type="checkbox"/>
Any development generating significant freight or HGV movements per day, or significant abnormal loads per year.	<input type="checkbox"/>
Any development proposed in a location where the local transport infrastructure is inadequate. – for example, substandard roads, poor pedestrian/cyclist facilities and inadequate public transport provisions.	<input type="checkbox"/>
Any development proposed in a location within or adjacent to an Air Quality Management Area (AQMA).	<input type="checkbox"/>

Scoping Reports shall be provided and agreed in writing by Worcestershire County Council prior to the undertaking of a Transport Assessment Report.

Every Transport Assessment or Statement must be accompanied by a Travel Plan, which is compliant with Worcestershire County Council’s guidelines. Travel Plans are typically a package of practical measures to encourage residents, employees and visitors to consider their travel options or reduce the need to travel. Typical examples of measures include: personalised travel plans and welcome packs for residential use, and for commercial use, the provision of showers, lockers and changing facilities, car sharing schemes, flexible working schemes etc.

It should be noted that the provision of Personalised Travel Planning is mandatory for all residential developments of 50 or more dwellings. Under 50 dwellings need a Travel Welcome Pack which must be put together using Worcestershire County Council guidelines. Worcestershire County Council provides a Personalised Travel Planning service, which can be purchased from the County Council. Further information is available from Worcestershire County Council’s Travel Plan Officer: sjenner@worcestershire.gov.uk

Businesses are required to register with Starsfor (www.starsfor.org) to create a suitable travel plan, using this online tool. Schools are required to use Modeshift Stars (www.modeshiftstars.org) to create their travel plans. Further information, including the level of accreditation required, is available from Worcestershire County Council’s Travel Plan Officer: sjenner@worcestershire.gov.uk

3. Layout and Connectivity

3.1 Establishing Access from the Existing Network

Traditional Junction Design

The developer must demonstrate that the junction arrangement proposed represents the best use of available capacity. This will need to be demonstrated through capacity analysis of the various junction types, with the junction form which minimises delays on the existing highway network being favoured, subject to safety considerations being assessed. For example, traffic signals will not be supported when a priority junction provides adequate capacity for vehicles wishing to enter and exit the development. TD 42/95, Geometric Design of Major/Minor junctions, Chapter 2 provides further guidance in this area.

When proposals provide for a new footway crossover or priority junction, guidance on its design should be sought from Manual for Streets 1 and 2. However, where more complex junctions are required, which could involve signal control, roundabouts and/or right turning lanes, DMRB is considered to be the appropriate design standard, again, the applicant should make reference to TD/42/95, although this should always be discussed and agreed with the DM team. In some cases, it may be appropriate to deviate from these standards. Again, this should be agreed early in the design process with the DM team.

Contemporary Junction Design

Innovation in junction and street design is welcomed and it can be appropriate to extend these principles on to the existing highway network, either as part of a specific access to a site or as wider mitigation. Where innovative schemes are to be promoted, early discussions are essential and some specific issues will need to be explicitly considered. A non-exhaustive list follows.

- The design should reflect the needs of the surrounding environment;
- There should be high levels of pedestrian movements;
- Design speeds should be low (under 20mph);
- Proposed construction materials should be readily available and of a limited pallet;
- Consideration must be given to junction efficiency, minimising delay to all road users.
- The needs of the visually or physically impaired users should be considered and local user groups involved from an early stage;

The developer will need to demonstrate than any highway design to be offered for adoption by the Local Highway Authority or to take place on the existing highway network enables Worcestershire County Council to discharge responsibilities placed upon it by Section 149 of the Equalities Act, 2010. In order to achieve this, early involvement with local and national disability access groups should be undertaken and the needs of these groups incorporated into the design. Section 149 of the Equalities Act, 2010 requires Local Authorities to have 'due regard' when making any decisions to the needs to eliminate discrimination, which includes the duty to make reasonable adjustments for disabled people and the "need to promote equality of opportunity between disabled persons and other persons", which includes "the need to take steps to take account of disabled person's disabilities" even where that involves "treating disabled persons for favourably than other persons".

Please see the Equality Impact Assessment template, available on www.worcestershire.gov.uk/SDG for details on requirements of this process.

The application of shared space-style junctions should not be considered to be an easy solution or a fall-back position, where traditional junction types are difficult to achieve.

3.2 Vertical Alignment

The Developer must consider the following when designing vertical curves on new developments. Generally, the maximum and minimum gradients allowable on new developments will be as detailed within the table below:

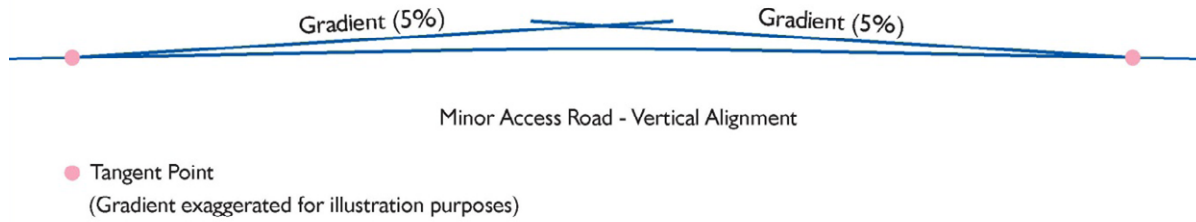
Category	Maximum Gradient	Minimum Gradient
All road categories	1:20 (5%) desirable but consideration may be given to gradients up to 1:12	1:100
Cycle tracks and footways	1:20 (5%)	1:100

Additionally, the Developer must consider the curvature of the new highway. The design curve length will be a function of the algebraic change of gradient, expressed as a percentage, multiplied by the 'K' value. 'K' values are provided in the table below:

Category	Minimum 'K' value
Major access and above	6
Minor access and below	2
Cycle track	2

Example, Minor Access Road – Vertical Alignment

The example below has been included to assist developers in designing vertical curves.



The Developer should note that side road gradients into junctions should be set at a maximum of 1:20 (5%) for the first 10m. Additionally, the minimum vertical curve length of any section of road should be not less than 20m.

In the above example, assuming it is a Minor Access Road, and the curve length will be 20m.

The 'K' Value is given by:
Design curve length / Algebraic change of gradient
 $= 20m / 10$
 $= 2$

Therefore the above example falls within the design criteria and would be acceptable.

The developer should note that where gradients exceed 5% there may be a requirement for a grit bin. In such instances, the developer will need to ensure the design provides an adequate location and that a suitable grit bin is provided.

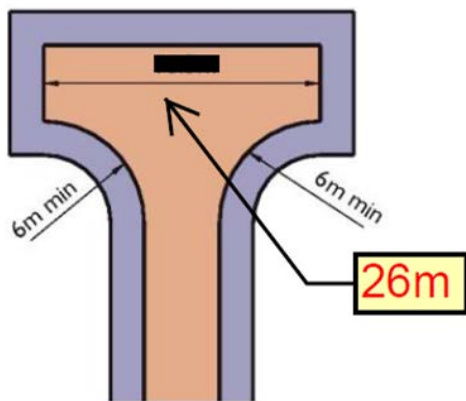
3.3 Headroom

Additionally, the Developer must also consider in the design that the minimum allowable headroom for all new highways intended for adoption shall be as follows:

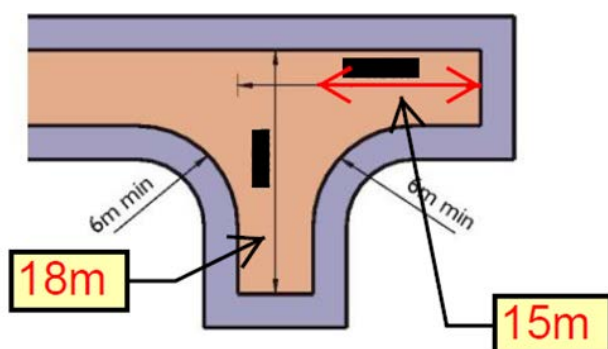
Category	Minimum Headroom
All Roads	5.3m
Cycleway	2.7m
Footway	2.7m

3.4 Turning Heads

T-form' turning facilities should maintain a distance of 26 metres (m) across the 'T' to facilitate manoeuvres by pantechnicon (HGV) sized vehicles. The carriageway widths, radii and footway widths should comply with the design specification for the road which they serve.



'Side T-form' turning facilities should maintain a width of 18 metres (m) and a distance of 15m from the termination of the carriageway and the start of the spur. The carriageway widths, radii and footway widths should comply with the design specification for the road which they serve.



3.4 Turning Heads

T-form' turning facilities should maintain a distance of 26 metres (m) across the 'T' to facilitate manoeuvres by pantechnicon (HGV) sized vehicles. The carriageway widths, radii and footway widths should comply with the design specification for the road which they serve.

3.5 Landscaping

The retention of existing landscape features of value must be taken into account and therefore the preliminary design of residential access roads, cycleways and footpaths to serve the development should as far as possible be sympathetic to the Authority's wishes. So, for example, if a tree of value was situated within the visibility splay, all attempts should be made to reposition the access if this can be done safely.

In residential areas the Highway Authority will normally only adopt the paved surfaces and verges which are critical to the functioning of the highway.

Small areas of grass should only be permitted where adequate maintenance arrangements can be guaranteed for the foreseeable future.

Trees must not be planted near structures or services.

Existing trees, which will become maintainable at public expense, shall be the subject of condition survey to ascertain their health and may be subject to commuted sum payments to cover their future maintenance costs.

New highway trees should be of slender girth and modest canopy. The trunk should be maintained free of side shoots and branches to a height of 2.1m. Tree grids, planting details and root barriers are shown in Appendix E of the Specification. The developer may be required to pay commuted sums for the future maintenance of highway trees.

Highway landscape features should be maintained by the developer for a period of 5 years.

Thorny species shall not be accepted immediately adjacent to footways and cycle tracks. Existing hedges adjacent to the existing highway shall be transferred to frontagers for maintenance.

Any new carriageway should be outside the canopy (or reduced canopy if reduction is deemed suitable) of any existing tree to prevent damage to the new construction by the tree roots. Any work under the canopy of deciduous trees or within a radius of half of the height of coniferous species shall comply with BS 5837: 1991.

3.6 Street Lighting

The aim of the Worcestershire Street Lighting service is to:

- Create a safer and more secure night-time environment, by providing an energy efficient and cost effective system of street lighting and illuminated signs. The objectives for new developments are to:
- Reduce crime and the fear of crime;
- Minimise environmental impact;
- Implement Best Practice in systems and operations

All highway lighting, illuminated sign and illuminated bollards must be designed, specified and installed to Worcestershire County Council (WCC) requirements. There are two methods for developers to achieve the above requirements, which are provided in Worcestershire's Highway's Specification for New Developments. However, developers need to also take account of local attitudes relating to the provision of street lighting, so that they might be relieved of the duty of providing such where it is not needed

3.7 Drainage

General Requirements

In general, drainage systems shall be designed in accordance with the current edition of Sewers for Adoption and with the Specification accompanying this Design Guide.

All pipes that only carry surface water from the adoptable highway are prospectively maintainable by the Highway Authority. Their design and construction shall comply with the standards required in this document.

Pipes that carry surface water from the adoptable highway as well as other areas such as roofs, private drives etc must be adopted by the water authority and must comply with their requirements.

Lateral connections into public sewers will remain private but shall be designed and constructed to adoptable standards. All such connections shall run approximately at right angles to the centreline of the road to minimise their length.

Adoption Requirements

Where foul or surface water sewers are to be laid under the adoptable highway or where the highway drainage is to be connected into a surface water sewer, written assurance must be obtained beforehand that the water authority will adopt the sewers, subject to compliance with their adoption procedure.

The Highway Authority will normally decline to adopt any highway covered by a Section 38 agreement until the water authority has confirmed the adoption of all sewers within the highway. This also includes any other sewers not within the adoptable highway but which carry water from it.

All drains that are intended to be adopted as highway drains shall discharge to a pipe or watercourse at a point approved by the Highway Authority. Evidence will be required that the developer has right to discharge, free of any liability which may be binding upon the Highway Authority when the drain is adopted.

Private drains will not normally be permitted within the adoptable highway.

All prospectively maintainable highway drains shall be located within land that is to be adopted by the Highway Authority. Only in exceptional circumstances will they be permitted in land that is to remain private. Where such circumstances do arise the land owner at the time of completing a Section 38 Agreement will be required to give a grant of easement keeping 3m each side of the pipe clear of all obstructions, which will be binding on successors in title. The developer is strongly advised not to sell any land that will contain a highway drain before completion of such an Agreement. The Highway Authority will not accept any different form of undertaking, which dilutes the rights conferred on it.

Outfalls And Watercourses

Where the outfall is into a ditch or watercourse the approval of the Environment Agency must be obtained in writing.

Where the outfall is proposed to be through an existing highway drain the developer will be required to prove its capacity and condition before approval for the connection can be given. This will include a CCTV survey of the drain and the carrying out of any improvement works found to be necessary.

Where the highway drain discharges into a watercourse, calculations shall take into account the possibility that the watercourse may be flooded.

Drainage Design

Gully spacing shall be determined using the recommendations of HA 102/00, Spacing of Road Gullies. Gullies will be required immediately upstream of block pavements, pedestrian crossing points and road junctions but shall never be located on a crossing point. It is the developer’s responsibility to demonstrate and ensure that the number and positioning of gullies is adequate to drain the highway.

The parameters to be used during the drainage design are as listed below:

Rainfall average return period	2 Years
Rainfall average return period (risk of flooding)	120 Years
Time of entry	4 Minutes
Design flow velocities	0.75m/s (Min), 7.5m/s (Max)
Minimum gradient	1:225
Design maximum rainfall	50mm/hour
Minimum pipe diameter	225mm

The Council may consider the use of combined kerb and drainage systems depending on the situation and design submitted for approval.

In certain cases the Council may require the provision of a larger capacity drain than would normally be needed in order to accommodate the drainage of adjoining land and/or future development.

Soakaways

Where soakaways are to be considered it will be at the discretion and approval of the Director of Economy and Infrastructure Services and will be considered as a last resort only (refer to Specification, Section 13). The Developer is to note that a commuted sum may be charged for each soakaway installed. The minimum diameter shall be 1500mm.

If more than one soakaway is planned, they are to be linked by a 225mm diameter pipe. The soakaways are to be surrounded by Terram or similar, laid between the chamber and the filter material. The appropriate filter material to be used will vary according to prevalent ground conditions. Where possible, the soakaway is to incorporate an overflow link (minimum diameter 225mm) to an existing highway drain/outfall system.

Sustainable Urban Drainage Solutions

While issues exist as to the acceptance of Sustainable Drainage Solutions (SuDS) by various bodies, Worcestershire County Council expects developers to incorporate storage, attenuation and filtration measures in accordance with 'SUDS- A Guide for Developers' by the Environment Agency and 'SUDS - A Design Manual for England and Wales' by CIRIA.

Worcestershire County Council will examine all proposals for SUDS and judge them on their merits. Permeability tests and hydrology surveys will be required to verify the suitability of the designs and commuted sums will be required for ongoing maintenance of the systems. The amount of the commuted sums will be calculated by the Council and will reflect the special maintenance requirements of the proposed system.

The SUDS proposals for a development shall be submitted along with geology and hydrology information, at planning application stage. Any proposals for outfalls into existing watercourses or ponds shall be accompanied by an environmental impact report and obviously such outfalls will need Consent to Discharge from the Environment Agency. Private SUDS drainage shall drain into the water authority surface water sewers and any infiltration will be into private land. SUDS for the highway shall drain into the highway drain network and any infiltration will be within highway/public areas.

3.8 Structures

Structures that are considered to 'potentially affect' the safety of the highway, whether to be adopted or not and permanent or temporary, where Worcestershire County Council are the highway authority are to follow technical approval procedures as set out in the 'Technical Approval of Highway Structures' BD2 of the Design Manual for Roads and Bridges volume 1 section 1. After April 1st 2010 and unless agreed with the Technical Approval Authority (TAA) Eurocodes must be used for the design and modification of existing highway structures (including geotechnical works)

Where Worcestershire County Council is the highway authority for the purposes of this guide references to the TAA in BD2 means Worcestershire County Council.

All structures shall be designed in accordance with the Design Manual for Roads and Bridges [DMRB], and constructed in accordance with the Specification for Highway Works [SHW]. BD2/05 'Technical Approval of Highway Structures' although based on previous design standards, many of which are now withdrawn, remains current at the time of writing. There are standards within the DMRB which have not been withdrawn but conflict with the Eurocodes. Where there is conflict between standards within the DMRB, including BD2, and the Eurocodes the requirements of the Eurocodes take precedence. This guidance will be updated to respond to any changes in legislation/guidance brought about by Brexit.

The Director of Economy and Infrastructure Services or their appointed representative will advise developers of the determined category for any proposed structures. All structures except for category 0 will require an Agreement in Principle (AIP) to be submitted and accepted prior to any design work [only completed versions of the forms in appendix C of this guide will be accepted – word versions available on request]. Currently there is no guidance within the public domain covering the required changes to either the

AIP or design and check certificates. Until the DMRB is updated for the application of Eurocodes guidance should be sought from the TAA on this matter

Any design work completed prior to the acceptance of the AIP will be at the developers' risk, whether or not the work completed is compliant with the DMRB.

The Highway Authority reserves the right to alter the design standards as it considers necessary and this will be communicated before and where necessary during the submission of the AIP. Early consultation for structural requirements is strongly advised.

All structures covered by BD2 will require Design and Check Certificates, and Construction Compliance Certificates [only completed versions of the forms in appendix C of this guide will be accepted – word versions available on request].

The AIP, or in the case of category 0 structures submitted with the Design and Check certificate, must contain evidence of consultation and discussions with statutory undertakers, planning authorities, the Environment Agency and any other relevant body statutory or otherwise.

The AIP must contain relevant extracts from the geotechnical ground investigation including all relevant testing for the proposed design.

A list of structures to be subject of technical approval is as follows:

- All bridges over or under the highway
- All culverts pipes crossing under the highway greater than 0.9m span
- Pipes or culverted streams or other structures greater than 0.9m span or diameter along the highway either maintained privately or by statutory undertakers.
- Any structures which are not pipes less than 0.9m span/diameter

- Retaining walls greater than 4 feet in height and within 4 yards of the highway boundary as described in section 167 of The Highways Act 1980.
- Any retaining wall within 4 yards of the highway retaining sloping ground.
- Any retaining wall supporting the highway regardless of height.
- Any private cellar or basement under or adjacent to the highway
- Reinforced earth structures with or without hard facings, includes gabion and crib lock walls.
- High masts and lighting columns compliant with the standard for the design of minor structures BD94/07 will be category 0 unless notified otherwise.
- High masts and lighting columns not compliant with the standard for the design of minor structures BD94/07 will be category 1 unless notified otherwise.
- Any part of a building structure overhanging the highway
- Highway sign posts greater than 7m in height.
- Any temporary works which are described as above.
- Structures required to be assessed by the highway authority whether or not maintained by them.

NOTE: This list may not be exhaustive and developers are urged to consult with the Highway Authority at the earliest possible stage.

Where developers combine various structural components, each with different designers, to be incorporated into one structure they will undertake to provide one Design and Check Certificate[s] from the principal designer that takes responsibility for the whole structure [and includes reference to and copies of the design and check certificates of the component parts]. Examples of this might include:

- a bridge that comprises of insitu cast abutments with pre-cast concrete deck beams, or
- cast insitu or driven piles on which insitu abutments / piers are constructed, and
- temporary works

Adoption Of Structures By The Council

The Council may adopt certain structures adjacent to, under or over the highway. In normal circumstances, the only structures that will be considered for adoption are those upon which the Highway relies for support and are constructed on Highway land.

All structures to be adopted should have received structural approval in accordance with the procedures shown as follows:

SCENARIO 1 - All new structures under an existing highway, or prospectively adoptable highway:

- These will be subject to the requirements of BD2
- Where any part of the structure [including approach embankments, etc] extends beyond the limits of the current highway the land not currently designated as public highway shall be dedicated to public highway so as to give the Highway Authority full control over the land upon which the structure and it component parts rest. This includes all land within the ‘footprint’ of the structure.

- An additional 2m margin ‘halo’ around all structural elements [including buried elements such as foundations, soil nailing, and reinforced earth] shall be dedicated to highway so as to protect the structure from interference and to provide for future un-inhibited inspection and maintenance access by the Highway Authority.
- These additional areas shall be finished in low maintenance materials agreeable to the Highway Authority, and which may vary from development to development. The area so dedicated shall be fenced off as agreed with the Highway Authority.
- Commuted sums shall be paid to the Highway Authority by the developer to cover future maintenance, and / or reconstruction.

SCENARIO 2 - All new structures over an existing highway where it is intended that the structure will carry a prospectively adoptable highway:

- These will be subject to the requirements of BD2
- Where any part of the structure [including approach embankments, etc] extends beyond the limits of the current highway the land not currently designated as highway shall be dedicated as public highway so as to give the Highway Authority full control over the land upon which the structure and it component parts rest. This includes all land within the ‘footprint’ of the structure.
- An additional 2m margin ‘halo’ around all structural elements [including buried elements such as foundations, soil nailing, and reinforced earth] shall be dedicated to highway so as to protect the structure from interference and to provide for future un-inhibited inspection and maintenance access by the Highway Authority

- These additional areas shall be finished in low maintenance materials agreeable to the Highway Authority, and which may vary from development to development. The area so dedicated shall be fenced off as agreed with the Highway Authority.
- Commuted sums shall be paid to the Highway Authority by the developer to cover future maintenance, and / or reconstruction.

SCENARIO 3 - Structures supporting the highway [e.g. retaining walls] adjacent to private housing developments:

- These will be subject to the requirements of BD2
- Where any part of the structure extends beyond the limits of the current highway the land not currently designated as public highway shall be dedicated as public highway so as to give the Highway Authority full control over the land upon which the structure and its component parts rest.
- An additional 2m margin 'halo' around all structural elements [including buried elements such as foundations, soil nailing, and reinforced earth] shall be dedicated to highway so as to protect the structure from interference and to provide for future un-inhibited inspection and maintenance access by the Highway Authority. These additional areas shall be finished in low maintenance materials acceptable to the Highway Authority, and which may vary from development to development. The area so dedicated shall be fenced off as agreed with the Highway Authority.
- Commuted sums shall be paid to the Highway Authority by the developer to cover future maintenance, and / or reconstruction.

SCENARIO 4 - Structures supporting land above the highway [e.g. retaining walls] adjacent to private housing developments:

- These will be subject to the requirements of BD2
- Land not currently designated as public highway shall be dedicated as public highway so as to give the Highway Authority full control over the land upon which the structure and its component parts rest.
- An additional 2m margin 'halo' around all structural elements [including buried elements such as foundations, soil nailing, and reinforced earth] shall be dedicated to highway so as to protect the structure from interference and to provide for future un-inhibited inspection and maintenance access by the Highway Authority. These additional areas shall be finished in low maintenance materials acceptable to the Highway Authority, and which may vary from development to development. The area so dedicated shall be fenced off as agreed with the Highway Authority.
- Commuted sums shall be paid to the Highway Authority by the developer to cover future maintenance, and / or reconstruction.

Approval Of Structures Not To Be Adopted By The Council

The following structures although not necessarily to be adopted by the Council require Structural Approval.

- These will be subject to the requirements of BD2:
- Any wall or basement constructed on private land by an individual or developer that affects the support of the highway;
- Bridges crossing the Highway where there is no public access to the bridge;

- [Requires licence s176 of Highways Act 1980. Requires condition to pay for removal or alterations required by highway authority]
- Retaining walls where any part of the retaining wall is 1.20m above the boundary of the highway nearest that point; and
- Buried structures over 0.9m span/ diameter carrying services or plant

S330 Highways Act 1980 requires SU to gain approval from the highway authority. Therefore any structure should be considered but general access chambers using precast units should not need approval. Longitudinal structures which use bespoke parts including pipe and PC box sections should be subject to TA.

SCENARIO 5 - All new structures under an existing highway, or prospectively adoptable highway provided by or for Statutory Undertakings [e.g. flood attenuation, storm overflows].

- These will be subject to the requirements of BD2:
- Structures should ideally be located away from the carriageway, or in public open space, if this cannot be achieved then they should be so positioned and agreed with the Highway Authority so as not to prohibit the future use of the highway during:
 - Cyclic cleansing
 - Maintenance of the structure

SCENARIO 6 - Structures supporting the highway [e.g. retaining walls]: adjacent to ongoing commercial developments.

- These will be subject to the requirements of BD2:
- The developer will be required to commit to the Code of Practice for the Management of Highway Structures complying with the inspections and maintenance requirements in all respects and provide evidence to the Highway Authority that this has been done at each cycle specified within the code. Evidence shall include: copies of inspection reports, maintenance works and structural assessment calculations.
- The developer will carry annual insurance, and / or indemnify the Highway Authority against all such claims arising from the construction, presence, use, and maintenance of the structure. Written evidence shall be provided on an annual basis that such indemnity is provided.
- The above requirements shall be included in property deed transfers to ensure future owners of the land are kept aware of their liabilities. The Highway Authority shall be provided with a copy of the deeds after each transfer of the land.

SCENARIO 7 - Structures supporting land above the highway [e.g. retaining walls] adjacent to ongoing commercial developments.

- These will be subject to the requirements of BD2:
- The developer will be required to commit to the Code of Practice for the Management of Highway Structures complying with the inspections and maintenance requirements in all respects and provide evidence to the Highway Authority that this has been done at each cycle specified within the code. Evidence shall include: copies of inspection reports, maintenance works and structural assessment calculations.
- The developer will carry annual insurance, and / or indemnify the Highway Authority against all such claims arising from the construction, presence, use, and maintenance of the structure. Written evidence shall be provided on an annual basis that such indemnity is provided.
- The above requirements shall be included in property deed transfers to ensure future owners of the land are kept aware of their liabilities. The Highway Authority shall be provided with a copy of the deeds after each transfer of the land.

SCENARIO 8 - All new and to be modified structures over an existing highway where the use is to remain private [service and access].

- These will be subject to the requirements of BD2:
- Wherever possible these should be constructed such that all supporting components are located within land to remain private.
- In particular every attempt should be made to prevent, in use, objects

from falling on to the public highway beneath.

- The developer will be required to commit to the Code of Practice for the Management of Highway Structures complying with the inspections and maintenance requirements in all respects and provide evidence to the Highway Authority that this has been done. Evidence shall include: copies of inspection reports, maintenance works and structural assessment calculations.
- The developer will carry annual insurance, and / or indemnify the Highway Authority against all such claims arising from the construction, presence, use, and maintenance of the structure. Written evidence shall be provided on an annual basis that such indemnity is provided.

The above requirements shall be included in property deed transfers to ensure future owners of the land are kept aware of their liabilities. The Highway Authority shall be provided with a copy of the deeds after each transfer of the land.

Assessment Of Existing Structures

Eurocodes are not to be used for the assessment of existing structures. Assessments will be undertaken in accordance with BD21 and the associated standards within the DMRB. Where structures are modified using Eurocodes, as stated above, there is the potential for a conflict due to differences in the effect of actions. In these cases the TAA is to be consulted for guidance.

Any existing structure which may be considered to potentially affect highway safety may be required to be assessed in accordance with BD2. All structures that are to be modified for the purposes of the development or to be subjected to increased magnitude or frequency of loading shall be assessed according to BD21. This will be undertaken as part of the Design and Check Process in BD2.

Approval Submissions

The Technical Approval Process shall consist for all structures whether adoptable or not an AIP where appropriate, Design and Check Certificates and Construction Compliance certificates.

The AIP will include the following:

- General arrangement drawing showing location and extent of all structures and in the case of walls detailing lengths to be adopted and/or over 1.20m high if applicable;
- Sufficient to determine wall heights, giving ground levels, behind and in front of wall and any features affecting loadings such as cover to culverts;
- Clearances to deck soffit and piers/abutments shall be submitted for bridges
- Cross section drawings for retaining walls annotated with proposed and existing ground levels
- Designers Risk Assessment; This is to include risks for design, construction, maintenance and operation, and demolition
- Site investigation details and geotechnical assumptions on which the design has been based. Appropriate sections of the geotechnical report should be included. This must be given in sufficient detail on the drawing to allow the designers assumptions to be compared with the conditions actually found on site by those responsible for construction;
- Construction details and material specifications;
- Agreed departures from standard.

For Category 0 structures the design and check certificate must be accompanied by the design calculations with full reference to the design standards used; and for structures that are to be adopted or for structures upon which the Highway relies for support: Design and Construction Certificates and it will be a condition of the approval that developers submit As-Built drawings for the CDM Health and Safety File.

For reference to the required standards, Developers are requested to review the Technical Approval Schedule as listed in the current version of BD2. In addition to the standards in the Design manual for Roads and Bridges developers may be required to comply with interim advice notes published by the Highways Agency. WCC will advise developers on a scheme basis during the technical approval process.

Departures From Standard

Departures from standards applicable to Eurocodes will only be accepted where the principle or concept is not covered therein or is a proposed alteration to the national annex which does not conflict with the Eurocode. If it is a requirement that designers comply with the principles of the Eurocodes these clauses are denoted with a letter P. It is permissible to use alternative design rules different from the Application Rules given in EN 1990 for works, provided that it is shown that the alternative rules accord with the relevant Principles and are at least equivalent with regard to the structural safety, serviceability and durability which would be expected when using the Eurocodes.

There may be instances where due to site constraints or nature of the development that it is not possible to design works in accordance with the appropriate highway standard. In these cases the developer can apply for a departure from the standards. Departures will only be granted when the site constraints prevent the implementation of the standard. A request for a departure should contain the following:

- Proposed departure
- Reasons for departure
- Consequences of the departure, particularly any increases in risks or hazards.
- A risk assessment for complying with the standard and one for the departure.

Normally all departures are to be agreed prior to the acceptance of the AIP and shall be included in the AIP.

Bridge Maintenance Manual/Health And Safety File

On completion of the work the Developer must provide a Bridge Maintenance Manual containing:

- Details of the materials used in construction and the supplier;
- Requirements for future maintenance;
- Any survey and geotechnical details undertaken on the site of the Structure;
- Details of problems encountered during construction that may have a long-term effect on the structure;
- Any access arrangements for future maintenance;
- As built drawings as electronic TIF, DXF or AutoCAD files;
- Design calculations; and Special arrangements required for demolition.

The above information will comprise the documentation you have to legally provide under the CDM Regulations. In addition to contents listed, the following must be included:

- All relevant documentation from the technical approval process
- Approval in Principle
- Design and Check certificates
- Construction Compliance Certificate

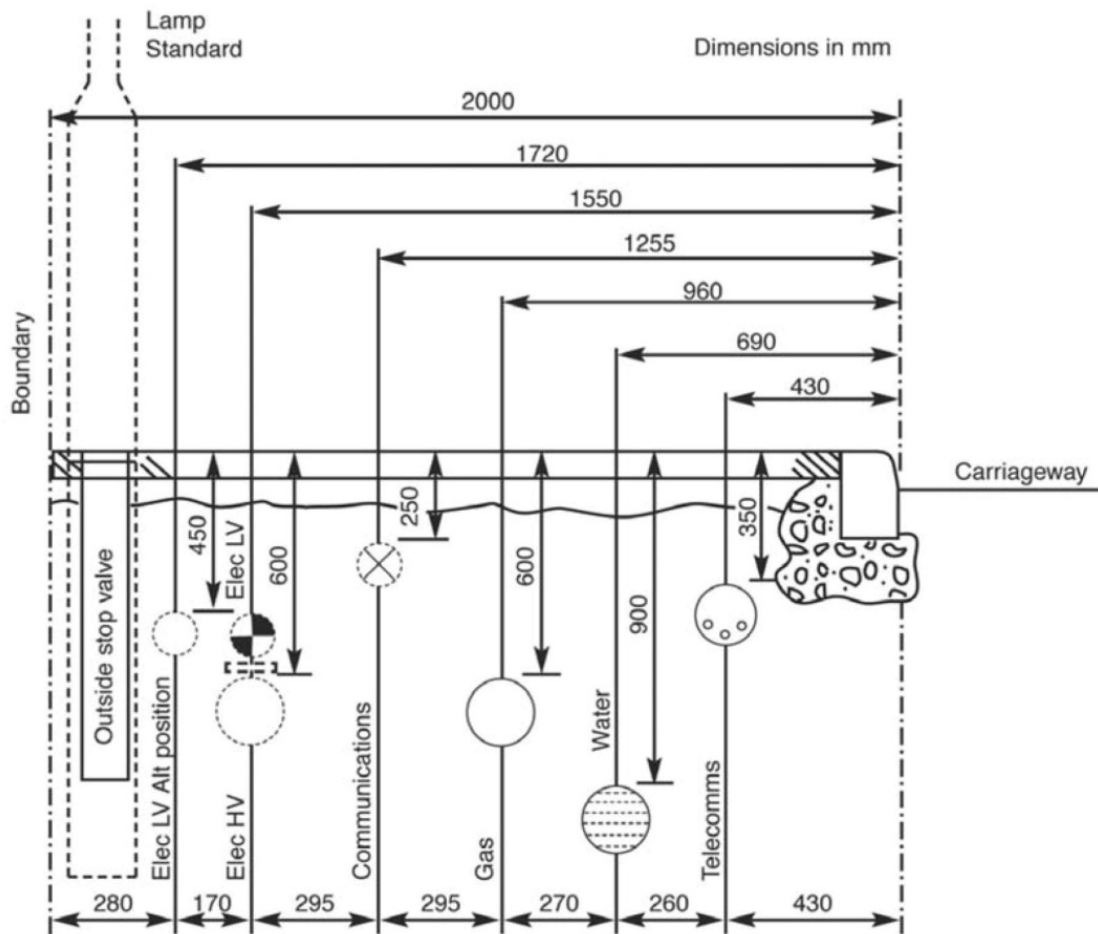
These are to be copies of the accepted certificate by the TAA:

- Appropriate certification of components, VRS systems, quality assurance certification for reinforcement and concrete suppliers, waterproofing and other materials.
- Certificates for any material or integrity testing undertaken, i.e. concrete cube results or integrity testing of piles
- Any residual risks or hazards within the structure, similar confined space, hazardous materials used in construction or hazards found within the original ground.

Worcestershire County Council has a standard format for Health and Safety Files, a copy of which is available on request.

3.9 Statutory and Other Services

New estate roads should be designed to accommodate services and liaison with all statutory undertakers and communications providers should be done at the earliest stage possible to ensure that their equipment is installed in an efficient manner and as much as possible to comply with the recommendations of the National Joint Utilities Group.



Although this idea is not always possible it is important to ensure that services do not conflict.

All categories of estate road should have either footways or service strips in which services will be located. The Highway Authority will not adopt land the sole purpose of which is to contain services. Any land must have a justifiable connection with the highway and be clearly adoptable as highway.

The laying of apparatus within the carriageway will not generally be permitted although at junctions and in the case of public sewers exceptions are clearly unavoidable.

The Developer shall ensure that service strips are clear of trees, walls and hedges. Any trees shall be located so that their root systems when mature will neither damage apparatus, nor be damaged during the laying and maintenance of apparatus. Root deflection barriers should be used. Developers should consult the Local Planning Authority regarding any Tree Preservation Orders and should act in accordance with BS 5837: 1991 during construction works.

Service strips shall be delineated from private property by Highway Boundary concrete marker blocks.

When selecting routes for services, dual mains installations should be the norm to prevent carriageway crossings weakening the road structure and preventing the need to dig up the carriageway.

Where services are to be laid within the extent of the highway, ideally, the appropriate utility company should lay the required service. Where services are not laid or subsequently adopted by the appropriate utility company, they should not be laid within the extent of the highway.

In exceptional circumstances, where unadopted services cannot be avoided within the limit of the highway, a section 50 license will be required before the highway can be adopted.

3.10 The Street Hierarchy

As stated previously, the design of new streets should take into account the intended link and place functions of the street, as well as the type, density and character of the development. Developing a streetscape environment should also, where appropriate, be accessible, comfortable and safe for pedestrians. Furthermore integration of the surrounding landscape and ecological context of the site must be integral to any design development.

Carriageway widths should be appropriate for the particular context and use of the street. Key factors to take into account include:

- The volume of vehicular traffic and pedestrian activity;
- The traffic composition;
- The requirements for clear demarcation between carriageway and footways;
- If on street parking is to be provided, its distribution, arrangement, the frequency of occupation and the any need for enforcement;
- Design speeds;
- Curvature of the street, including increased width for bends to accommodate swept paths of larger vehicles; any intention to include single lane working in two way streets.

The following street definitions provide a design character for a typical street. Variation from these definitions is encouraged, although these should be supported with clear justification of how these variations will continue to meet the requirements set out in relevant statutory legislation and non-statutory guidance.

3.11 Innovative Street Design

Worcestershire County Council welcomes innovative design proposals. Where innovative designs are proposed for adoption as public highway, the following guidelines must be followed:

- As with standard street designs, the designer should ensure that an Equality Impact Assessment, as established by Section 149 of the Equality Act, 2010 is undertaken;
- Design should be bespoke to the road and the development;
- Design speeds should be a maximum of 10 mph and street furniture and landscaping should be used to achieve this;
- Materials should be of a limited pallet and be readily sourced. They should be used to help legibility and create a sense of place where the car is a guest;
- Innovative designs can be prone to poor drainage so Worcestershire County Council would expect this to be considered at an early stage.

3.12 Main Streets

Main Streets have both high link and place functions. Often, the main shops and businesses are located here. Design speeds are often low (20mph or less) and the street is normally overlooked by adjacent buildings with active frontages. These routes typically accommodate passenger transport routes and belong in the heart of proposed developments.



Design Details for Main Streets

CRITERIA	SPECIFICATION
Traffic Speed	
Design Speed	20mph, achieved through measures such as surface changes, visual narrowing, sensitive parking provision and green infrastructure.
Street Dimensions and Character	
Carriageway Width	No less than 5.5 metres (if street is identified as a bus route then consideration should be given to increasing width to 6.1 metres)
Footway	A minimum footway width of 3.5 metres should be provided, but the final width of the total footway/cycleway should be determined by a comfort assessment and where required should be wider. Adequate space should be provided within a dedicated furniture footway zone to accommodate street lighting columns, cycle parking stands, planters, bins and benches specified and a footway clear zone provided for uninhibited access for footway users.
Direct vehicular access to parking	This will be permitted, subject to suitable visibility being demonstrated in the design process.
Street Design Details	
On Street Parking	Discretely positioned on-street, parallel, unallocated parking bays for visitor use will be permitted at agreed locations. Parallel bays should be a minimum of 2 metres x 6 metres with a 1 metre 'pull out' strip in addition. A maximum of 3 contiguous bays will be permitted. A Traffic Regulation Order may be required, and should be considered on a case by case basis.
Junction Radii	Typically 6 metres, or sufficient to accommodate a FTA identified 10-metre rigid vehicle.
Landscaping	The landscaping should consider the Green Infrastructure strategy for the character area of the site. Existing trees should be accommodated within the design and removal of them should be the last resort. New trees should be planted as part of the footway furniture zone using an appropriate design solution as guided by the TDAG document and a budget for the installation and maintenance of the trees committed within the project budget.
Biodiversity	Ways to incorporate enhancements for wildlife should be included in the streetscape design in a way that engages the public and is tamper proof. Street trees should be incorporated to enhance permeability of the landscape for species to connect with other habitat types such as woodlands and grasslands.
Materials	
Main Carriageway	Predominantly macadam, with contrasting materials being considered for traffic calming features where appropriate.
Footway	Predominantly macadam, the use of pavers or fine textured pre-cast flags in appropriate locations may be considered. Alternative surfacing materials must be suitable to withstand accidental mounting by all types of vehicle.

3.13 Residential Distributor

A Residential Distributor has a higher 'link' value than place, and carries traffic flows higher than 100 vehicles per hour.

Design Details for Residential Distributor

CRITERIA	SPECIFICATION
Traffic Speed	
Design Speed	20mph, achieved through measures such as surface changes, visual narrowing, central reservations, sensitive parking provision and green infrastructure.
Street Dimensions and Character	
Carriageway Width	5.5 metres (if street is identified as a bus route then consideration should be given to increasing width to 6.1 metres).
Footway	A minimum of 2 metres. Where necessary obstructions are accommodated in the footway (such as street lighting columns, cycle parking stands, planters, bins and benches) then a wider footway should be specified.
Direct vehicular access to parking	This will be permitted, subject to suitable visibility being demonstrated in the design process.
Street Design Details	
On Street Parking	Residential Distributors are envisaged as being a more traditional residential street, with on street visitor parking provided within the highway extent. Where identified as a bus route some discretely positioned on-street unallocated parallel parking bays for visitor use, will be permitted at agreed locations to preserve bus journey time reliability and punctuality. Parallel bays should be 2 metres x 6 metres with a 1 metre 'pull out' strip. A maximum of 3 contiguous bays will be permitted.
Junction Radii	Typically 6.0m or sufficient to accommodate the local refuse collection vehicle. A minimum centre-line radius of 20 metres should be provided.
Landscaping	Green infrastructure can significantly add to the quality of the streetscape. Wherever possible, this should be accommodated outside the limits of the adopted highway.
Materials	
Main Carriageway	Predominantly macadam
Footway	Predominantly macadam, the use of pavers or fine textured pre-cast flags in small appropriate locations may be considered. Alternative surfacing materials must be suitable to withstand accidental mounting by all types of vehicle.

3.14 Residential Street

A Residential Street has a much higher ‘place’ value than as a ‘link’. Residential streets are multifunctional spaces which are often accessible to both pedestrians and vehicles. Design should enable pedestrians to move more freely by limiting traffic management features which encourage vehicles drivers to assume priority. Residential streets should not exceed 100 vehicles per hour.

Design Details for Streets

CRITERIA	SPECIFICATION
Traffic Speed	
Design Speed	15mph, achieved through variations in carriageway width, horizontal alignment of the carriageway and provision of on-street parking facilities.
Street Dimensions and Character	
Carriageway Width	Variable width, predominantly between 4.1 and 6 metres, narrowing to an minimum of 3.7 metres on short lengths.
Footway/Verge	A 2 metre wide service margin/footway/verge should be provided to facilitate the provision of street lighting and/or statutory undertaker’s equipment. This facility should be defined within the extent of the highway by the introduction of physical demarcation, such as a low level kerb.
Direct vehicular access to parking	This will be permitted, subject to suitable visibility being demonstrated in the design process.
Street Design Details	
On Street Parking	Designers should use local carriageway widening to accommodate this.
Junction Radii	Typically 6.0m or sufficient to accommodate a FTA 10m rigid vehicle. Smaller radii will be encouraged and/or vehicular footway crossings where appropriate. A minimum centre-line carriageway radius of 15 metres should be provided.
Landscaping	Green infrastructure should be used extensively to soften highway infrastructure and add to the visual appeal of the street. The landscaping should consider the Green Infrastructure strategy for the character area of the site. Existing trees should be accommodated within the design and removal of them should be the last resort. New trees should be planted as part of the footway furniture zone using an appropriate design solution as guided from the TDAG document and a budget for the installation and maintenance of the trees committed within the project budget.
Biodiversity	Ways to incorporate enhancements for wildlife should be included in the streetscape design in a way that engages the public and is tamper proof. Street trees should be incorporated to enhance permeability of the landscape for species to connect with other habitat types such as woodlands and grasslands.
Materials	
Main Carriageway	A combination of concrete block paving with macadam would be considered suitable. Parking areas, junctions, slow points and traffic management features will need to be highlighted, using different materials.
Kerbing	Low rise kerbs should be provided, either as kerb setts or concrete edge strips to indicate the boundary between adopted highway and private property.

3.15 Private Shared Drives and Courtyard Parking Areas

A private driveway can serve one or more properties, up to a maximum of six, after which the traffic generated and number of turning movements associated with the driveway is considered sufficient for the access to be considered for adoption by the Local Highway Authority.

Communal private parking areas can be considered an exception due to the need generated by the type and layout of the development. In such cases consideration should be given to providing more than one access if the numbers of parking spaces exceeds twelve. Private driveways are also appropriate for small scale commercial development.

These areas are not considered of sufficient public utility to warrant adoption by the Highway Authority.



Design Details for Private Shared Drives and Courtyard Parking Areas

CRITERIA	SPECIFICATION
Traffic Speed	
Design Speed	10mph
Street Dimensions and Character	
Carriageway	<p>A shared surface serving more than two properties can be of varying width, but must be a minimum of 4.1 metres for the first 15 metres behind the back of the carriageway to allow two vehicles to enter and leave simultaneously. Turning facility provided for cars where cul-de-sacs are longer than 20 metres (Manual for Streets, Paragraph 6.8.3)</p> <p>Refuse collection points should be provided within 25 metres of the highway.</p> <p>The connection to the priority road shall be laid out as per a footway crossing, in accordance with Section 184 of the Highways Act, 1980, where applicable.</p>
Footway	Part of the shared surface
Street Design Details	
Parking	All car parking should be provided off-street. Provision must be made to enter and exit in a forward gear on roads with high levels of vehicle flow. In/out drive arrangements are only permitted where space allows for manoeuvring within the site and does not rely on the use of both accesses, full visibility is required at both accesses. Car parking spaces must be delineated to maximize occupancy and courteous behavior, which may not otherwise be achieved through errant parking.
Junction Radii	Vehicular footway crossover. Vehicles to enter and exit at 90° to the kerb line.
Paving Style	Paving style to suit immediate environment of the public realm setting.
Landscaping	A landscape scheme should be integral to the design of the space using trees and low shrubs.
Materials	
Main Carriageway	Predominantly macadam and/or concrete block paving laid in a herringbone or tegular pattern. A stretcher course of blocks should be used to identify the edge of a parking areas, junctions, slow points and traffic management features as appropriate.
Intersections	Adequate vehicular and pedestrian visibility must be provided.
Kerbing	Low rise kerbs should be provided, either as kerb setts or concrete edge strips to indicate the boundary between adopted highway and private property. Level surfaces will be considered.
Street Lighting	Any street lighting provision will remain in private ownership.

3.16 Active Travel (Walking and Cycling) Routes

In all cases, Active Travel Routes in new developments should be designed to provide a more direct and convenient means of accessing services and facilities from developments than by using the highway network alone.

Worcestershire County Council requires that Active Travel Routes are to be clearly marked to provide adequate separation of pedestrians and cyclists, recognising the accessibility and safety benefits of this approach. They should be designed to minimise the need for cyclists to stop and to maintain a speed of approximately 12mph.

Design Details for Active Travel Routes

CRITERIA	SPECIFICATION
Traffic Speed	
Design Speed	15mph for cyclists
Street Dimensions and Character	
Active Travel Route Width	Separated, shared facilities are required. Active Travel Routes should be a minimum of 3.5 metres wide to allow for two cycles to pass each other comfortably, with an associated 1 metre service margin/verge to accommodate street lighting where appropriate.
Street Design Details	
Cycle Parking	Secure cycle parking should be provided in the vicinity of all trip attractors, positioned to ensure maximum visibility, but not in locations where it would become an obstacle to pedestrians or cyclists.
Protection from Vehicular Use	Bollards should be used to prevent use of footways and cycleways by motor vehicles. Guard railing must not be used.
Biodiversity and landscape	Ways to incorporate enhancements for wildlife should be included in the streetscape design in a way that engages the public and is tamper proof. Hedges, trees and wildflower verges should be incorporated to enhance permeability of the landscape for species to connect with other habitat types such as woodlands and grasslands. This will also enhance the user experience along the route.
Materials	
Carriageway	Active Travel Routes should be exclusively of macadam (Hot Rolled Asphalt is preferred to minimise rolling resistance). More porous materials will be considered for leisure routes.
Demarcation	Flush kerbing or green infrastructure should be used to demarcate cycleways and footways, as required.

3.17 Industrial Access Roads

Industrial access roads are to be provided to serve industrial or employment areas where HGV movements are to be accommodated on a regular basis. Carriageway widths may need to be increased to accommodate all types of vehicles expected to access these sites.

Design Details for Industrial Access Roads

CRITERIA	SPECIFICATION
Traffic Speed	
Design Speed	30mph
Street Dimensions and Character	
Carriageway Width	6.7 metres minimum, up to a maximum of 7.3 metres if required to accommodate larger vehicles.
Active Travel Route	A separated active travel route should be provided which runs parallel, providing direct access to all trip attractors in the site. This should be separated from the highway by a minimum 1 metre green infrastructure strip.
Direct vehicular access to parking	This will be permitted, subject to suitable visibility being demonstrated in the design process.
Street Design Details	
On Street Parking	Parking on the highway will not be permitted. This will necessitate the implementation of a Traffic Regulation Order if the road is to be adopted by the Highway Authority.
Junction Radii	Typically 10 metres. Tracking must be provided for the largest permitted vehicle.
Landscaping	Green infrastructure has a strong role to mitigate the impacts of major industrial/employment uses on the adjacent landscape. The landscaping can be integrated with SuDS drainage using swales and tree planting to provide additional GI benefits as part of a site wide SuDS and GI strategy. Wherever possible, this should be accommodated outside the limits of the adopted highway.
Biodiversity	Green infrastructure has a strong role to mitigate the impacts of major industrial/employment uses on the biodiversity. Wherever possible, this should be accommodated outside the limits of the adopted highway.
Materials	
Main Carriageway	Macadam
Kerbing	Pre-cast concrete kerbs. Larger, more robust kerbing may be required to prevent over-running and damage to green infrastructure.

4. Planning For Parking

4.1 Introduction

On 27th March 2015, a Ministerial Statement updated Paragraph 39 of the National Planning Policy Framework, providing further detail on the application of parking standards. This document seeks to provide an approach as to how car parking in Worcestershire should be provided to support new and expanding business and residential development in a manner which embraces the NPPF.

It is considered that if the applicant is the end user that they are well placed to assess operational demands but all sites must be considered against a planning use class to ensure they equally address the needs of future users. Therefore applications should provide a suitable evidence base to ensure vehicles are not displaced onto the Highway to ensure highway safety is not compromised and maintain the free flow of traffic to the benefit of the local economy.

This document only reflects a small part of managing vehicle demands and therefore should be read alongside the Local Transport Plan which contains policies to promote sustainable travel through the provision of physical infrastructure and travel planning initiatives.

4.2 Residential

There is a no direct relationship between car parking provision and choice of transport mode, so a minimum provision for residential need should be made to ensure suitable in-curtilage storage as per the following:

Flats With Communal Parking Area:

- 1 Bedroom Flat – 1 Car Space, 1 Cycle Space
- 2 Bedroom Flat – 2 Car Spaces, 2 Cycle Spaces

Dwelling Houses

- 1 bed house – minimum 2 spaces
- 2 bed house is a minimum of 2 spaces
- 3 bed house is a minimum of 3 spaces
- 4 bed house is a minimum of 4 spaces

Thereafter, 0.5 for each additional bedroom. E.g:

- 5 bed house – minimum of 4.5 (5) spaces
- 6 bed house is a minimum of 5 spaces
- 7 bed house is a minimum of 5.5 (6) spaces
- 8 bed house is a minimum of 6 spaces
- 9 bed house is a minimum of 6.5 (7) spaces
- 10 bed house is a minimum of 7 spaces

The above also cover Houses of Multiple Occupancy and refer to off street/on-site parking. Where practical, revised Traffic Regulation Orders are to be pursued to ensure no additional parking is available on street. Appropriate cycle storage should be provided which is sheltered and secure, such as garden shed.

Garages are excluded from the car parking calculations due to the ability to convert them into habitable accommodation without the need for permission and their usage for personal storage rather than that of a vehicle.

Worcestershire County Council strongly encourages all properties to be equipped with Ultra Low Emission Vehicles (ULEV) charging points including provision where communal parking is provided. This position is supported by paragraph 35 of the NPPF.

Visitors

These are permitted to be counted within the street due to their short term duration and infrequent occurrence. Where existing on street demand or parking restriction prevents this.

Off road provision should be made for 1 space per 5 dwellings. Provision should also be made for cyclists where spaces should be shared and the number proportionate to the scale of the development.

Car Free Development

In town and city centres it may be appropriate not to provide car parking spaces at all. In such cases, detailed consideration must be given to the opportunity to access the site sustainably, the proximity to local amenities, transport interchange points, parking restrictions and the implementation of an approved Travel Plan.

Car Clubs

In areas where housing density is greater and there is a wider range of transport choices car free development will be encouraged., However residents should still be given the ability to travel by car should they choose and where there is sufficient critical mass in terms of development or existing population to support a scheme the provision of a car club can provide a valuable service. Where these are proposed early discussions with the HA and club operators is needed to ensure long term viability and city wide take up.

Care Homes

These are a mix of residential and employment uses which can fall into C2 or C3 uses. Most sites are promoted by established care providers who will have experience of comparable sites. The applicant should present appropriate up to date data from similar sites on car parking demand to inform levels for their proposal rather than applying the residential C3 standards which may not be appropriate.

Commercial / Industrial (Non-Residential)

Commercial operators will have a good understanding of the needs of their business and will determine how land under their control could be managed. Car parking need is a subjective matter particularly in the mind of neighbours; the applicant should provide a minimum parking provision for each development along with an evidence base to demonstrate the appropriateness of the provision. Trip rates accumulation should either be derived from first principles or from existing data, for example; TRICS or comparison to facilities of similar size and geographic circumstance.

Adequate space for heavy goods, delivery and public service vehicles must be made within the site boundary, which should not conflict with the proposed parking arrangements.

Car Free Development

As with private car provision, in certain highly accessible locations such as in town and city centres it may be appropriate not to provide car parking spaces at all. Consideration must be given to the opportunity to access the site sustainably, the availability and capacity of public car parks and the number of linked trips. Provision for servicing and deliveries must always be made within the site, unless there is a strong fall-back position which would remove this requirement.

Educational Facilities

Car parking at schools is a contentious issue and often causes local concerns. By definition schools service a local catchment and new schools should not be proposed in isolated locations, therefore any proposals should look to manage day long parking only associated with staff. It is recognised that there is a difference in rural and urban locations and there will be on street parking for short periods of the day associated with link trips in both cases. In rural locations space should be made for every member of staff and in urban locations staff levels should be reduced based on the alternative options. Car free development is permissible depending on the local circumstances. Shelter facilities to provide for pupil scooter storage should be provided in an accessible location for primary schools and pupil cycle parking for all educational facilities.

Other Users Needs In Non Residential Development

Consideration and provision must be made for disabled badge holders, motorcycles, bicycles and ULEV. The following ratios are required.

- Disabled: 1 space per 20 car parking spaces, minimum provision 1 space
- Motorcycle: 1 space per 20 car spaces, minimum provision 1 space
- Bicycle Space: 1 space per 10 car spaces, but a minimum provision of 6 spaces.
- ULEV Charging Spaces: 1 space per 25 car spaces.

Commercial development must be supported by a travel plan to promote sustainable travel choices irrespective of the number of car parking spaces provided and where a transport assessment is provide they should be a key factor in managing traffic generation and car parking supply.

Specifications

Car Parking Spaces should be a minimum 2.4m x 4.8m. For residential development circulation space around the vehicle is needed so dimensions increase to 3.2m x 6m

Garages can be used to provide bicycle storage as well as for other household storage needs, where this occurs garages should have an internal dimension of 3.2m x 6m.

ULEV charging systems should be 32A, 7kW charging points.

Reference Documents

This is not a definitive list, but indicates where detailed guidance can be found:

- Car Parking, What Works Where – English Partnerships
- Guidance Note: Residential Car Parking – CIHT - 2012
- LTN 2/08 – Cycle Infrastructure Design – 2008
- Institute of Highway Engineers – Guidelines for Motorcycling (www.motorcycleguidelines.org.uk)
- Manual for Streets – DfT – 2007
- Planning for Cycling – CIHT – 2014
- NPPF

5. Planning For Passenger Transport

5.1 Philosophy

Worcestershire County Council requires developers to ensure access to high quality passenger transport facilities and services to optimise travel choice, and ensure sustainable development, regardless of whether a residential, commercial or industrial development.

It is critically important that development seeks to strengthen the commerciality of the passenger transport network. To do this, it must actively contribute towards ensuring passenger transport is an attractive travel choice, which assumes that developments will be designed to benefit from:

- Quality infrastructure and information - to limit wait times, ensure passenger comfort and enable intuitive journey planning;
- Quality passenger transport services – to support passenger transport companies to offer direct, fast, punctual and reliable services using appropriate vehicles, which are affordable and attractive to use;

In practice, developers will be expected to consider passenger transport access at a very early stage in the development process, and set out a costed passenger transport access strategy for their development.

5.2 Bus Routes

Worcestershire County Council recognises that ensuring direct, fast, reliable and punctual bus services is critically important if passenger transport is to offer a credible travel choice option.

Wherever possible, bus routes should not be required to make circuitous detours into residential areas, as this increases travel time and reduces the attractiveness of bus routes. With this in mind, Worcestershire County Council proposes a mean average walk distance for all properties within a development to scheduled bus stops of 400 metres, up to an absolute maximum of 800 metres. This is to be measured accurately from front door to bus stop, and not by drawing a radius on a map (i.e. as the crow flies). Measurements should assume that residents will make use of planned walking routes within the development.

Large phased developments should make provision for the earliest phases to be served by bus services. The provision and phasing will require detailed consideration at the planning application stage and will need to be incorporated into any legal agreement tied to the planning consent.

Where bus routes are proposed to operate through developments, these should be agreed in advance with the bus operating company, and should offer direct, unimpeded access through the site to minimise any impacts on journey times. On-street parking provision must be designed so as not to cause detriment to bus service operational efficiency. Bus priority measures may be required to support this, and these should be specifically designed and discussed with the DM team in advance of application submission.

5.3 Bus Stops

The provision and location of bus stops should be planned at an early stage and made the subject of a safety auditing process to ensure stops are not placed in hazardous areas on the network. The stop must be clearly marked on all plans, well in advance of construction and brought to the attention of potential house buyers to avoid any problems when a service starts later than intended occupation dates.

The provision of bus stops should be minimised within developments, to preserve operational reliability. A minimum distance of 400 metres between bus stops is recommended.

Stops should be located to give the best penetration into the development site by means of associated footpaths and they need to serve the greatest catchment area possible in terms of convenience.

Bus routes within new developments should be designed to be continuous (i.e. they should either pass directly through the development, or operate in a loop. Developments must not require bus services to make any unnecessary manoeuvres, so turning facilities should never be required.

Bus stops provided on, or adjacent to existing highway networks should be placed as close as possible to existing footpaths which provide access into the development.

In locations where Worcestershire County Council is the bus shelter provider, a commuted sum may be sought from developers to support ongoing maintenance of this infrastructure.

5.4 Real Time Passenger Information

Worcestershire County Council operates a countywide Real Time Passenger Information system for buses (RTPI). In many cases, contributions may be sought from developers to provide for RTPI displays at bus stops.

5.5 Rail

Where a development is adjacent to a railway line or other rail infrastructure (stations, sidings, freight facilities), then the developer should consult, at an early stage, with Network Rail. Contact details and procedures for such consultation can be obtained from the Network Rail website (www.networkrail.co.uk).

The Council's policies for rail are included in its Local Transport Plan. Where development is expected to generate additional demand for rail travel, and improvement schemes are identified, then financial contributions may be sought to support bringing forward delivery of these.

Where a development is adjacent to a railway station, developers should contact the relevant Train Operating Company responsible for managing that station. If in doubt, developers are advised to contact the DM team for advice.

5.6 Community Transport

Worcestershire benefits from a comprehensive network of Community Transport schemes, which provide passenger transport services to those who are unable to access scheduled passenger transport services, for a variety of reasons. Developers may be required to contribute towards service enhancement of community transport services to support access to developments by sustainable modes. This will be particularly relevant in more rural locations.

6. Planning For An Adoptable Public Streetscape

6.1 Introduction

This section covers works on the public highway instigated by developers and the creation of new highway maintainable at public expense, commonly referred to as Section 38 and Section 278 Highways Agreements.

6.2 Definitions and Interpretations

The following definitions and interpretations apply within this section:

- Adopted Highway – Highway maintainable at public expense.
- Adopt (Adoption) – The process by which future maintenance of a Highway at the public expense is accepted by Worcestershire County Council
- CDM Regulations – Construction (Design & Management) Regulations 2007
- Consultant – An organisation employed by the Developer to design the works.
- Contractor – An organisation employed by the Developer to carry out construction works.
- Dedicate (Dedication) – The freehold legal owner of a piece of land dedicates the top soil of that land for use as Highway, surrendering all rights to the top soil, whilst retaining legal ownership of the subsoil.
- DMRB - Design Manual for Roads and Bridges.
- Developer – An individual or organisation promoting a development.
- Development Control Engineer - Officers responsible for the technical approval, site inspection and management of the works on pursuant to a Sec. 38 and/or Sec. 278 Agreement.
- Easement – The right (secured by a legal agreement) to use or cross someone else's land for a specified purpose, for example to carry out work on subterranean ducts.
- Highway – A way over which the public have right to pass and re-pass unhindered.
- Highway Agreement – a legal agreement between Worcestershire County Council and the developer. Worcestershire County Council will enter the agreement where it is satisfied that the works to the Adopted Highway will be of benefit to the public. The Developer (or their contractor) will be responsible for executing the works on the Adopted highway in accordance with the terms of the agreement.
- Minor Works – minor work is limited to works of this description only: lowered kerbs for a single vehicular access; a simple bellmouth serving a private development that requires no amendment to the street lighting, highway drainage system or horizontal and vertical alignment of the Adopted Highway.
- Section 38 Agreement – A legal agreement made pursuant to Section 38 of the Highways Act (1980) that provides for Dedication of a road or other way as a Highway, and an agreement to Adopt the Highway at a specified point in time.

- Section 278 Agreement – A legal agreement made pursuant to Section 278 of the Highways Act (1980), which enables a Local Highway Authority, where it is satisfied that it will be of benefit to the public, to execute works on the Adopted Highway, in accordance with the terms of the agreement entered into with the developer.
- Surety – A third party approved by Worcestershire County Council becomes a party to the Section 38 and/or 278 agreement and guarantees to pay the sum specified in the said agreement for the completing of the works in certain circumstances.
- Worcestershire County Council – Worcestershire County Council is the Local Highway Authority (LHA) responsible for the construction, maintenance, operation, use and control of the Adopted Highway.

Section 38 of the Highways Act (1980) allows Worcestershire County Council as Local Highway Authority (LHA) to enter into a legal agreement with a Developer to adopt highways for future maintenance at the public expense, provided that they are constructed to Worcestershire County Council's approved conditions and specifications. The agreement may also contain further necessary provisions for the construction and dedication of the road as Worcestershire County Council considers appropriate.

Where schemes require alterations or improvements to the existing public highway, Sec. 278 of the Highways Act 1980 allows for Worcestershire County Council to enter into a legal agreement with a Developer in order to enable the Developer to make alterations or improvements to the public highway.

Sec. 38 Agreements will often be combined with a Sec. 278 Agreement if works in the existing highway are involved and Sec. 278 Agreements may also include a 'Sec. 38 Agreement element' if land is required to be adopted.

Please see Sec. 38 Application Form & Sec. 278 Application Form, which can be downloaded at www.worcestershire.gov.uk/SDG for a breakdown of the information required to commence a Sec. 38 or Sec. 278 submission.

Submissions will not be registered until all of the information required, as specified in the relevant Application Form has been submitted in an acceptable format. Worcestershire County Council doesn't have the resources to undertake technical assessment of schemes that can't gain technical approval due to missing information.

Sec. 38 of the Highways Act 1980 allows Worcestershire County Council (WCC) as Highway Authority (HA) to enter into a legal agreement with a Developer to adopt highways for future maintenance at the public expense, provided that they are constructed to WCC's approved conditions and specifications. The agreement may also contain further necessary provisions for the construction and dedication of the road as WCC considers appropriate.

Where schemes require alterations or improvements to the existing public highway, Sec. 278 of the Highways Act 1980 allows for WCC to enter into a legal agreement with a Developer in order to enable the Developer to make alterations or improvements to the public highway.

Sec. 38 Agreements will often be combined with a Sec. 278 Agreement if works in the existing highway are involved and Sec. 278 Agreements may also include a 'Sec. 38 Agreement element' if land is required to be adopted.

The Early Technical Assessment (ETA) of off-site highway works, during the lifetime of the planning application is a precursor to the Sec. 278 process and is not an iterative process. This facility is offered, primarily to highlight issues which may arise during the detailed design process of the proposed off-site highway works but which wouldn't necessarily come to light during the assessment of the preliminary designs submitted as part of the planning application submission.

The ETA process will enable a more rigorous assessment of the off-site highway improvements submitted as part of the planning application and should give developers greater confidence that their proposals are deliverable in compliance with both National and WCC design specifications.

In order to produce an assessment of the off-site highway works within the timescales allotted to the planning process (8 to 12 weeks) the level of information required is reduced from that normally needed to initiate a Sec. 278 submission.

Please see the Early Technical Assessment, Sec. 38 Application Form & Sec. 278 Application Forms, which are available at www.worcestershire.gov.uk/SDG for a breakdown of the information required to commence the respective submission.

Electronic submissions and general enquiries should be sent to: HighwayTechSub@worcestershire.gov.uk

Submissions will not be registered until all of the information required, as specified in the relevant Application Form has been submitted in an acceptable format. WCC doesn't have the resources to undertake technical assessment of schemes that can't gain technical approval due to missing information.

All drawings and plans must be drafted by a competent highway consultant appointed by the Developer who must have experience in highway design and construction.

The initial technical submission will need to be supported by a Design Report which discusses all of the design elements of the scheme from horizontal & vertical alignment, drainage and junction control etc. their relevant merits and justifies their use within the submitted design. This document will need to be refreshed with each subsequent technical submission, to take account of any amendments made to address issues highlighted in the technical assessment.

Each technical assessment carried out by Worcestershire County Council or its consultants and returned to the developer will be accompanied by a Comment Summary that will establish the headline issues which need to be resolved prior to Technical Approval being issued. The developer will need to complete the Designer Response section for each of the comments, as well as the revised Departure from Standard Report and resubmit this form with their subsequent submission. Failure to address each of the comments will result in the submission being returned, without registration.

It is strongly recommended that the developer or their agents undertake detailed discussions with WCC prior to each submission being made, to ensure that their submission addresses the outstanding issues and new departures from standard which occur as a result of addressing those comments.

Meetings between the developer, their agents and WCC are the best way to resolve the issues affecting the award of Technical Approval and would recommend that a meeting is held to discuss the content of each technical assessment. However, after the issue of every second technical assessment, a progress meeting will have to take place and failure to attend will prevent the registration of any further submissions?

The Developer will be required to enter into a formal agreement with the Local Water Authority in respect of sewers and pumping stations in accordance with Sec. 104 Water Industry Act 1991 and provide written assurance that the Water Authority will adopt sewers within the Sec. 38 Works. Private sewers within the Sec. 38 Works are not accepted by WCC and will not be adopted. Adoption of the Sec. 38 Works will not take place until proof of the adoption of the private sewers etc. by the Local Water Authority has been provided to WCC.

WCC require the inclusion of the Traffic Management works required to deliver the Sec. 278 works within the technical submissions. The traffic management proposals will need to be certified by an accredited TM Practitioner (Sector 12d). The traffic management plans, will be assessed to ensure it enables WCC to manage the highway network to secure the expeditious movement of traffic on the network. The traffic management plan will also be used to schedule Streetwork permits, temporary traffic regulation orders etc. within the works programme and form part of the Sec. 278 agreement.

A Comment Summary will accompany each assessment returned to the Developer. This form will need to be completed by the developer or their agent and submitted alongside their next technical submission. This document will evolve alongside the scheme through each subsequent technical submission and provide ongoing record of the schemes progress through the technical assessment process. WCC reserves the right to withhold registration and return the submission should any of the comments remain unaddressed.

6.3 Fees

Worcestershire County Council will charge a Management and Inspection Fee, based upon a percentage of the County Council's estimate of the total cost of the works, currently 7.5%. This fee will cover the following in respect of the proposed Sec. 38/ Sec. 278 Works:

- Basic technical approval;
- Calculation of Bond Fees;
- Administration;
- Site inspections during construction and for provisional and final certificates (see below); and
- Inspections of highways, adoptable highway drainage and street lighting inspections

The Developer will also be responsible for payment of all additional fees incurred by Worcestershire County Council for Worcestershire County Council consultancy design checks and audits as considered appropriate for each Sec. 38/278 proposal which may include:

- Street lighting design;
- Major junction design;
- Structures design and inspection

All fees are payable before the Agreement is signed.

6.4 Site Inspections

The Developer is responsible for the day-to-day supervision and setting out of the Sec. 38/Sec. 278 Works up to the date of issue of the Final Certificate of Completion for the works (see below). A Worcestershire County Council Inspector will be responsible for ensuring the works comply with Worcestershire County Council's Specification and the Developer must allow Worcestershire County Council's representative access to every part of the Sec. 38/Sec. 278 Works at all times for the purpose of inspecting the Sec. 38/ Sec. 278 Works and all materials used or intended to be used therein. It is the responsibility of the Developer to ensure the works are constructed in accordance with the approved drawings/specification submitted to and approved by Worcestershire County Council. The Developer is responsible for the testing of materials using an approved laboratory as specified and/or requested by Worcestershire County Council.

Non-compliance with the approved drawings/specification will result in the Developer being required to reconstruct defective area(s) of the Sec. 38/Sec. 278 Works (a Defective Works Requirement). Each and every additional inspection to check compliance with a Defective Works Requirement will be charged at £250 per visit.

6.5 Completing the legal requirements

Once technical approval has been granted, the Developer must provide 13 coloured copies of the Sec. 38/Sec. 278 layout drawing to be included in the agreement.

Please see Sec. 38 Application Form & Sec. 278 Application Form, available at www.worcestershire.gov.uk/SDG for details regarding the colour of highway features.

6.6 Surety

The Developer will be required to provide a financial security in order to ensure that there is adequate provision to allow the Sec. 38/Sec. 278 Works to be completed in default of the Developer's obligations under the Sec. 38/Sec. 278 Agreement. This may include unfinished or defective works. The amount to be secured must be equal to the total cost of the Section 38/Section 278 Works as determined by Worcestershire County Council. The security may be in the form of:

- a. A bond in Worcestershire County Council agreed format with a reputable financial institution (Bank/Insurance company) approved by the County Council.
- b. a deposit of the equivalent sum deposited with Worcestershire County Council until issue of the final certificate of completion of the Sec. 38/Sec. 278 works
- c. NB in the case of a Sec. 278 Agreement where a bond is provided, the surety may be a party to the Agreement

6.10 Constructing the Works

Where works are being carried out under a Sec. 38/Sec. 278 Agreement, the Developer must not commence any works on the site until:

- a. The Sec. 38/Sec. 278 Agreement has been completed;
- b. An acceptable form of the financial security has been provided;
- c. All fees have been paid;
- d. Written notification has been provided of the Developer's intention to commence construction giving at least 3 months notice (to comply with the requirements of the Traffic Management Act 2004;
- e. Details of the appointed contractor in order for Worcestershire County Council to validate its suitability to carry out the Sec. 38/Sec. 278 Works

NB: Any anomalies/amendments encountered whilst construction is ongoing and before the issue of the Provisional Certificate/Final Certificate of Completion will require a formal amendment to the plans appended to the Sec. 38/Sec. 278 Agreement, which will require the completion of a supplemental agreement. The Developer will be responsible for any costs associated with the drafting and completion of the supplemental agreement and any additional supervision fees that may be required.

6.11 Timescale for completing the works

Once works have commenced on site they must be completed to Worcestershire County Council's satisfaction within a reasonable time period, either within 3 months of all buildings on site being completed, or within 3 years of the date of signing the Sec. 38/ Sec. 278 Agreement. If this timescale is not adhered to Worcestershire County Council may refer the matter to their Legal Services and take action as set out in 'Defects and Default Lists' below.

6.12 Issuing a Provisional Certificate

A Provisional Certificate of Completion (The Provisional Certificate) will only be issued and the 12-month maintenance period commence, once the Sec. 38/Sec. 278 Works have been completed in accordance with the approved drawings (including compliance with any Defective Works Requirements) and to the satisfaction of Worcestershire County Council's Engineer.

The Provisional Certificate must be formally requested in writing by the Developer from Worcestershire County Council's Engineer.

6.13 Inspection Process following request for Provisional Certificate

- a. As soon as is reasonably practicable Worcestershire County Council's Engineer will undertake an inspection of the Sec. 38/Sec. 278 Works and produce and supply a defects list (Defects List) to the Developer.
- b. The Developer will within 3 months from the date of receipt (or such other period of time as notified in writing by the Engineer) complete the works as identified on the Defects List (The Defect Works).
- c. When Worcestershire County Council's Engineer is satisfied all works identified have been carried out in accordance with the Sec. 38/Sec. 278 Agreement and Worcestershire County Council's specification or as otherwise directed by the Engineer above, Worcestershire County Council's Engineer will then issue the Provisional Certificate in order to commence the 12 month maintenance period. The bond supporting the Agreement will then normally be reduced to 50% of its original value. The Developer will remain fully responsible for maintaining the works for a minimum period of 12 months until a Final Certificate of Completion is issued.

NB: The issue of the Provisional Certificate of Completion will constitute the road being 'first open' to the public traffic for the purposes of Sec. 1(9) of the Land Compensation Act 1973. The Sec. 38/ Sec. 278 Agreement will make provision for the Developer to indemnify Worcestershire County Council from any claims relating to the works including those made under the Land Compensation Act 1973.

NB: Where a developer has commenced work on highways to be included within the Sec. 38 agreement, Worcestershire County Council will be considered the imposition of a 36 month maintenance period.

Even though a road is 'open to public traffic' it will not, in respect of the Sec. 38 Works, constitute the road(s) becoming highway maintainable at the public expense until the Final Certificate of Completion is issued.

Similarly, in respect of any Sec. 278 Works carried out, the works will not be deemed to form part of the publicly maintainable highway until the issue of the Final Certificate of Completion.

6.14 Defects, Default Works and Notice to Surety

If the Defect Works or Defective Works Requirements (the Default Works) have not been completed as set out above, the Engineer will consider, with advice from Worcestershire CC's Legal Services, the legal options for ensuring the works are completed.

Worcestershire CC may without prejudice to any other right claim or remedy under the Sec.38/Sec. 278 Agreement:

In respect of an Agreement supported by a Bond or Surety, send to the Surety a Notice in writing ("the Default Notice") specifying the works required to be carried out, containing an estimate by Worcestershire County Council's Engineer or Agent of the cost of carrying out the outstanding works and of the cost of administration, supervision, execution, completion and maintenance of the works for a period of 12 months prior to the street(s) and way(s) becoming (or in the case of existing highway maintainable at the public expense forming part of) a highway maintainable at the public expense (the Default Costs); [the Surety or the County Council to apply the sum to carry out the work as appropriate]; or

In the case of the financial security being in the form of a cash deposit lodged with Worcestershire County Council, send to the Developer Notice in writing (“the Default Notice”) specifying the work to be carried out, containing an estimate by Worcestershire County Council’s Engineer or Agent of the cost of carrying out the outstanding works and of the cost of administration, supervision, execution, completion and maintenance of the works for a period of 12 months prior to the street(s) and way(s) becoming (or in the case of existing highway maintainable at the public expense forming part of) a highway maintainable at the public expense, (the Default Costs)) and without further notice to the Developer apply the sum held upon deposit in the execution of carrying out the Default Works.

6.15 Issuing a Final Certificate of Completion

At the end of the 12 month maintenance period the Developer must request the Final Certificate of Completion, (the Final Certificate) from the Worcestershire County Council’s Engineer in writing. Copies of as built drawings will also need to be supplied at the time the request is made.

6.16 Inspection Process following a request for a Final Certificate

The inspection process for the issuing of the Final Certificate will follow that of Paragraphs A and B of the Provisional Certificate inspection process above.

If Worcestershire CC’s Engineer is satisfied that all works identified have been carried out in accordance with the Sec. 38/Sec. 278 Agreement and Worcestershire County Council’s specification or as otherwise directed by the Engineer, then Worcestershire CC’s Engineer will issue the Final Certificate.

The issuing of the Final Certificate signifies (amongst other things) Worcestershire CC’s adoption of the Sec. 38/Sec. 278 Works. Any roads open to public traffic forming part of the Sec. 38 Works will at this point become highway(s) maintainable at the public expense. The Bond or deposit provided in support of the Agreement may now be cancelled/ refunded.

Should the Developer not have carried out the Default Works, nor requested the Final Certificate of Completion within 18 months of the date of issue of the Provisional Certificate, Worcestershire County Council will apply the remedies set out in the section entitled ‘Defects, Default Works and Notice to Surety’ above.

6.17 Health and Safety

Prior to formal adoption, the Developer will be required to submit a copy of the completed Health and Safety File in accordance with the Construction, Design and Management 2007 Regulations.

Appendix A – Useful Contact Details

ORGANISATION	CONTACT DETAILS
Worcestershire County Council Development Management Team County Hall, Spetchley Road, Worcester, Worcestershire, WR5 2NP	highwaysdc@worcestershire.gov.uk www.worcestershire.gov.uk/SDG 01905 763763
Redditch Borough Council Town Hall, Walter Stranz Square, Redditch, Worcestershire, B98 8AH	Contact.centre@bromsgroveandredditch.gov.uk (01527) 534123
Bromsgrove District Council The Council House, Burcot Lane, Bromsgrove, Worcestershire, B60 1AA	Contact.centre@bromsgroveandredditch.gov.uk (01527) 534123
Wyre Forest District Council Wyre Forest House, Finepoint Way, Kidderminster, Worcestershire, DY11 7WF	worcestershirehub@wyreforest.gov.uk www.wyreforestSDG.gov.uk (01562) 732928
Worcester City Council The Guildhall, High Street, Worcester, Worcestershire, WR1 2EY	customerservicecentre@worcester.gov.uk www.worcester.gov.uk (01905) 722233
Wychavon District Council Civic Centre, Queen Elizabeth Drive, Pershore, Worcestershire, WR10 1PT	service@wychavon.gov.uk www.wychavon.gov.uk (01386) 565000
Malvern Hills District Council The Council House, Avenue Road, Great Malvern, Worcestershire, WR14 3AF	Development.control@malvern hills.gov.uk www.malvern hills.gov.uk (01684) 862151
Highways England National Traffic Operations Centre Ridgeway, Quinton Business Park, Birmingham, B32 1AF	Contact details can be found here: www.gov.uk/government/organisations/highways-agency
West Mercia Road Safety Partnership Suite 11, Malvern Gate, Bromwich Road, Worcester, WR2 4BN	contact@srpwestmercia.org.uk www.srpwestmercia.org.uk
West Mercia Police PO Box 55, Worcester, Worcestershire, WR3 8SP	Contact Details can be found here: https://www.westmercia.police.uk/CPDA

Appendix B – Worcestershire Highway Network

A dynamic map of Worcestershire's Local Highway Network, Public Rights of Way and many other features can be viewed here:

<http://gis.worcestershire.gov.uk>

It should be noted that the M5, M42 and M50 motorways and the A46 Trunk Road (from the County boundary with Gloucestershire, to the County boundary with Warwickshire) are managed by Highways England.

Appendix C – Biodiversity

Legislative Framework And Best Practice Guidance

The Wildlife And Countryside Act 1981 (As Amended)

The WCA is the major legal instrument for wildlife protection in the UK. This legislation is the means by which the Convention on the Conservation of European Wildlife and Natural Habitats (the ‘Bern Convention’), the Convention on the Conservation of Migratory Species of Wild Animals (the ‘Bonn Convention’) and the European Union Directive on the Conservation of Wild Birds (79/409/EEC) (EC Birds Directive) are implemented in Great Britain (see below). The Act makes it an offence (subject to exceptions) to intentionally kill, injure or take any wild animal listed on Schedule 5 or wild bird not listed in Schedule 2; and prohibits interference with places used for shelter or protection and intentionally disturbing animals occupying such places. The Act makes it an offence (subject to exceptions) to intentionally pick, uproot or destroy any wild plant listed in Schedule 8.

Birds Directive 2009/147/Ec (Codified Version Of Directive 79/409/Eec As Amended)

The Directive provides for the establishment of a coherent network of Special Protection Areas (SPAs) comprising all the most suitable territories for endangered and migratory species. Since 1994 all SPAs form an integral part of the Natura 2000 ecological network. The Birds Directive also bans activities that directly threaten birds, such as the deliberate killing or capture of birds, the destruction of their nests and taking of their eggs, and associated activities such as trading in live or dead birds (with some exceptions).

Habitats Directive

The aim of the Habitats Directive is to ‘maintain or restore, at favourable conservation status, natural habitats and species of wild fauna and flora of Community interest’ (Habitats Directive, Article 2(2)).

The provisions of the Directive require Member States to introduce a range of measures, including:

- Maintain or restore European protected habitats and species listed in the Annexes at a favourable conservation status as defined in Articles 1 and 2;
- Contribute to a coherent European ecological network of protected sites by designating Special Areas of Conservation (SACs) for habitats listed on Annex I and for species listed on Annex II. These measures are also to be applied to Special Protection Areas (SPAs) classified under Article 4 of the Birds Directive. Together SACs and SPAs make up the Natura 2000 network (Article 3);
- Ensure conservation measures are in place to appropriately manage SACs and ensure appropriate assessment of plans and projects likely to have a significant effect on the integrity of an SAC. Projects may still be permitted if there are no alternatives, and there are imperative reasons of overriding public interest. In such cases compensatory measures are necessary to ensure the overall coherence of the Natura 2000 network (Article 6);
- Member States shall also endeavour to encourage the management of features of the landscape that support the Natura 2000 network (Articles 3 and 10);
- Undertake surveillance of habitats and species (Article 11),

- Ensure strict protection of species listed on Annex IV (Article 12 for animals and Article 13 for plants).
- Report on the implementation of the Directive every six years (Article 17), including assessment of the conservation status of species and habitats listed on the Annexes to the Directive.”

Protection Of Badgers Act 1992

The Protection of Badgers Act 1992 protects badgers and their setts. Offences under the act include killing, injuring or taking a badger, or to damage or interfere with a sett unless a licence is obtained from the relevant statutory authority.

Countryside And Rights Of Way Act 2000 (Crow Act 2000)

The CRoW Act provides for public access on foot to certain types of land, amends the law relating to public rights of way, increases measures for the management and protection for Sites of Special Scientific Interest (SSSI) and strengthens wildlife enforcement legislation, and provides for better management of Areas of Outstanding Natural Beauty (AONB).

The Act places a duty on Government Departments and the National Assembly for Wales to have regard for the conservation of biodiversity and maintain lists of species and habitats for which conservation steps should be taken or promoted, in accordance with the Convention on Biological Diversity.

Schedule 9 of the Act amends SSSI provisions of the Wildlife and Countryside Act 1981, including provisions to change SSSIs and providing increased powers for their protection and management.

Schedule 12 of the Act amends the species provisions of the Wildlife and Countryside Act 1981, strengthening the legal protection for threatened species. The provisions make certain offences ‘arrestable’, create a new offence of reckless disturbance, confer greater powers to police and wildlife inspectors for entering premises and obtaining wildlife tissue samples for DNA analysis, and enable heavier penalties on conviction of wildlife offences.

Natural Environment And Rural Communities (Nerc) Act 2006

The NERC Act makes provision in respect of biodiversity, pesticides harmful to wildlife and the protection of birds, and in respect of invasive non-native species. It alters enforcement powers in connection with wildlife protection, and extends time limits for prosecuting certain wildlife offences.

Section 40(1) imposes a duty to conserve biodiversity:

“Every public authority must, in exercising its functions, have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity.”

Section 40(3) of the Act explains that:

“Conserving biodiversity includes, in relation to a living organism or type of habitat, restoring or enhancing a population or habitat”.

The duty applies to all local authorities and extends beyond just conserving what is already there to carrying out, supporting and requiring actions that may also restore or enhance biodiversity.

Section 41 of the Act requires the Secretary of State to publish a list of habitats and species which are of principal importance for the conservation of biodiversity in England. The list (including 56 habitats and 943 species) has been drawn up in consultation with Natural England and draws upon the UK BAP List of Priority Species and Habitats. The S41 list should be used to guide decision-makers such as local and regional authorities when implementing their duty: to have regard to the conservation of biodiversity in the exercise of their normal functions – as required under Section 40 of the NERC Act 2006.

The Conservation Of Habitats And Species Regulations 2010 (As Amended)

The Habitats and Species Regulations are the principal means by which the European Union Directive on the Natural Habitats and Wild Fauna and Flora (92/43/EEC) (EC Habitats Directive) is transposed in UK law. They also consolidate all the various amendments made to the Conservation

(Natural Habitats, &c.) Regulations 1994 in respect of England and Wales. The Regulations provide for the designation and protection of ‘European sites (paragraph 8)’, the protection of ‘European protected species’, and the adaptation of planning and other controls for the protection of European Sites. In addition, the need for an assessment of impacts on Natura 2000 sites is set out within Article 6 of the EC Habitats Directive 1992, and interpreted into British law by the Conservation of Habitats and Species Regulations 2010.

Hedgerow Regulations 1997

The Hedgerows Regulations 1997 protect most countryside hedgerows from being removed (including being uprooted or otherwise destroyed) without prior permission from the local planning authority. The Regulations set out criteria for identifying important hedgerows, for which greater protection is conferred.

Biodiversity 2020: A Strategy For England’s Wildlife And Ecosystem Services (2012)

This is a biodiversity strategy for England’s wildlife and ecosystem services which builds on the Natural Environment White Paper and provides a comprehensive picture of how England is implementing its international and EU commitments. It sets out the strategic direction for biodiversity policy for the next decade on land (including rivers and lakes) and at sea, building on the work that has gone before, but also seeking to deliver a step change.

One of the Priority actions is that DEFRA “will work with transport agencies and key delivery partners to create coherent and resilient ecological networks in the natural areas at the edges of our strategic roads and railways, which cover approximately 60,000 hectares. The Government will host a forum with environmental stakeholders to inform future priorities for the enhancement of these green corridors”.

DEFRA state that they will “through reforms of the planning system, take a strategic approach to planning for nature within and across local areas. This approach will guide development to the best locations, encourage greener design and enable development to enhance natural networks. We

will retain the protection and improvement of the natural environment as core objectives of the planning system.”

Infrastructure Act 2015

An Act to make provision for strategic highways companies and the funding of transport services by land; control of invasive non-native species; and nationally significant infrastructure projects.

National Planning Policy Framework (2012)

The National Planning Policy Framework sets out the Government’s planning policies for England and how these are expected to be applied. This includes a number of environmental policies:

“Paragraph 117 states: To minimise impacts on biodiversity and geodiversity, planning policies should:

plan for biodiversity at a landscape-scale across local authority boundaries;

identify and map components of the local ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity, wildlife corridors and stepping stones that connect them and areas identified by local partnerships for habitat restoration or creation;

promote the preservation, restoration and re-creation of priority habitats, ecological networks and the protection and recovery of priority species populations, linked to national and local targets, and identify suitable indicators for monitoring biodiversity in the plan;

Paragraph 118 states;

if significant harm resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;

proposed development on land within or outside a Site of Special Scientific Interest likely to have an adverse effect on a Site of Special Scientific Interest (either individually or in combination with other

developments) should not normally be permitted. Where an adverse effect on the site's notified special interest features is likely, an exception should only be made where the benefits of the development, at this site, clearly outweigh both the impacts that it is likely to have on the features of the site that make it of special scientific interest and any broader impacts on the national network of Sites of Special Scientific Interest;

opportunities to incorporate biodiversity in and around developments should be encouraged;

planning permission should be refused for development resulting in the loss or deterioration of irreplaceable habitats, including ancient woodland and the loss of aged or veteran trees found outside ancient woodland, unless the need for, and benefits of, the development in that location clearly outweigh the loss; and

the following wildlife sites should be given the same protection as European sites: – potential Special Protection Areas and possible Special Areas of Conservation; – listed or proposed Ramsar sites; and – sites identified, or required, as compensatory measures for adverse effects on European sites, potential Special Protection Areas, possible Special Areas of Conservation, and listed or proposed Ramsar sites.”

Defra (2011). Biodiversity 2020: A Strategy For England's Wildlife And Ecosystem Services

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/69446/pb13583-biodiversity-strategy-2020-111111.pdf

Department For Communities And Local Government (2012). National Planning Policy Framework

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/6077/2116950.pdf

Chartered Institute Of Ecology And Environmental Management (2016). Guidelines For Ecological Impact Assessment In The Uk And Ireland. Terrestrial, Freshwater And Coastal

http://www.cieem.net/data/files/Publications/EcIA_Guidelines_Terrestrial_Freshwater_and_Coastal_Jan_2016.pdf

British Standard 42020:2013 Biodiversity. Code Of Practice For Planning And Development

<http://www.bsigroup.com/LocalFiles/en-GB/biodiversity/BS-42020-Smart-Guide.pdf>

Joint Nature Conservation Committee (2010). Handbook For Phase 1 Habitat Survey. A Technique For Environmental Audit. Jncc, Peterborough.

http://jncc.defra.gov.uk/PDF/pub10_handbookforphase1habitatsurvey.pdf

Highways Agency (1993). Design Manual For Roads And Bridges, Volume 11 Section 3 Part 4 Ecology And Nature Conservation

<http://www.standardsforhighways.co.uk/ha/standards/ - Volume 11, Section 3>

Highways Agency (2008). Design Manual For Roads And Bridges Volume 11 Section 2 Part 5 Assessment And Management Of Environmental Effects

<http://www.standardsforhighways.co.uk/ha/standards/ - Volume 11, Section 2>

Worcestershire County Council

You can contact us in the following ways:

By telephone:

01905 844887

By post:

Economy and Infrastructure Directorate
Worcestershire County Council,
County Hall,
Spetchley Road,
Worcester WR5 2NP

By email:

Transportstrategy@worcestershire.gov.uk

Online:

www.worcestershire.gov.uk



Worcestershire
Local Enterprise Partnership



worcestershire
county council