Buckinghamshire County Council
Transport, Economy and Environment

Buckinghamshire Countywide Parking Guidance

September 2015

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1. Introduction

This guidance sets out Buckinghamshire County Council's (BCC) approach to parking throughout the county, explaining how much parking new developments should provide for bicycles, motorcycles, cars and blue badge holders. The standards aim to help ensure that all new developments provide the right amount of parking, wherever they are in Buckinghamshire. BCC has worked alongside the four district planning authorities to ensure the needs of each district have been met.

Part 1 explains how we developed the standards and part 2 sets out the standards themselves.

1.1 Aims, objectives and scope of the standards

The key aim of this guidance is to ensure that developers provide the appropriate level and type of parking for new developments. This will play a role in promoting sustainable development across the county by attracting businesses and economic activity; ensuring our towns and villages remain attractive places to live and visit; and ensuring our residents continue to experience a high quality of life.

The objectives of the standards are:

- To provide guidance that sets out appropriate number of parking spaces for new developments across the county. The standards have been designed to account for the variation in settlement types, from densely populated towns to small rural communities.
- To reflect real-world demand for parking, to provide the parking that is really needed.
- To allow flexibility to recognise that each development is unique and the standards cannot predict exactly what will be appropriate in all cases.
- To encourage sustainable modes of transport by ensuring that appropriate levels of cycle and motorcycle parking are provided, and that this is secure and accessible.

Encouraging sustainable transport remains an important objective for the Council and will be pursued through a combined policy response as opposed to a solution based largely on parking supply constraint, which has proven to be of limited impact.

Scope

The parking guidance will:

- Be the core parking guidance document for Buckinghamshire and will provide the basis for all future highways advice provided by the County Council in its role as highway authority.

- Provide a document that can be used by the four District Councils (or suitably referred to in their emerging local development plans as deemed appropriate).
- Allow sufficient flexibility for Districts to consider the most appropriate way in which to adopt the Parking Provision Guidance locally.
- Be one document that has analysed both qualitative and quantitative issues, for example accessibility, size of spaces, and household size, among others.

However, it is worth noting that the scope does not include the following:

- Parking enforcement. BCC (and district authorities) have a role in parking enforcement, and this has been considered carefully when developing the standards. However enforcement is not considered in detail, and is the subject of other policies and procedures.
- Charging for car parking.
- Detailed design criteria although basic design details have been included

1.2 Why we need parking standards

Parking has a huge influence on Buckinghamshire's people and places. Too little parking could hold back our economy, or cause people to park inappropriately – leading to congestion, compromising safety and threatening the beautiful places that make Buckinghamshire special. Too much parking takes up space that could be used more productively and makes places difficult to get around. Good provision for cyclists and motorcyclists is vital to encourage travel by these modes, and suitable (and sufficient) disabled parking for blue badge users is important in retaining mobility and independence. Therefore, we need parking standards that carefully balance these needs - to provide the right amount of parking for Buckinghamshire.

There are currently no countywide parking standards in Buckinghamshire. Instead, the county relies on those developed by the district councils. These vary considerably and were developed under the more restrictive national policies described in Section 1.2. The recent change to national policy described (see Section 1.2) gives us the opportunity to revise these to provide the right levels of parking in Buckinghamshire.

These new standards also allow us to look at how travel has changed and make sure the levels of parking we secure reflects what is happening in the real world. Between 2001 and 2011 car ownership in Buckinghamshire has increased by 14%, although car ownership per household has increased by just 7%, from 1.5 to 1.6 cars per household. As a result, there are now over 300,000 privately owned cars or vans in Buckinghamshire, and the county has the highest percentage of three or more car households in the south-east. The countywide parking guidance has taken these statistics into account, to ensure that the most appropriate level of parking is provided for both residential and non-residential developments.

Providing clear standards is also key to stimulating growth, whilst keeping the county special. It will help developers to understand what is considered an appropriate level of parking. This should accelerate the determination of planning applications, by ensuring that applications are submitted with appropriate levels of parking, allowing (appropriate) developments to get going with minimal delay.

In summary, parking standards are required to balance the many benefits and costs of parking. They will help to ensure we provide the right parking for Buckinghamshire today. The following section sets out the aims and objectives that allow the standards to meet these needs.

2. Policy context

This section sets out the policy context which shaped the parking standards: the challenges we face and the opportunities we have.

2.1 National Policy

The National Planning Policy Framework (NPPF) (DCLG, 2012) sets out the national policy in relation to parking standards for new developments. This replaces both Planning Policy Statements (PPS) and Planning Policy Guidance (PPG); specifically PPG 13 covering transport (DCLG, 2011). These earlier documents restricted the flexibility local authorities had when setting parking standards, with PPG 13 setting out maximum parking standards for large developments. However, the more recent NPPF provides much more flexibility, and simply states that the following factors should be considered if local authorities choose to set parking standards (para 39):

- The accessibility of the development;
- The type, mix and use of the development;
- The availability of and opportunities for public transport;
- Local car ownership level;
- An overall need to reduce the use of high-emission vehicles.

Whilst we have been developing this guidance central government has added the following text to 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'*. This has been incorporated into the NPPF due to some local authorities imposing maximum parking standards from a previous administration. However as this new guidance moves away from arbitrary and maximum parking standards, we believe that the NPPF supports our new guidance and the flexibility implemented throughout. (See paragraph 1.5.2).

It also goes onto say that parking in town centres should be 'convenient, safe and secure, including appropriate provision for motorcycles' (para 40).

The Planning Practice Guidance (DCLG 2014) sets out guidance on a range of issues including encouraging more town centre parking spaces and emphasises the importance of well-designed places and overcoming street design issues. The guidance highlights that there are many different approaches that support successful outcomes of residential parking, such as on-street parking, in-curtilage parking and basement parking. Natural surveillance of parked cars is an important consideration, and car parking and service areas should be considered in context to ensure the most successful outcome can be delivered in each case. In terms of town centre parking, the guidance also states that it should be 'convenient, safe and secure'.

There is more detailed guidance available from national bodies, which has also helped to guide the development of these standards. The National Regeneration Agency's 'Car parking: What works where' (English Partnership, 2006) considers what works in different locations, bearing in mind the dilemma between individuals desire to park their car, and the collective desire for safe and attractive streets. This provides guidance on how many cars we should be planning for; how to deal with specific parking issues; and how and where to best accommodate car parking. This guidance has been used as a reference point throughout this document, as it identifies a range of important issues and parking options that should be considered when formulating standards.

Manual for Streets (MfS) (DfT, 2007) also provides useful guidance, and emphasises the link between planning policy and residential street design. It challenges established working practice and standards that have failed to produce good quality outcomes, particularly within residential developments. This is significant given the role of developers in creating successful neighbourhoods with a strong sense of community. MfS does not set out a new policy, but instead provides additional detail on how to do things differently within the existing policy, technical and legal framework. This has been considered and utilised within our standards.

The guidance also aims to drive forward the government's assurance to support the market for ultra-low emission vehicles as part of their plans for road reforms. This has been confirmed in various statements, strategies and policies, and in June 2011, the Office for Low Emission Vehicles issued its Plug In Vehicle Infrastructure Strategy 'Making the Connection'. With a clear desire for further funding and commitment from government to use of electric vehicles, the county wide parking guidance includes support for low emission vehicle infrastructure and industries. With the government announcing long term support for the ultra-low emission vehicle sector, this move will help to address the carbon consequences of motoring and improve our air quality.

In terms of cycle parking, there is a variety of guidance available on the design and layout of cycle parking. Sustrans (2004) provides extensive information on the location, design, and amount of cycle parking. This takes into account the importance of ensuring cycle parking is safe and secure, attractive, accessible and

convenient to the user. Transport for London (TfL, 2006) has produced guidance for cycle parking in the workplace and this emphasises the importance of ensuring cycle parking encourages people to cycle to work, and provides further details on long-stay bike parking. The above documents have been used alongside local experiences and evidence included in other local authorities' guidance, to ensure the BCC standards are well informed and appropriate.

2.2 Local Policy

The BCC Local Transport Plan 3 (LTP3) (2011) set out our policies, strategies and priorities to address the transport related challenges and issues across the county. This document identifies the need for effective parking management and enforcement, and the role of parking in managing demand for road space within towns and villages. It identifies that appropriate parking can make a significant contribution to town centre economic vitality and peak period congestion reduction. It also acknowledges that appropriate parking levels are important to ensure that the local economy is supported, particularly in small towns and villages.

In addition to LTP3, BCC encourages the use of Travel Plans, which aim to help new developments mitigate their impacts, reduce congestion, improve health, reduce CO_2 emissions, and reduce time spent travelling. Travel Plans will be used alongside the parking guidance by planners and developers to achieve the appropriate level and management of parking for new developments. The Travel plans are site-specific and should be live documents. These will vary in content depending on whether they are school travel plans, developer travel plans, business travel plans or visitor travel plans.

The Council is developing a fourth Local Transport Plan to replace LTP3. It will provide the (updated) overall strategy for transport in Buckinghamshire. It will build on and cross-reference this guidance where appropriate.

3. Developing the guidance

BCC has developed this guidance in close consultation with the district councils. Officers have worked in cooperation with counterparts in the district authorities to ensure the standards meet their needs. This included a series of working group meetings facilitated by the County Council, and the sharing of comments on working drafts and methods. The following section explains how the standards were developed.

3.1 Optimum standards

Previously, attempts have been made on both a national and countywide scale to reduce car ownership by adopting maximum parking standards. However, it is now widely accepted that restricting residential parking had little influence on car ownership - people still own cars, and are just forced to park inappropriately.

With this in mind, and considering the flexibility of the NPPF, we have now moved away from restraint-based parking standards. Instead we are introducing 'optimum' parking standards, which aim to reflect the *right* amount of parking to meet demand. Optimum is defined as providing the 'best or most favourable point, degree or amount'. So the standards introduced in this guidance should be considered as the most favourable amount to create conditions for sustainable growth, without causing adverse effects through the under or over provision of parking spaces.

3.2 Flexible standards

We have also provided flexibility for developers to provide the right amount of parking in situations where there is evidence that applying specific standards would not be appropriate. This flexibility acknowledges that parking standards need to be sensitive to local circumstances and concerns, and ensure parking restrictions do not encourage migration to other areas, or suppress development.

If a developer believes that the stated standard is not appropriate for the new development, the developer must produce sufficient evidence (e.g. through their transport assessment and/or travel plan) that a different level of parking would be more appropriate. It will remain the responsibility of the highway authority (the County Council) and relevant planning authority to decide whether the evidence is appropriate. Equally, where the highway and/or planning authority believe the evidence suggests the standards would not be appropriate, they have the flexibility to request what parking is appropriate. For example, in town centres, parking should be considered as a shared resource. By encouraging shared use parking between neighbouring developments or using public car parks a different amount of parking may be appropriate in some places.

4. Zoning

Buckinghamshire is made up of four districts, each with their own characteristics and population make-up, ranging from densely populated towns such as Aylesbury and Wycombe, to small, rural communities. Within each district there is further variation in the character and make-up of the population. There is also significant variation in the accessibility of public transport in different areas as can be seen in Appendix 1. As a result, it would be unrealistic to create one set of standards for the whole county.

To ensure that the standards reflect this variation, we have divided the County into zones, which take into account the different requirements of urban and rural areas. This is explained further in sections 1.5.3.1 – 1.5.3.2 below.

4.1 Zoning - Residential car parking

In urban areas, residents have more opportunity to walk, cycle, and use public transport to move around. Consequently, car ownership tends to be lower in urban areas than in rural areas. Hence, it is not always necessary to provide as many car

parking spaces for residential developments in urban areas. This is particularly important given the limited availability of land in urban areas and the importance of ensuring land is developed in the most efficient way. The standards are still calculated to provide enough parking for these areas, based on real-world evidence, but avoid providing too much.

In contrast, residents in rural areas are likely to be more dependent on cars for their day to day trips due to limited access to public transport; fewer designated cycle and footpaths; and more widely dispersed services. This must be reflected within the standards.

Therefore, residential standards have been produced for three zones based on ward population size and accessibility by public transport. We were able to map the bus routes found within the county, and layer them on top of the district zone maps. From this we can see a clear connection between zone allocation and accessibility. The zones are based on wards, as this is how the Office of National Statistics (ONS) provides us with the cross tabulation of data. Each ward has been assigned to one of the three zone types, as set out in Table 1.

Table 1. Residential zoning assessment

Zone A	Large population	Over 70,000 residents
Zone B	Mid-range population	Between 8,000-69,999 residents
Zone C	Low population	Up to 7,999 residents

Where there are a number of wards that lie within large towns and larger villages, these have been grouped together to give a more realistic figure in terms of population size. Aylesbury, High Wycombe, Buckingham and Beaconsfield are all examples of where major town boundaries have been combined to give a total population. This approach ensures that the correct level of residential parking provision is provided across the county. The list of wards by zones can be found in Appendix 2.

The boundaries of the zones are not intended to be applied rigidly, and the flexibility of the guidance creates the opportunity to consider local circumstances, so that different zone's standards can be applied where appropriate. For example, any extension of development should be treated as part of that urban area. Another example is mixed urban and rural wards, where some parts should be treated as Zone A and others as Zone B or C.

4.2 Zoning Non-residential car parking

As with the residential standards, the non-residential standards are designed to reflect the differences between town centre urban locations, and rural areas. Due to the nature and usage of non-residential developments, a two-zone approach has been adopted. The two zones are Zone 1 and 2, with Zone 1 generally being more accessible, and Zone 2 being generally less accessible.

The boundaries of the non-residential zones are, therefore, designed to differentiate between Buckinghamshire's urban and less-urban areas. Areas in Zone 1 are those which fall within the boundaries of urban areas defined by the respective district councils for the following towns:

- Amersham on the Hill Town Centre
- Aylesbury
- Chalfont St Peter District Centre
- Chesham Town Centre
- High Wycombe
- Marlow
- Princes Risborough

Maps provided by the district councils to define these areas are set out in Appendix 3 and should be referred to in identifying whether a development is defined as being within Zone 1. All other areas fall within Zone 2.

Some local planning authorities have expressed an interest in the option of including an additional town centre zone for both residential and non-residential developments. This could allow them to apply a different standard where they feel a town centre has different needs and would be possible within the flexibility provided by this guidance.

5. Electric vehicle charging points

The guidance aims to ensure that consideration is given to making provision for electric vehicle charging infrastructure in new developments. This will contribute towards the government's commitment to drive forward the market for ultra-low emission vehicles, whist also addressing the carbon consequences of motoring. The widespread adoption of electric vehicles is a long term goal of government. However, there are things we can do now and it's important that developments make the most of these opportunities.

The guidance proposal is not prescriptive, but aims to make sure developments do what they realistically can to provide for this emerging technology.

Where new developments require a Transport Assessment, they should demonstrate that they are making appropriate provision for electric vehicle charging points, having considered the demand that the development would generate, the number and type of existing and proposed provision of publically accessible charging points in the surrounding area, and the impact of providing electric vehicle charging points on development viability.

A requirement that all developments consider the needs and opportunities for incorporating vehicle chagrining points at a variety of sites, will support the Government's commitment to drive the infrastructure for it.

- Whilst the guidance does not set out specific requirements it is important to consider that: Technology is continuously changing, and the use of electric charging points needs to be able to respond flexibly to the market. Where possible, infrastructure should not be specific to individual systems. In some residential developments, for instance, an appropriate electricity supply to a garage may be sufficient.
- As a commercial market for public charging infrastructure develops, it will be important to ensure that public charging points are located so they are accessible and convenient, and do not compromise highway safety.

6. Calculating the standards – Method and Methodology

6.1 Calculating Cycle parking

A range of sources were considered when developing cycle parking standards. Initially TRICS (TRICS 2013) data was used to calculate demand for cycle parking in a similar way to that described for car parking in Sub-section 1.5.4.3. However, as TRICS uses data from historic sites, with cycle parking levels based on older standards this tended to suggest very low levels of provision that would not reflect BCC's and the governments aspirations for increased cycling. Instead, a variety of examples of current practice were analysed and compared to current cycling levels in Buckinghamshire, to identify the most appropriate standards.

The current standards by Wycombe District Council (2011) and Aylesbury District Council (2002) were considered, as these are expected to be representative of the cycle parking needs of Buckinghamshire. However, in both cases it is not clear how exactly these standards were derived, and therefore how representative they are of the actual demand for cycle parking.

Standards by Transport for London (TfL, 2006) were also considered, as these aim to encourage cycling, and are based on a wide range of information including cycle trends, policies, demand for cycle parking, and surveying and questionnaires. Therefore, it is expected that these are robust and represent the actual need for cycle parking to a certain degree. However, there are major differences between London and Buckinghamshire in terms of cycling, and therefore these standards are only useful to a certain extent.

Cycle parking standards by both Somerset County Council (2013) and East Sussex County Council (no date) were also considered. The former are recent standards with the aim of encouraging cycling. However, the cycle to work rate in Somerset is over double that in Buckinghamshire, and therefore these standards are likely to be higher than those required in Buckinghamshire. The latter were considered as, in terms of cycling, East Sussex is the most representative county (for which appropriate standards were identified) of Buckinghamshire, with a very similar

percentage and number of people cycling to work. Therefore, it is expected that similar levels of cycle parking may be required.

Finally, the Cambridge City Council (2010) standards were considered. These are aimed at encouraging cycling, and are referred to in numerous cases as being an example of best practice, particularly by Sustrans, a charity dedicated to sustainable transport. However, these standards are based on a city with a very high cycle to work rate compared to Buckinghamshire, and therefore the standards are likely to be much higher than those required in Buckinghamshire.

The above documents were used together, taking into account the advantages and disadvantage of each, to inform the cycle standards. The resulting cycle standards were then applied to case studies to ensure they are appropriate and realistic.

6.2 Calculating Motorcycles and scooter parking allocations

As there is no national guidance available in relation to motorcycle parking for either residential or non-residential developments, and the TRICS data used to calculate car parking standards (explained below) is not available for motorcycles, an alternative approach was identified. The Department for Transport provides vehicle licensing statistics for motorcycles based on postcode (DfT 2013), and this guidance has used this data to calculate the recommended standards. The motorcycle licensing statistics indicate that Buckinghamshire has approximately a ratio of 30:1 car ownership to motorcycle ownership. Therefore, this ratio was used to determine the number of spaces required in non-residential developments.

When planning for residential motorcycle parking, we also used the same ratio. However, unlike residential car parking all motorcycles spaces must be unallocated. Further information and guidance on providing for motorcycles and scooters can be found from motorcycle industry groups.

6.3 Calculating Residential car parking

The residential parking standards are based on actual car ownership levels, dwelling numbers and bedroom numbers across the county. This information was used to calculate the number of spaces required for the different dwelling types in each of the three zones.

Current car ownership levels in existing developments across the three zones was calculated to ensure that the new standards provide the appropriate level of parking for different development types across the county. The most comprehensive data source to provide this information is the 2001 Census from the Office of National Statistics (ONS), as the most recent Census Data (2011) does not yet provide a cross tabulation of the relevant data. As the increase in average car ownership per household across the county has been relatively small between 2001 and 2011, this was not considered to compromise the quality of the data.

The Census data is based on habitable rooms (the Census definition includes kitchens, living rooms, bedrooms, utility rooms and studies. It does not include bathrooms, toilets, halls, landings or rooms for storage), and therefore, number of habitable rooms has been used for all calculations. However, as people are more familiar with number of bedrooms, table 2 provides an approximate conversion between bedrooms and habitable rooms for the information of users of this guidance.

Table 2. Number of bedrooms ratio

No' of habitable rooms	No' of bedrooms	Example of possible makeup of dwelling
1 - 4	1	1 Bedroom, kitchen, living area, dining room
5	2	2 bedrooms, kitchen, living area, dining room
6	3	3 bedrooms, kitchen, living area, dining room
7	4	4 bedrooms, kitchen, living area, dining room
8	5	5 bedrooms, kitchen, living area, dining room

Bedsits/studios are included in the 1-4 rooms category.

The ONS data showed us the number of cars owned per household in each ward. There are lots of different ways that this could be represented: minimum, maximum, average etc. We tried these out and selected one (95th percentile) which catered for the needs of most, whilst excluding dwellings with unusually high or low numbers of cars. Additional unallocated parking spaces provided within a new development, provide additional flexible capacity for those with unusually high numbers of cars.

The Census data demonstrates that car ownership levels vary across the zones, with Zone A generally having lower levels of car ownership per household compared to Zone C, where there are a greater number of households owning two or more cars. Standards have been rounded to the nearest half space. Where results were close to the point of being rounded up or down, and doing so would create a more even distribution between zones, they were rounded up or down accordingly.

The car ownership data provided by the ONS is split into dwelling types: houses and flats. However, after reviewing the data we concluded that car ownership has minimal variation according to the type of property. Therefore, the standards are derived from the house data only. This should ensure that flats are provided with an appropriate number of parking spaces without complicating the standards unnecessarily. This decision is supported by 'Car parking: What works where' (English Partnerships, 2006), which suggests that car ownership in flats is only slightly less than for houses of equivalent size, and reflects stakeholder concerns about the historic under-provision of car parking space in the development of some flats.

6.3.1 Unallocated/ visitor parking

Where most of the parking provided is allocated to specific dwellings there is often little room for visitors to park. This can lead to inappropriate and dangerous parking. Therefore, it is important to provide a certain level of unallocated or visitor parking.

- Allocated - within curtilage, garage/driveway, reserved in communal areas
- Unallocated – available for anyone to use

The guidance 'Design for Homes: Car Parking what works where' (English Partnerships, 2006) states that 'generally parking standards project a level of

provision for visitors of about 20% over the overall parking allocation per household within a new development build.' Our standards support this, and 20% extra unallocated/ visitor parking is required per development to provide for visitors. However, if at least half of the parking in a new residential development is unallocated, then an additional 20% provision might not be required. It will be the developer's responsibility to ensure that adequate parking is provided, and parking will not have a detrimental impact on traffic safety or the character of an area. This should be explained as part of the planning application or included in a Transport Statement or Transport Assessment where one is required.

This guidance does acknowledge that the provision of additional visitor parking may not be possible in smaller developments, particularly where the developer is not responsible for street design and no off-street provision is possible. In such circumstances it may well be appropriate to employ the flexibility provided within the guidance, where there is evidence that this would be appropriate and/or other approaches to mitigating the development's impact can be secured.

For both residential and non-residential developments, a Parking Calculator has been produced to support users of the guidance to calculate exactly the number of spaces required for a new development. For residential developments, the calculator also states the number of unallocated parking to be provided based on the level of the allocated parking.

The main principle for unallocated parking is to maximise the flexibility and economy of land use. In some circumstances parking can be accommodated entirely without allocated spaces. Unallocated spaces can be provided on the public highway. On-street parking (whether adopted or private) can be controlled by traffic regulation orders to restrict vehicle type and or length of time of use although this is not a preferred solution on new developments. If the surrounding area suffers parking problems, then other means of controlling parking should be considered. Developers are encouraged to design the road and housing layout to create an effective self-controlling arrangement to reduce the need for traffic regulation orders. However the unallocated on-street parking will need to be tied down by planning permission.

The quality of the street is a key factor in parking design, so where developers put the parking is more significant than how much. 'A combination of on plot, off plot and on street is the solution' (English Partnerships, 2006), which is why for larger developments, the use of unallocated parking is encouraged within guidance. The design of unallocated parking and the distribution of spaces throughout the development should be safe, attractive, discrete, and located where there are points of demand.

Some of the standards provided in table 5 include half spaces, to reflect the average requirement of some areas / dwelling sizes accurately (Table 5 below explains more

about the role of half spaces). Where possible spaces arising from half spaces in the standards should be unallocated.

6.4 Calculating Non-residential car parking

The aim of our non-residential standards is to ensure we provide sufficient parking for the trips people make by car, to ensure both residents and visitors can reach their destination. This should reduce anti-social parking, often caused by insufficient parking. Bearing this in mind, we have chosen to base the standards on the demand for parking found at each development class, using information provided by TRICS.

TRICS is a database of a large number of surveys of real developments across a wide range of land use categories. The TRICS data showed us how many parking spaces non-residential developments need. There are lots of different ways that this could be represented: minimum, maximum, average etc. We tried these out and selected the best ones for the two zones introduced above. These were selected to exclude developments with unusually high or low numbers of cars. For Zone 1 we used a level known as the median, and for Zone 2 we used a level known as the 85th percentile.

We also undertook a review of other local authorities' existing standards which have recently been updated since the development of the NPPF to double check our TRICS calculations and ensure they are realistic.

6.5 Car parking as a shared resource

The guidance recognises non-residential car parking as an important resource, particularly at off peak times when parking spaces may not be being utilised. Therefore developers and the local planning authority must take account of car parks as a shared resource within town and local centre locations, by encouraging shared use parking between neighbouring developments. The guidance encourages developers make use of shared car parks rather than requiring small new uses in town or local centres to provide separate spaces.

This initiative is supported by DCLG's Planning Update (DCLG, March 2015), whereby local authorities are being encouraged to clarify that non-residential car parking spaces can be rented out, which will in turn support the shared economy and increase the provision of competitively priced car parking spaces.

6.6 Calculating Blue badge parking

When considering blue badge parking, the current district council standards were considered alongside national policies and guidance; guidance from non-governmental organisations; and best practice examples from other authorities as identified in the national policies and guidance.

7. The Standards

7.1 Cycle parking

Safe and secure cycle parking is an important component in encouraging cycling. For new developments, BCC aims to ensure that developers make efficient use of land and promote sustainable travel choices. Therefore, cycle parking must be considered early on in the planning process.

7.1.1 Number of spaces required:

Table 4 sets out the minimum number of cycle parking spaces required at different development types**.** **Table 3. Cycle parking spaces**

Land use- new developments		**BCC recommended number of cycle space**
Residential dwelling	1 bedroom 2 bedroom 3 bedroom 4 bedroom 5+ bedroom	Storage space for 1 bicycle Storage space for 2 bicycles Storage space for 2 bicycles Storage space for 3 bicycles Storage space for 4 bicycles
	Flats/apartments	1 space per flat/apartment
	Sheltered and retirement accommodation	1 space per 10 residents, plus 1 space per 5 staff on duty
	Multiple occupancy	0.5 spaces per bedroom, plus 1 visitor space per 10 bedrooms
A1. Retail		1 space per 150 sqm (<1000sqm) 1 space per 250 sqm (>1000sqm)
Storage/distribution warehouse		1 space per 500 sqm up to 10,000 sqm. After 10,000sqm, 1 additional space per 20,000 sqm
Garden centre		Case by case
A3. Food and drink (inc pub, restaurant)		1 space per 100 sqm
Business	B1 Business offices	1 space per 250 sqm
	Industrial unit	1 space per 500 sqm
	Industrial estate	1 space per 500 sqm
C1. Hotel and hostels		1 space per 15 bedrooms plus 1 space per 7 staff
D1. Surgeries/health centres		1 space per 5 staff
D2. Assembly and leisure	Cinema	1 space per 100 seats
	Leisure centres/ pools	1 space per 400 sqm
Schools (Please note, standards reflect use of scooters plus bikes) D1e. Primary D1f. Secondary		 1 space per 10 staff and students 1 space per 7 staff and students
D1e. Colleges		1 space per 7 full time staff and students
D1. Libraries		1 space per 200 sqm
Sui Generis. Theatres		1 space per 100 seats
Transport	Bus station	Case by case
	Train station	Case by case

- A minimum of two cycle spaces (i.e. one Sheffield Stand) must be provided at all non-residential developments
- At residential developments, space for cycles could be in the form suitable garage space, shed space or separate cycle space. Cycle parking which is provided in back gardens must be easily accessible.
- All values for cycle spaces required should be rounded up to the nearest whole figure.
- In many cases it will be suitable to have cycle parking distributed around a development than in one location, particularly if there are a number of entrances to the site. The distribution of cycle parking should reflect the proportion of people using each entrance.

The use of this guidance is additional to the evidence which is expected to be provided within the developer's Transport Assessment. By providing Travel plans, developers should further be able to demonstrate that they have applied the appropriate levels of monitoring in the area, especially if they are permitted to provide lower levels of parking spaces below the optimum recommendations.

7.1.2. Cycle parking design:

7.1.2.1. All developments

- Cycle parking should be sited in a manner that encourages the use of cycling as a first choice for short trips. It should be placed as close as possible to the main entrance and exit points on ground level. It should not be sited where it will be obstructed by pedestrians or vehicles.
- Cycle parking should be easily accessible, visible and in locations where it will be well used. They should be covered, and where possible and appropriate, in specially constructed cycle sheds (particularly for workplaces and educational institutes where bikes are likely to be left for long periods of time).
- The recommended choice of rack is the 'Sheffield' stand (inverted U-shaped metal tube). Sheffield stands are recommended as they are popular with users; two cycles can be locked to one stand; they are non-damaging to cycles; and they are easy to maintain. Where other racks or support systems are used, they should provide good support and allow the cycle frame and both wheels to be secured.
- Where additional space can be provided at the end of a row of Sheffield stands, the end spaces can be used by handcycles or other modified bikes that require extra space (including those used by people with mobility

impairments). Where sufficient demand is expected these spaces could be reserved for this type of bike.

- The minimum spacing between Sheffield stands should be 1000mm. If stands are arranged in more than one row, these rows should be a minimum of 2000mm apart. This should be extended to 3100mm where an aisle is required to access the stands (where there are more than two rows, for example). It is also necessary to make sure there is adequate turning space to allow cyclists to access all stands provided (see figure 1, as produced by Cambridge City Council (2010))
- The design of cycle parking should be in keeping with the surroundings and be attractive to the user.

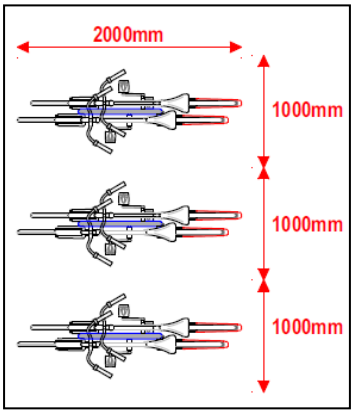

Figure 1. Cycle parking, as produced by Cambridge City Council (2010)

7.1.2.2. Additional guidance for flats/apartments

- Cycle parking for residents should always be covered, and where possible, this should also be the case for visitor cycle parking.
- Cycle parking must be secure and in a well-lit area creating a sense of personal safety. It should be included in premises' CCTV surveillance systems (if provided), and where possible in lockable cycle sheds. If cycle parking cannot be housed inside, it should be overlooked by dwellings.
- Cycle parking should be sited within 20m of the relevant entrance of the building. If multiple entrances are used, cycle parking should be distributed throughout the site at each entrance.

7.1.2.3. Additional guidance for other residential dwellings

- The guidance aims to encourage cycling by providing the space needed to store bicycles; therefore developers must bear this in mind within their planning applications. This doesn't have to be in a special / separate area. For example it could be included within garages (by increasing the stated garage dimensions) or in a suitable shed. The key thing is that an appropriately safe,

secure and easy to use space is provided. Cycle parking in back gardens needs to be easily accessible.

7.1.2.4. Additional guidance for non-residential developments

- Provisions for cycle parking at schools and colleges should reflect proposals for safer routes to school and Travel Plans, and may need to be increased to reflect the aspirations of these plans.

7.2 Motorcycle and scooter parking provision

The analysis of motorcycle ownership described in sub-section 1.5.4.2 above shows that in Buckinghamshire, the ratio of cars to motorcycles is 30:1. Table 4 sets out the requirements for motorcycle parking in both residential and non-residential developments.

Table 4. Motorcycle parking standards

Non residential	Minimum of 1 space for all new developments
	Plus **1 space per 30** car parking spaces
Residential	Minimum of 1 unallocated space for all residential developments
	Plus **1 unallocated space per 30** car parking spaces

This guidance does acknowledge that the provision of unallocated motorcycle parking may not be possible in smaller developments, particularly where the developer is not responsible for street design. In such circumstances a different approach to motorcycle parking may be appropriate.

When providing motorcycle/scooter spaces, it is recommended that 2.0m by 1.0m is allowed per space. Spaces should be secure, well lit, and situated in prominent, accessible locations, ideally in a site that benefits from surveillance of some sort. For security, the use of anchor points (such as steel rails or hoops) is a minimum.

7.3 Residential car parking standards

As explained in section 1, residential car parking standards were developed from data showing car ownership across different zones and dwelling sizes.

There is less opportunity for half spaces (as calculated by formula) and unallocated parking in a small development. Therefore, parking needs to be calculated differently for smaller sites, to make sure they still have the right amount of parking. Table 5 provides guidance for new residential developments with over 10 dwellings, and table 6 provides guidance for new residential developments of 10 dwellings and under. See Appendix 1 for residential zone maps.

Table 5. Residential car parking standards (above 10 dwellings)

Zone	1-4 habitable rooms[1]/ 1 bedroom	5 habitable rooms[1] / 2 bedrooms	6 habitable rooms[1]/ 3 bedrooms	7 habitable rooms[1]/ 4 bedrooms	8+ habitable rooms[1]/ 5 bedrooms
A	1	1.5	2	2	2.5
B	1.5	2	2	2.5	3
C	1.5	2	2.5	3	3.5
The car parking standards set out here are optimum standards; the level of parking they specify should be provided unless specific local circumstances can justify deviating from them. Proposals for provision above or below this standard must be supported by evidence detailing the local circumstances that justify the deviation. This evidence must be included in (and/or consistent with) the developer's Travel Plan and Transport Assessment.					
The standard should be rounded up to the nearest whole number across the development.					
Half spaces aim to reflect the average requirement of some areas / dwelling sizes accurately. Therefore dwellings should be allocated the lower whole number e.g. 2.5 = 2 spaces, and the half spaces are to be added together and distributed within the development as unallocated parking. For example: - 3 bedroom dwellings (x50) with an average of 2.5 spaces each - Each individual dwelling will be allocated 2 spaces each, and the half spaces equal 25. - The 25 spaces are to be provided as unallocated parking.					
Where more than half of parking allocated, an additional 20% of the total number of spaces are required for unallocated/ visitor parking.					
How to calculate the additional spaces required if a residential development has more than half of its parking allocated: - Determine the correct zone - Calculate the number of spaces required according to the optimum standards - Add the 20% additional unallocated parking (on top of the initial calculation)					
When there are significant differences between parking provision based on bedrooms and habitable rooms, the most appropriate amount of parking should be provided. For example, where a dwelling is open plan, parking should be based on the number of bedrooms.					

Table 6. Residential car parking standards (up to 10 dwellings)

Zone	1-4 habitable rooms[2]/ 1 bedroom	5 habitable rooms[1] / 2 bedrooms	6 habitable rooms[1]/ 3 bedrooms	7 habitable rooms[1]/ 4 bedrooms	8+ habitable rooms[1]/ 5 bedrooms
A	1	2	2	2	3
B	1	2	2	3	3
C	2	2	3	3	4
The car parking standards set out here are optimum standards; the level of parking					

[1] See Sub-section 1.5.4.3 for further information on habitable rooms and their definition.
[2] See Sub-section 1.5.4.3 for further information on habitable rooms and their definition.

they specify should be provided unless specific local circumstances can justify deviating from them. Proposals for provision above or below this standard must be supported by evidence detailing the local circumstances that justify the deviation. This evidence must be included in (and/or consistent with) the developer's Travel Plan and Transport Assessment.
When there are significant differences between parking provision based on bedrooms and habitable rooms, the most appropriate amount of parking should be provided. For example, where a dwelling is open plan, parking should be based on the number of bedrooms.

Where there are changes to existing properties such as extensions and garage conversions, developers will be required to provide sufficient parking for property redevelopments based on the standards specified. It will be the developer's responsibility to make sure that the changes made to an existing property will not prejudice the retention of adequate parking within the curtilage of the property.

7.3.1 Residential car parking design

Below are the minimum design requirements criteria for residential parking standards and must be considered within all planning applications:

- Size of allocated parking spaces size to follow in accordance with Section 2.5 (Length 5.0m x Width 2.8m)
- Parallel parking dimensions – 6.0m x 3.0m is recommended
- Parking spaces in front of a garage or vertical feature would require a 5.5m space for access to the car boot
- Street width design to be considered and amended to accommodate on-street parking. Where unallocated parking spaces are distributed throughout a development, an increased carriageway width should be used to allow cars to park on either side of the street, leaving at least an appropriate width carriageway.
- The design of unallocated parking should make it clear where it is appropriate to park and prevent inappropriate parking (particularly on footways).
- To add appropriate planting to soften the visual impact of cars
- Wherever parking is provided it needs to be more attractive than inappropriate parking opportunities. It should be accessible, well lit, overlooked and attractive. Where a parking court is considered it must be part of a coherent overall layout, be small and over looked by dwellings.
- Parking design should consider its impact on the carriageway, particularly on the turning movements of larger vehicles, such as refuse vehicles.

7.4 Non-residential car parking standards

As described previously, non-residential car parking standards have been derived using TRICS. Table 6 sets out the resulting standards. Each use class parking standard is based on Gross Floor Area (GFA), or by staff/consultation room where

indicated. Due to the limitations of the data available to us, there are a number of exceptions to these standards, and these are outlined below Table 7.

Table 7. Non-residential car parking standards (see Appendix 3 for maps)

Land use – new developments	Zone 1 (more accessible)	Zone 2 (less accessible)
Retail		
A1. Retail (GFA < 1000 sqm) See additional guidance below.	1 space per 23 sqm	1 space per 22 sqm
A1. Non-food retail (GFA >1000 sqm) See additional guidance below.	1 space per 38 sqm	1 space per 26 sqm
A1. Food retail (GFA > 1000 sqm) See additional guidance below.	1 space per 17 sqm	1 space per 14 sqm
Retail warehouses (DIY, Garden Centre) Retail warehouse w/o garden centre	1 space per 67 sqm 1 space per 65 sqm	1 space per 38 sqm 1 space per 40 sqm
A2. Financial and professional services	1 space per 25 sqm	1 space per 21 sqm
A3. Restaurant – single	1 space per 16 sqm	1 space per 10 sqm
A3. Public houses, restaurant	1 space per 17 sqm	1 space per 12 sqm
A3/A4. Pub restaurants + hotel	Case by case	Case by case
A4. Public houses without restaurant (although site may sell bar food)	1 space per 25 sqm	1 space per 8 sqm
A5. Takeaways	1 space per 23 sqm	1 space per 8 sqm
Business		
B1. Business – offices See additional guidance below.	1 space per 25 sqm	1 space per 21 sqm
B2. General Industrial	1 space per 64 sqm	1 space per 39 sqm
B2. Industrial Estate	1 space per 87 sqm	1 space per 41 sqm
B8. General Warehouse, Industrial Units .	1 space per 130 sqm *Please see additional guidance below on servicing arrangements and operational guidance.*	1 space per 120 sqm *Please see additional guidance below on servicing arrangements and operational guidance.*
Other use classes		
C1. Hotels and hostels	1 space per bedroom	1 space per bedroom
C2. Hospitals	Case by case	Case by case
C2. Care Homes	1 space per 3 residents	1 space per 3 residents

	(unallocated)	(unallocated)
C3. Sheltered accommodation	1 space per 4 units (unallocated)	1 space per 3 units (unallocated)
Retirement flats	1 space per 4 units (unallocated)	1 space per 3 units (unallocated)
D1*a. Art galleries/museums	1 space per 89 sqm	1 space per 40 sqm
D1*a. Exhibition centre	1 space per 25 sqm	1 space per 18 sqm
D 1* (g & h). Place of worship/public assembly buildings	1 space per 25 sqm	1 space per 8 sqm
D1*b. Health surgeries	1 space per 20 sqm	1 space per 14 sqm
D1*e. Primary schools See additional guidance below.	1 space per f.t.e staff	1 space per f.t.e staff
D1*f. Secondary schools See additional guidance below.	1 space per f.t.e staff	1 space per f.t.e staff
D1*e. Higher, further education, college	1 space per 1 f.t.e staff + student parking to be assessed individually	1 space per 1 f.t.e staff + student parking to be assessed individually
D1*. Library	1 space per 50 sqm	1 space per 42 sqm
D2. Bingo Hall	1 space per 21 seats	1 space per 15 seats
D2. Cinema	1 space per 12 seats	1 space per 6 seats
D2. Leisure Centre – swimming pool	1 space per 62 sqm	1 space per 26 sqm
Tennis courts	2 spaces per court or individual assessment	2 spaces per court or individual assessment
B1/B2. Motorist centre/car servicing	1 space per 53 sqm	1 space per 38 sqm
B2. Repair Garage	1 space per 35 sqm	1 space per 23 sqm
Sui Generis. Theatres	1 space per 12 seats	1 space per 6 seats
The car parking standards set out here are optimum standards; the level of parking they specify should be provided unless specific local circumstances can justify deviating from them. Proposals for provision above or below this standard must be supported by evidence detailing the local circumstances that justify the deviation. This evidence must be included in (and/or consistent with) the developer's Travel Plan and Transport Assessment.		
Additional guidance: **A1 shops** – In all cases, adequate provision should be made for the parking and turning of service vehicles serving the site, off the highway. **B1 Business** – These optimum standards are designed to provide an appropriate level of parking across the county. However recent developments suggest higher levels may be required in certain areas. This may be due to specific to local		

circumstances and/or the geography of the district. Where this is the case, the flexibility allowed by the standards should be applied.

Houses in Multiple Occupation (HMO's) – see guidance in Table 3.

Shared use facilities – When a use forms part of a shared use facility, parking standards must be looked at for all uses and the appropriate amounts supplied. For example when conference facilities are included in a hotel facility, appropriate parking standards must be applied for each use. However, where visitors will use more than one of these facilities the impact of this on the parking spaces required must also be taken into account.

All schools and colleges - All school and colleges should provide appropriate drop off areas as well as car parking. Drop offs can reduce the need for parking, improve circulation and ultimately reduce congestions problems on local roads around the school.

Secondary schools – where there is a 6th form, student parking should be assessed individually.

Residential schools – to be assessed individually.

Warehouse – Consideration should be given to the requirement for overnight parking and facilities. Also due to variability of the sites, the standard will need to be considered carefully and greater flexibility may be needed here.

Parking For Service Vehicles - The provision of spaces for goods vehicles to load and unload will be assessed for each development proposal on its merits. It is essential to make adequate provision to ensure that servicing can be accommodated without detriment to the safety of other road users, or the free flow of all-modes of transport on the highway. Car sales/showrooms will be expected to ensure that deliveries by car transporters can be appropriately accommodated.

7.4.1 Exceptional situations

For some land uses, the approach used to calculate parking requirements does not provide appropriate results, either due to the data available or the nature of their parking requirements. Table 3 explains how we dealt with these exceptional land uses to develop the standards listed. This information is provided for the sake of transparency and to help those interested in the details of our calculations. All other standards were derived in the way described above.

Table 8. Dealing with exceptions

Land use	Approach
Houses in Multiple Occupation (HMO's), including	HMO's should provide the same number of spaces as other residential dwellings. As with all developments the standards allow for flexibility where there is evidence that they would not be appropriate. Where a local planning authority considers that other rooms are likely to be used as bedrooms, they may wish to consider including these

relevant student accommodation	within the calculation for parking provision. HMO's come in a wide range of forms and there is scope to utilise the flexibility in these standards to make this provision in a way that is appropriate for the situation. Where a property is converted into a HMO, developers will need to agree with the local planning authority on how sufficient parking will be provided. For example the local planning authority may be wish to explore the potential for an agreement that allows equivalent parking facilities to be provided or funded elsewhere by the developer.
Care home/sheltered housing accommodation	Care home and sheltered housing properties should provide a minimum of 0.5 spaces per dwelling in Zone 1, and 1 space per dwelling in Zone 2, of which all must be provided as unallocated parking. However, similarly to HMO's, where properties are converted into care homes/sheltered housing accommodation, developers will need to agree with the local planning authority (following appropriate discussion with BCC) on how sufficient parking will be provided for these uses, particularly where districts have a policy on this.
A2. Financial and Professional services	TRICS database has no data for this use class. The existing standards between the four districts are similar, and similar to those for 'B1 (a) (b) (c) Business – Offices'. As the existing B1 standards fits well with observed data, and the two land uses have a number of similarities, the standard has been suggested to be the same as B1.
Pub restaurant with hotel	TRICS does not include sufficient data for this land use to provide a robust basis for a standard. Therefore the parking requirement for pub restaurants with hotels attached will be considered on a case by case basis.
Hotels	TRICS does not include sufficient data for this land use to provide a robust basis for a standard. Therefore, the hotel standards have been based on the existing district standards.
Hospitals	Parking at hospitals is an important issue. However, there are a number of barriers to the creation of a hospital car parking standard. Hospitals are often complex, multi-occupancy developments catering for more than just the general hospital; the NHS is constantly evolving, with different ways of managing staff, patients and visitors; and hospitals are often developed in a phased way, meaning that long terms plans are not always clear. These factors combine to make the identification of a standard based on historic data inappropriate. Therefore, it is considered appropriate that car parking at hospitals is considered on a case-by-case bases (including, where appropriate, discussion between local authorities, health trusts, staff and patient groups). A number of points should be considered when determining parking requirements, including existing issues such as lack of capacity, overspill and neighbourhood issues; existing parking provisions; use and demand; long term development plans; accessibility by public transport; the overall sustainability and accessibility of the site; type of hospital; and number and timing of users.

8. Dimensions for car parking

Evidence shows that the size of vehicles has increased over time. As a result, the size of parking spaces has been reviewed, and the size increased for both residential and non-residential parking, to better reflect the current size of vehicles. Table 8 sets out the minimum bay size for cars.

Table 9. Minimum car parking dimensions

Length	5.0m
Width	2.8m

The minimum bay size must be used unless developer evidence suggests otherwise. If spaces are smaller than the minimum bay size, the bay will no longer be considered a usable parking space. Where spaces are constrained by a wall on one side, which may consequently prevent a door from opening, the space may need to be larger. Increasing the length of an on-street parking bay may also need to be considered for parallel parking.

Table 10. Minimum parallel parking dimensions

Length	6.0m
Width	3.0m

Parking spaces in front of a garage or vertical feature would require a 5.5m space for access to the car boot

There should be a distance of 6.5m between rows for access where the parking spaces are at right angles to the traffic lane. The distance between rows can be reduced where the parking spaces are at angles to the traffic lane.

Wider car parking spaces should be provided for blue badge holders (see section 2.7.2)

Unallocated on-street parking spaces (kerbside parking or marked bays) may be considered for adoption by the Highway Authority subject to operational and safety considerations. However, where there is allocated parking provision for individual dwellings which is not adopted by the Highway Authority, the developer will have to provide the appropriate arrangements for their future management and maintenance. In some cases, the District Councils may also be delegated the management of on-street parking where appropriate.

9. Garage provision and size

It is clear that some garages within Buckinghamshire are not used for parking of vehicles, but instead are used for storage or other purposes. Historically, garages have been too small to accommodate most family cars, a bicycle and other domestic goods - contributing to this problem. Garages are, therefore, required to provide enough space for all functions they are planned to accommodate. Where a garage is to be used for cycle or motorcycle parking, a suitable area must be provided on top on the dimensions set out here. This area must meet the minimum dimensions set out for cycle and motorcycle parking in Sections 2.1 and 2.2 respectively.

Table 9 sets out the minimum dimensions for a garage. These dimensions have been checked against the current top-selling cars to ensure they are fit for purpose.

Table 11. Minimum garage dimensions

Length	6.0m
Width	3.0m

The district authorities may wish to consider whether local circumstances suggest garages should be included as parking spaces, and count towards the parking standards, when adopting guidance based upon this document. Where they are to be included, the garage space must meet the minimum size specified in Table 9 to be classified as a parking space.

10. Blue badge parking

Many people with reduced mobility are dependent on cars for getting around. Therefore, when developers make plans, blue badge parking should be a priority.

The positioning of blue badge parking is critical if it is to serve its purpose successfully and help blue badge users to access services independently. Blue badge parking should be located within 50 metres of the entrance of the service it is provided for, on firm, level ground, in well-lit areas. If the distance between the parking facility and the entrance is (unavoidably) greater than 50 metres, no more than 50 metres should be uncovered. Where ramps are used to provide level access it is important to consider that these can be difficult to negotiate for some ambulant disabled people. Therefore, it may be appropriate to provide ramps alongside alternatives such as steps. If all blue badge parking spaces cannot be located immediately next to an entrance, developers should consider distinguishing ‘high priority’ blue badge holders (such as those with a ‘nil value tax disc’). Spaces closest to the entrance could be reserved for ‘high priority’ blue badge holders’ whose needs are most acute.

The route between the parking facility and the service should be direct and suitable for wheelchairs and those with limited mobility, with no steps, bollards, or heavy doors. Developers should be aware of the impacts of glare on people with visual

impairments, particularly where there are bright or shiny surfaces. In multi-storey car parks blue badge parking should be on the same level as pedestrian access, or positioned close to a lift with wheelchair access. Where possible, blue badge parking should be located where it allows people to do a number of things at once and access facilities such as accessible toilets. In all cases, blue badge parking should be positioned to protect users from moving traffic.

The marking of blue badge parking is also vital to ensure spaces are clearly visible. In car parks, blue badge parking should be clearly sign posted from the entrance, and the spaces themselves clearly labelled with a sign at eye level, a yellow wheelchair symbol within the space, and areas between the bays hatched in yellow. Signage should indicate the distance between the parking spaces and nearby facilities.

Where machines with audio capabilities (such as ticket machines and entrance and exit gates) are present, a loop system should be in place to help users with limited hearing to use these.

Table 12 sets out recommendations for the number of blue badge parking spaces, and Table 13 sets out recommendations for the size of blue badge spaces. Both tables set out minimum recommendations; however, additional needs may be identified for specific developments and it is important that blue badge parking is monitored regularly to ensure the needs of people with disabilities are being met. Where sufficient demand is likely developers should also consider providing areas to park and lock mobility scooters, particularly in large developments such as shopping complexes.

10.1 Blue badge parking: number of spaces

Table 12. Blue badge parking standards

Where the public do not normally have access (including employment sites)	1 bay per disabled employee; **Plus** 2 bays or 5% of total capacity (whichever is greater)
Where the public normally have access (e.g. shopping areas, leisure facilities, railway stations)	3 bays or 6% of parking capacity (whichever is greater)
Residential	Where a dwelling is to be built to Mobility Standards a minimum of 1 bay per dwelling (of the overall optimal standards for car parking) should be built to the blue badge parking dimensions set out in Table 11.
C3 Sheltered and retirement accommodation	30% of parking capacity (of the overall optimal standards for car parking) should be allocated to blue badge users.

All decimals should be rounded up to the nearest whole space.
More spaces may be required for certain land uses (e.g. doctor's surgeries) than the standards set out above.

In residential areas where on street parking is limited, consideration will be given to residents with disabilities. In order to apply for an additional blue badge parking space (a marked bay), the following requirements must be met:

- Applicants must hold a current valid blue badge
- There should be no suitable off-street parking available (e.g. drive or garage)
- The vehicle should be registered to the badge holder's address
- The positioning of the parking space must be safe. The vehicle parked must not cause obstruction (i.e. there must be sufficient road width for emergency vehicles to pass, the location must be at least 10m from a junction, and the area must not be intended as a turning space)

Initially bays may be used by any badge holder. However, if non-blue badge holder parking persists within the marked bay, a formal TRO will be considered.

Hospital car parking is considered on a case-by-case basis through negotiation between local authorities, health trusts, and staff and patient groups. This should include consideration of existing issues, neighbouring areas, time variations and the demands from all potential users.

10.2 Blue badge parking: dimensions

Table 13. Blue badge parking dimensions

The following dimensions are based on the current district parking standards, and the recommendations set out in the Traffic Advisory Leaflet 5/95 (DfT, 1995).

Off-street parking	
When bays are adjacent	5.1 X 3.8m (1.2m of this may be shared between two adjacent spaces)
Parallel bays	6.6 X 3.8m
Height (if applicable)	2.6 m
On-street parking	
At an angle to the access aisle	5.1 X 3.3m
Parallel to the access aisle	6.6 X 3m If cannot access footway from vehicle, width should be 3.3m

11. Impacts on surrounding areas and parking management

These standards endeavour to ensure new developments provide the right amount (and type) of parking. However, there will be situations where a risk remains that developments could cause parking problems in surrounding areas. Developers remain responsible for mitigating this impact of their development.

These issues should be considered through the normal development management processes. The bullet points below provide guidance on some of situations where this may be particularly important. This guidance is provided purely to assist the aforementioned process and is not intended to be exhaustive.

- Developments in areas subject to existing parking management measures (such as restrictions or residents' parking zones) will be responsible for funding any changes to these arrangements they necessitate.

- Developments which risk causing a spill over of parking into neighbouring areas (including through the imposition of parking charges) will be responsible for funding any parking management measures required to prevent this as part of their mitigation works.

- Schools may require additional parking management measures to ensure safe access to pedestrians and cyclists, and to prevent obstructions to traffic at peak times. This may include (but may not be limited to):

    - Keep clear markings at school entrances
    - Controlled parking zones
    - Loading and waiting restrictions
    - Pavement parking controls
    - Speed limits
    - Walking and cycling infrastructure

- Where there is capacity available in other existing or planned developments, and appropriate arrangements can be made, this can be an effective way to provide parking. This would need to be agreed with the car park's operator, and be consistent with the development's Travel Plan and/or Transport Assessment. Arrangements for permits and the payment of (potentially reduced) fees may be appropriate.

- Although unallocated parking can be very effective, developments that include high proportions of unallocated parking may require parking management measures. This may include (but may not be limited to) residents permit zones or Traffic Regulation Order's (TRO).

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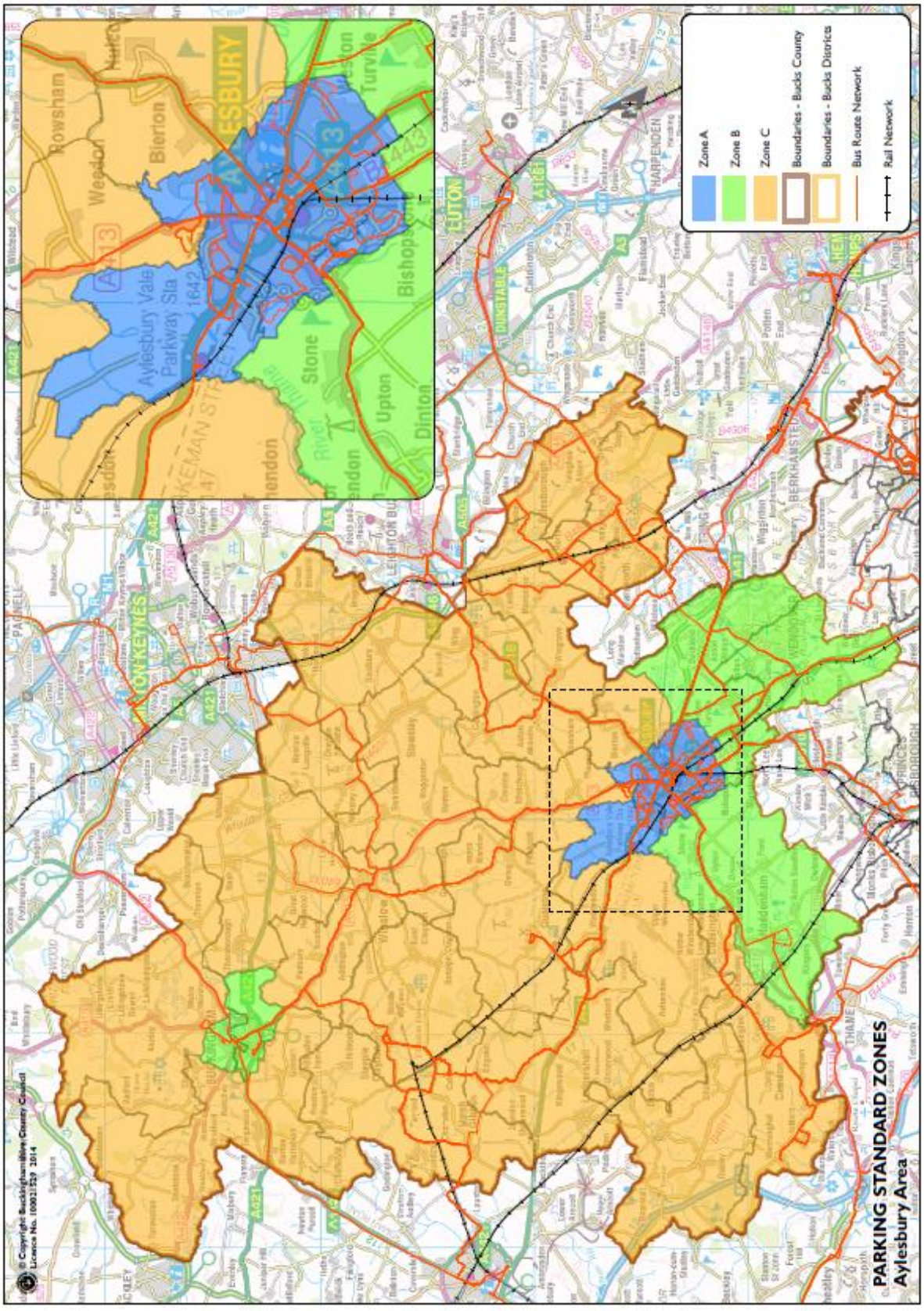
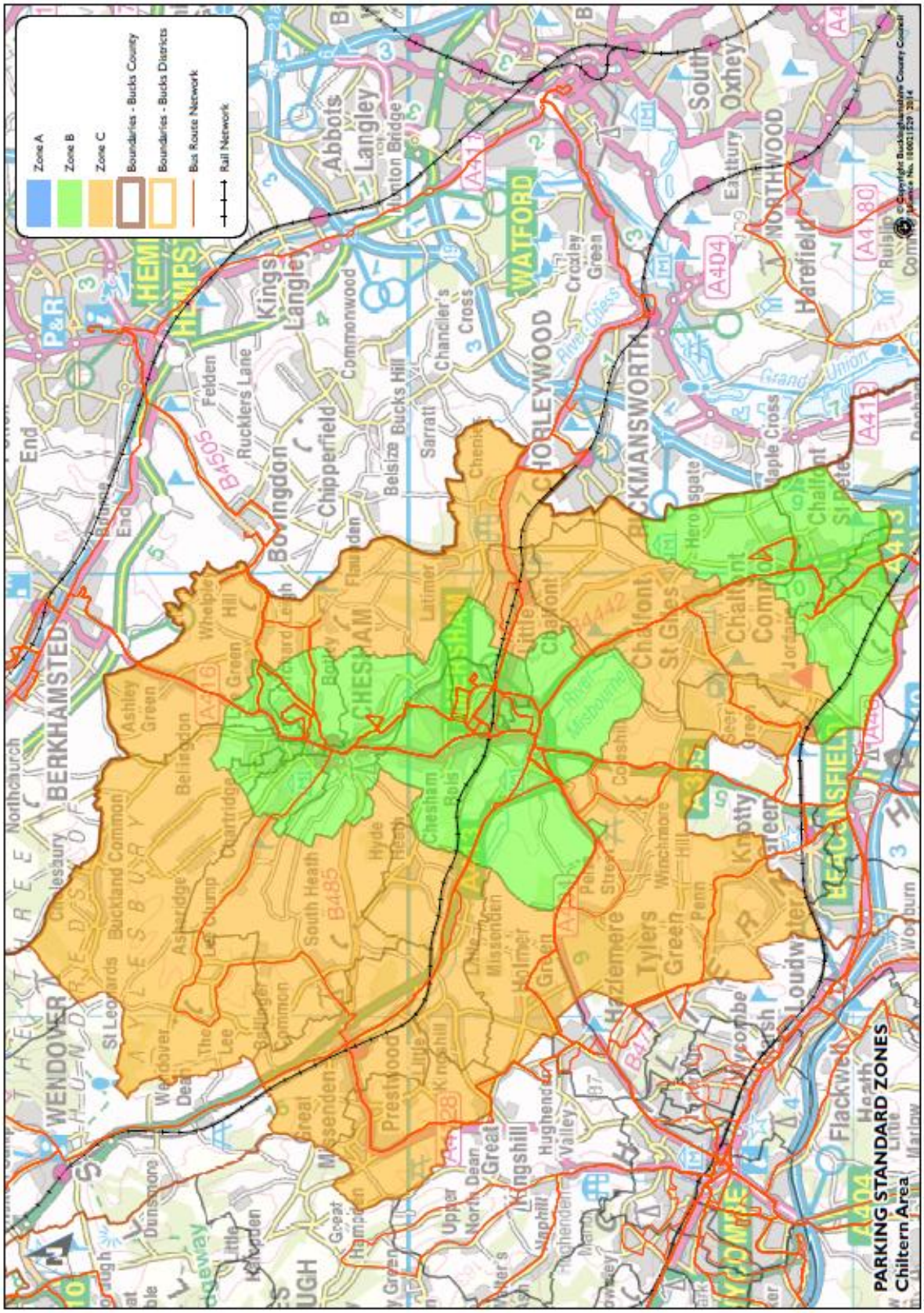
Appendix 1. Residential zoning

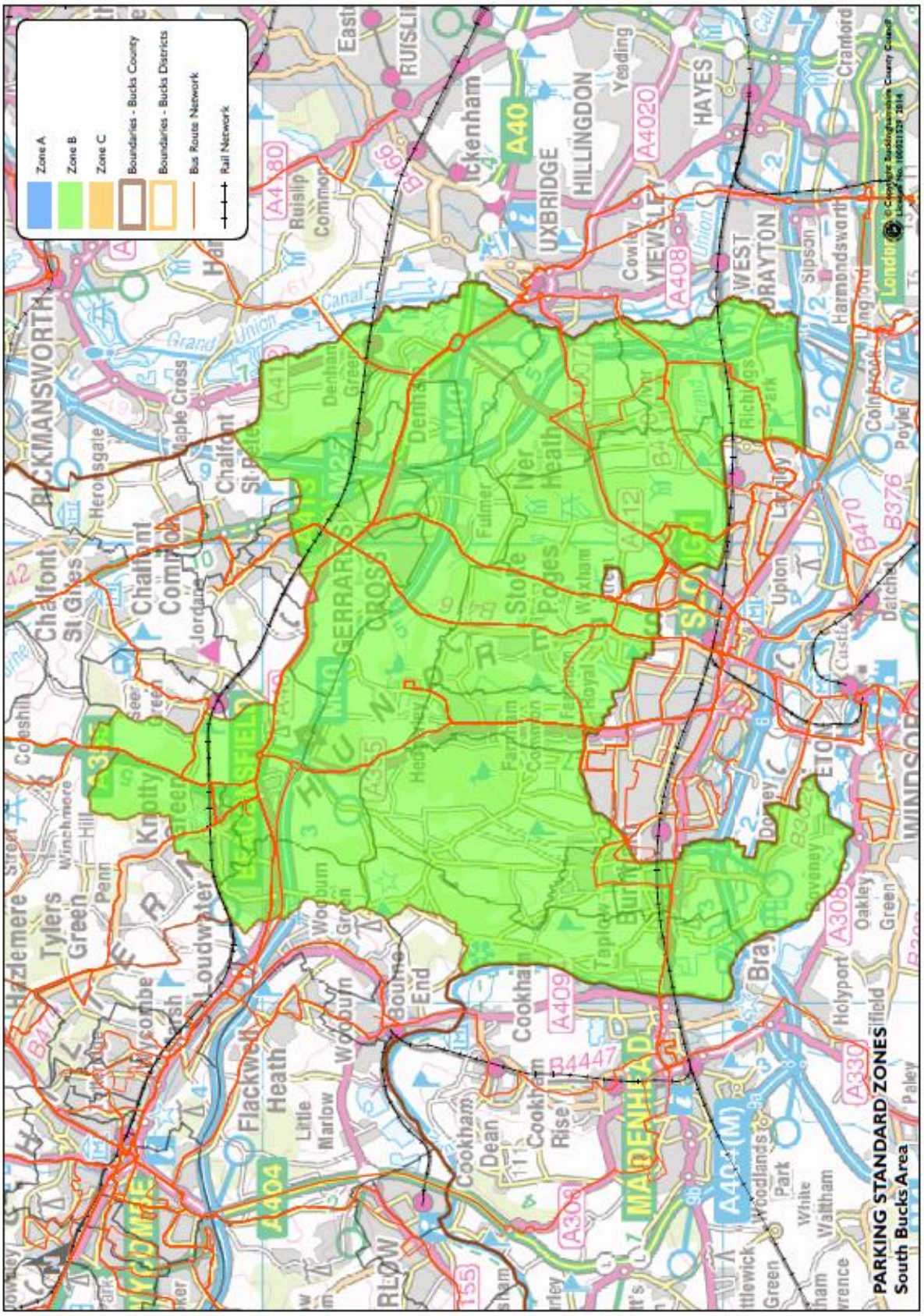
Aylesbury Vale ward zone allocations.



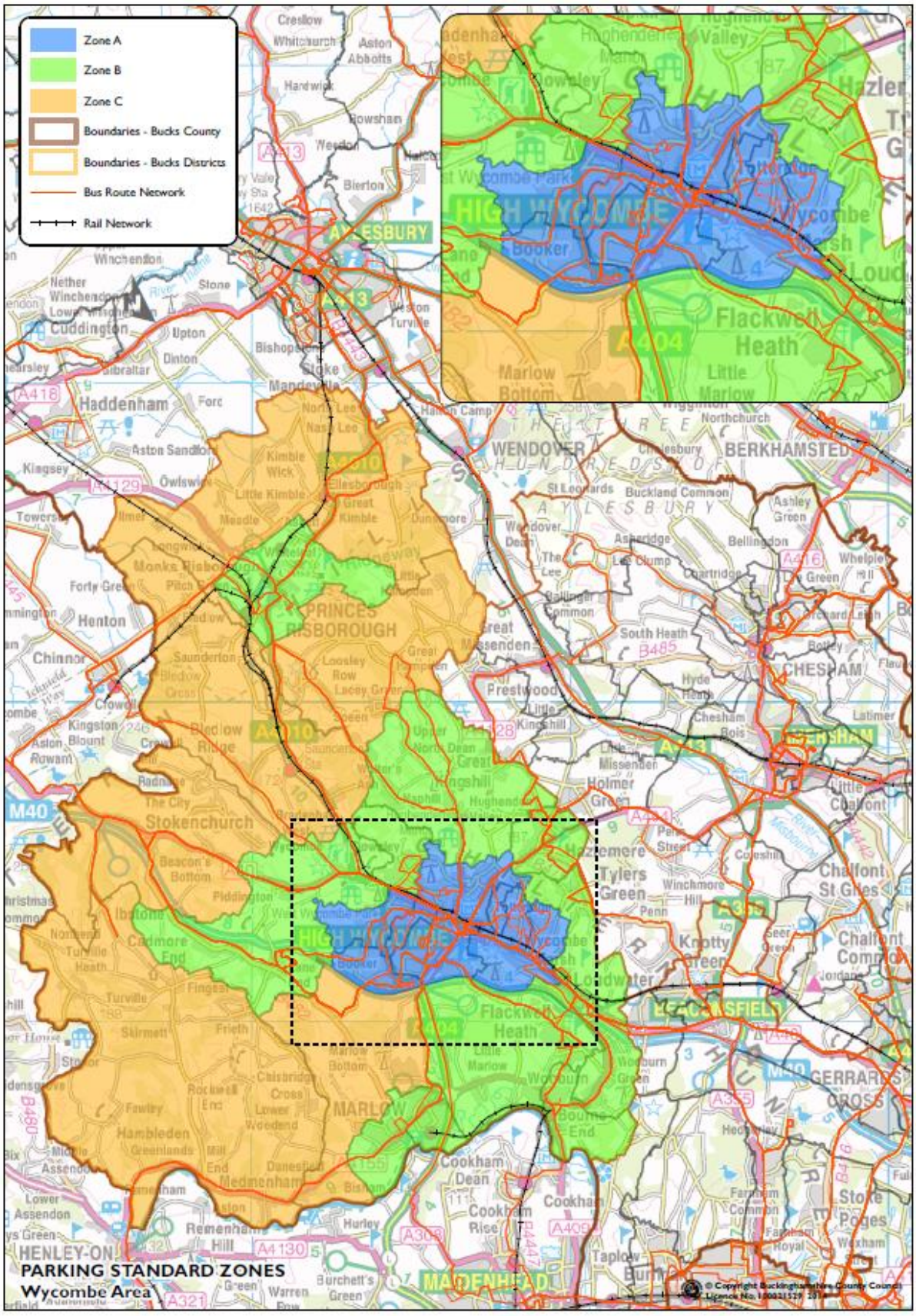
Chiltern ward zone allocation.



South Bucks ward zone allocation



Wycombe zone allocation



Appendix 2. List of district wards by zone

This table lists Wards which make up the three zone areas developed in 1.5.3.

Wards that have been grouped together as part of a cluster of larger settlements/wards with greater accessibility have been titled to show the name of the larger settlement make up.

Zone A			
District	**Grouped Settlement**	**Ward**	**Population size**
Aylesbury Vale	Aylesbury	Aylesbury Central	3,821
		Bedgrove	8,804
		Coldharbour	9,398
		Elmhurst and Watermead	9,168
		Gatehouse	6,187
		Mandeville and Elm Farm	8,726
		Oakfield	5,896
		Quarrendon	5,478
		Southcourt	6,912
		Walton Court and Hawkslade	5,882
Wycombe	High Wycombe		
		Abbey	10,365
		Booker and Cressex	4,974
		Bowerdean	5,574
		Disraeli	5,891
		Micklefield	5,807
		Oakridge and Castlefield	9,406
		Ryemead	7,088
		Sands	6,214
		Terriers and Amersham Hill	9,181
		Totteridge	6,562

Zone B			
District	**Grouped Settlement**	**Ward**	**Population size**
Aylesbury Vale		Aston Clinton	9,641
Aylesbury Vale	Buckingham		
		Buckingham North	6,469
		Buckingham South	5,574
Aylesbury Vale		Haddenham	8,105
Aylesbury Vale		Wendover	8,334
Chiltern	Amersham		
		Amersham Common	2,581

		Amersham Town	4,748
		Amersham-on-the-hill	4,937
		Chesham Bois and Weedon Hill	5,235
Chiltern	Chalfont St Peter		
		Austenwood	2,203
		Central	4,344
		Chalfont Common	3,983
		Gold Hill	2,236
Chiltern	Chesham		
		Asheridge Vale and Lowndes	4,850
		Hilltop and Townsend	4,541
		Newtown	2,474
		Ridgeway	2,604
		St Mary's and Waterside	4,875
		Vale	2,139
South Bucks	Beaconsfield		
		Beaconsfield North	5,104
		Beaconsfield South	3,789
		Beaconsfield West	3,188
South Bucks	Burnham and Taplow		
		Burnham Beeches	1,310
		Burnham Church	5,055
		Burnham Lent Rise	4,476
		Dorney and Burnham South	1,541
		Taplow	1,669
South Bucks	Denham		
		Denham North	2,939
		Denham South	3,524
South Bucks	Hedgerley and Farnham Common		
		Hedgerley and Fulmer	1,358
		Farnham Royal	5,499
South Bucks	Gerrards Cross		
		Gerrards Cross East & Denham South West	1,957
		Gerrards Cross North	3,195
		Gerrards Cross South	3,541
South Bucks	Iver		
		Iver Heath	4,945
		Iver Village and Richings Park	5,301
South Bucks		Stoke Poges	5,225
South Bucks		Wexham and Ivet West	3,251
Wycombe	Flackwell Heath, Wooburn & Bourne End		
		Bourne End cum Hendsor	5,531
		Flackwell Heath and Little Marlow	7,403
		The Wooburns	5,261
Wycombe		Greater Hughenden	8,362
Wycombe	Hazlemere		
		Hazlemere North	4,923

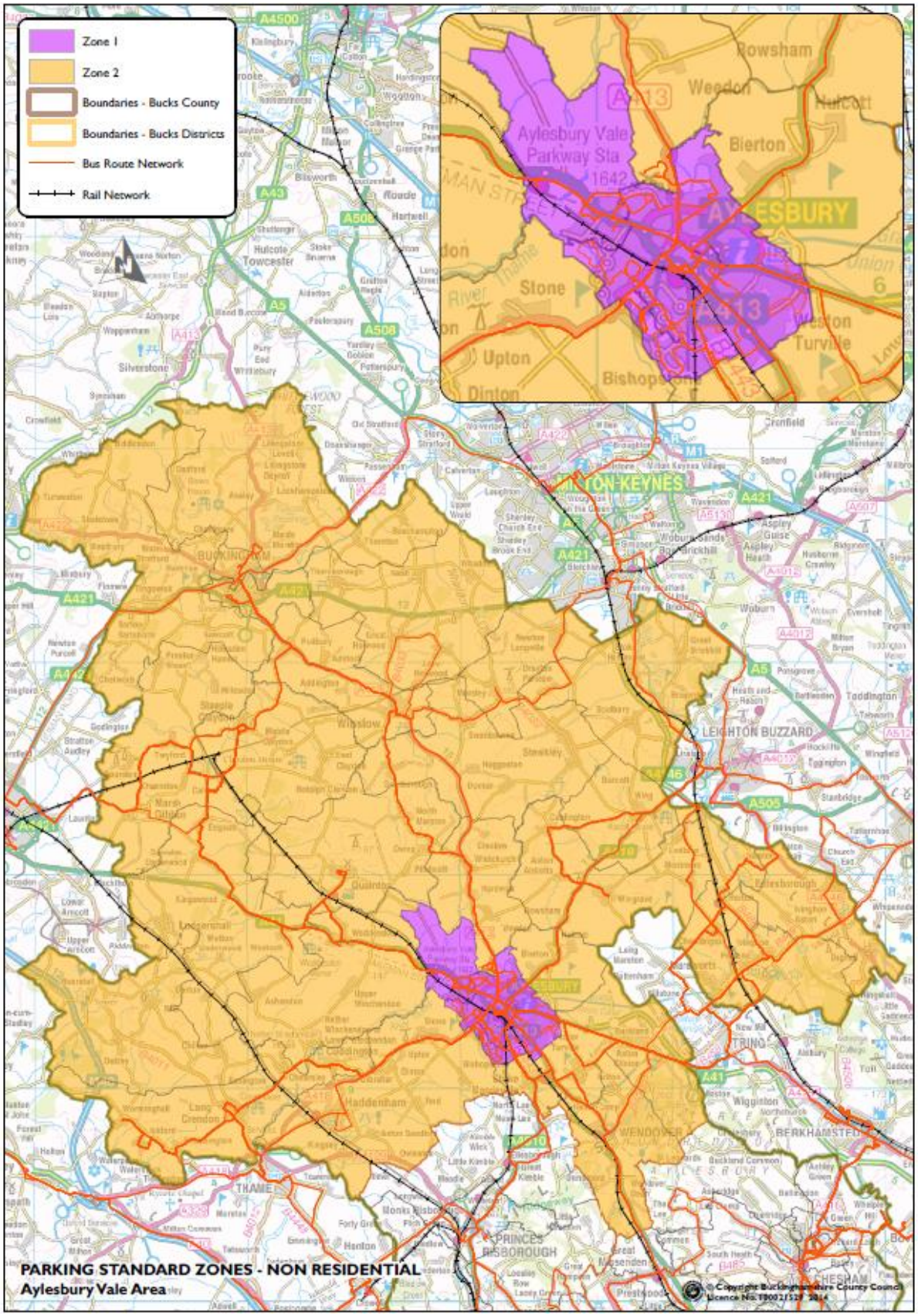
		Hazlemere South	4,700
Wycombe	Marlow		
		Marlow North and West	8,799
		Marlow South East	5,526
Wycombe		The Risboroughs	8,101
Wycombe		Tylers Green and Loudwater	8,683
Wycombe	West Wycombe		
		Chiltern Rise	5,484
		Downley and Plomer Hill	5,278

Zone C		
District	Ward	Population size
Aylesbury Vale	Bierton	1,705
Aylesbury Vale	Brill	2,578
Aylesbury Vale	Cheddington	3,023
Aylesbury Vale	Edlesborough	2,847
Aylesbury Vale	Great Brickhill	3,042
Aylesbury Vale	Great Horwood	3,074
Aylesbury Vale	Long Crendon	5,259
Aylesbury Vale	Luffield Abbey	3,049
Aylesbury Vale	Marsh Gibbon	3,412
Aylesbury Vale	Newton Longville	2,457
Aylesbury Vale	Pitstone	3,674
Aylesbury Vale	Quainton	2,551
Aylesbury Vale	Steeple Claydon	2,769
Aylesbury Vale	Stewkley	3,011
Aylesbury Vale	Tingewick	3,275
Aylesbury Vale	Waddesdon	2,513
Aylesbury Vale	Weedon	3,270
Aylesbury Vale	Wing	2,745
Aylesbury Vale	Wingrave	2,591
Aylesbury Vale	Winslow	5,725
Chiltern	Ashley Green, Latimer & Chenies	2,203
Chiltern	Ballinger, South Heath & Chartridge	2,203
Chiltern	Chalfont St Giles	7,118
Chiltern	Cholesbury, The Lee and Bellingdon	2,304
Chiltern	Great Missenden	2,312
Chiltern	Holmer Green	4,039
Chiltern	Little Chalfont	4,820
Chiltern	Little Missenden	2,468
Chiltern	Penn and Coleshill	4,510
Chiltern	Prestwood and Heath End	6,597
Chiltern	Seer Green	2,311
Wycombe	Bledlow and Bradenham	3,005
Wycombe	Greater Marlow	5,272
Wycombe	Hambleden Valley	2.648

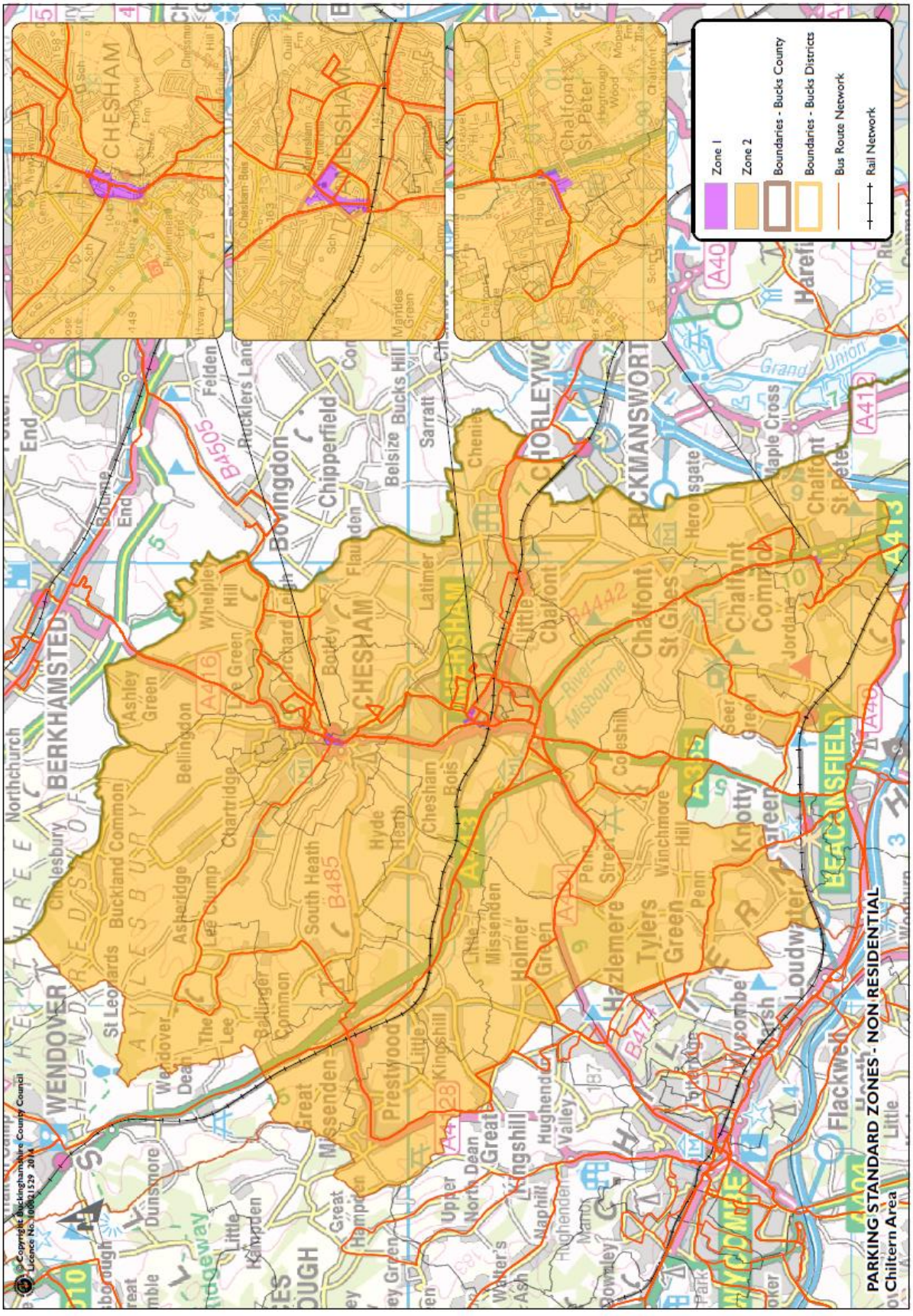
Wycombe	Icknield	3,193
Wycombe	Lacey Green, Speen & the Hampdens	2,859
Wycombe	Stokenchurch and Radnage	5,554

Appendix 3. Non-residential zone maps

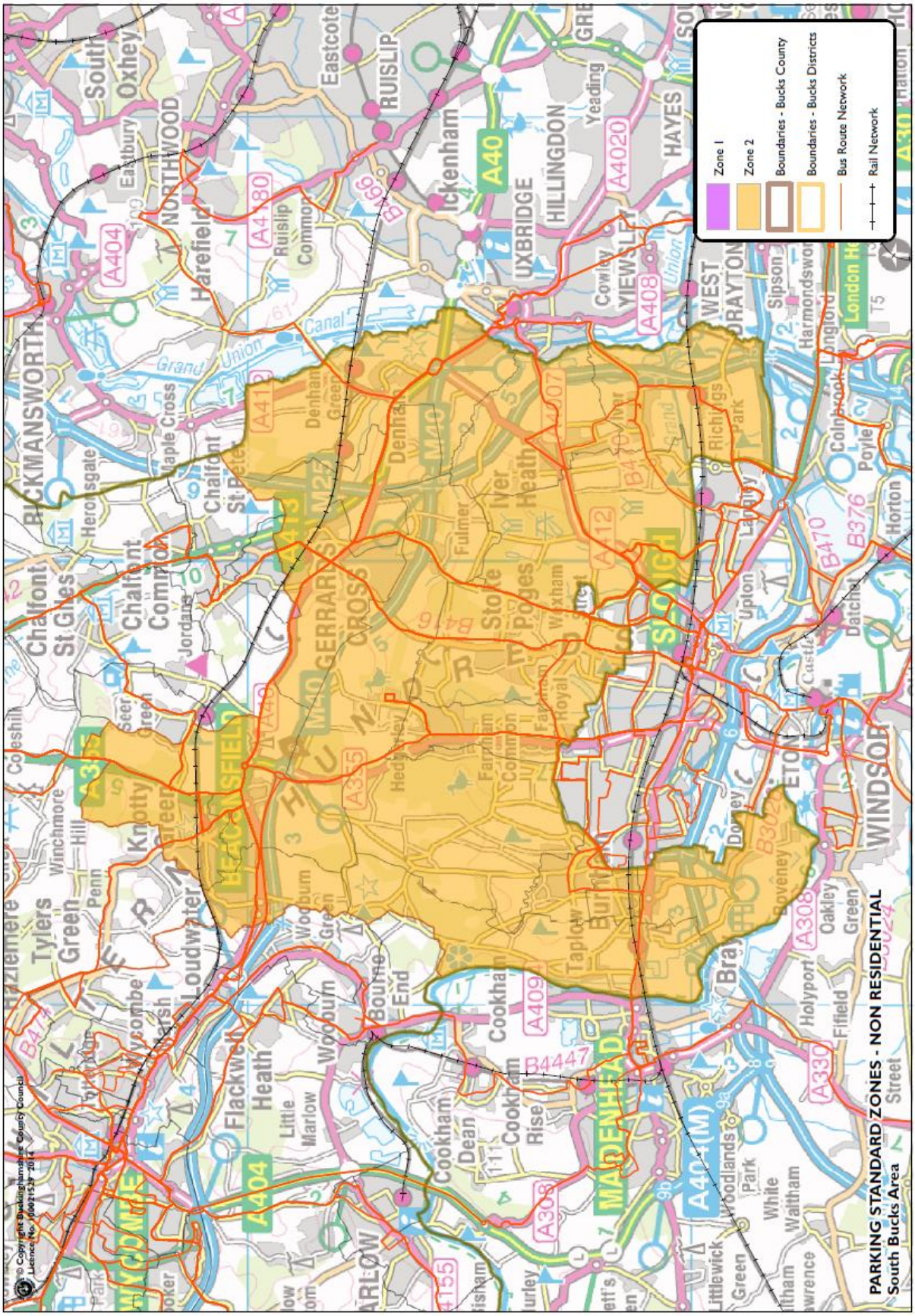
Aylesbury Vale zone map



Chiltern zone map



South Bucks zone map



Wycombe zone map