Parking Standards Review

Dacorum Borough Council

October 2017

Prepared for:

Dacorum Borough Council

The Forum

Marlowes

Hemel Hempstead

Hertfordshire

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EXECUTIVE SUMMARY

General Principles

There is clear evidence from officers, councillors and site visits that parking standards are required to manage the network and reduce pressure on on-street supply - these issues lead to parking that can increase congestion and reduce road safety.

Basing all standards on a maximum approach is likely to lead in some cases to under-provision of parking and pressure on scarce on-street resources. We therefore recommend that the standards move away from a maximum approach to a 'requirement' approach, which can be adjusted upward or downward if robust evidence is provided. We also recommend that these standards be related to accessibility zones, with a reduction in the required standard in the most accessible areas. In effect, this will result in a range of standards around a given standard, depending on site circumstances.

Accessibility zones

The existing standards have a relatively fine-grained approach to designating 4 accessibility zones based on public transport and local facilities. The information in this report suggests that public transport accessibility combined with access to many local facilities only reduces the average car ownership levels significantly in the core urban areas of Hemel Hempstead and to some degree Berkhamsted.

For **residential development**, census data on car ownership/availability was used as a starting point – this showed 'bands' of car ownership in three broad geographic zones – central Hemel, Hemel fringe and Berkhamsted, and the remainder of the borough – these zones corresponded well to accessibility to town centres and transport facilities, and we suggest that a different residential standard be applied in each.

Car ownership reduces by some 15-30% from the average across the borough in central Hemel, and we regard this as a suitable reduction range for residential parking here - Accessibility Zone 1. We suggest defining this zone by an approximate 10-minute walk (or some 800m) of Hemel centre. There are then a few other areas in central Berkhamsted and the fringes of Hemel centre, where car ownership is some 10% below the average, which we suggest should be regarded as Accessibility Zone 2, with 10% being a suitable reduction. We recommend an 800m radius of central Berkhamsted and an 800-1600m radius (10-20 minutes' walk) of Hemel centre for this zone. The presence of on-street controls and local parking stress will also be important in making decisions on

reductions in these zones. Outside of these areas, car ownership is at or above the borough average, and we recommend that the average requirement be used, but with flexibility if robust evidence can be provided to the council.

The census data described above was used to develop a set of parking standards for different sizes of residential units for each of these 'accessibility' zones, with an allowance for visitor parking applied on top of these. This resulted in a standard requirement applicable to each accessibility zone

For **non-residential development**, evidence is that most of the standards currently used are within the broad ranges experienced in practice, and these have been retained as requirements (not maximum standards) unless there is specific evidence that indicates changes are necessary. A general requirement is given for each land use across the borough, but as reductions from the requirement can help to encourage mode shift, particularly where there are good travel choices and on-street controls. Allowance is made for percentage reductions in this for higher accessibility zones. Looking at the data on mode of travel to work in different Dacorum areas, it appears that as described above, there are some clear reductions from the average in Hemel centre (some 15% below average) and Berkhamsted and Hemel fringes (10% below average).

While the data indicates there are some other areas with lower work car mode share, we suggest it is sensible to use the same accessibility zones as described above, and permit reductions of 15-30% in Zone 1 and 10-20% in Zone 2 from the general borough-wide requirements for non-residential development. These assumed 'ranges' are to allow for some flexibility within the areas – the census averages were for relatively large areas, and there will be variation within these, so a 'range' has been chosen. There is obviously still flexibility to consider higher reductions and reductions in any location with suitable evidence.

The standards need to be flexible, and we have suggested the factors the council could consider in determining changes above or below these; we also suggest more use of parking stress surveys when developments are considered, and have provided guidance on how to undertake these.

Other issues

Other aspects suggested in this report are:

- A new standard for electric vehicle charging points;
- Car-free development only acceptable in central Hemel Hempstead with suitable evidence;
- Disabled parking requirements adjusted to meet latest DfT guidance.

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CONTENTS

1.0 INTRODUCTION

General

1.1 Markides Associates (MA) have been commissioned by Dacorum Borough Council (DBC) to undertake a Technical Review of their current parking standards contained within Appendix 5 of the DBC Local Plan 1991-2011, which was adopted on 21st April 2004.

1.2 This Technical Review will form the evidence base to support a Supplementary Planning Document (SPD) which will contain DBC's new updated parking standards to support the current Local Plan and ultimately the new Single Local Plan that is currently in progress. The review does not cover the design elements of parking as the highway authority, Hertfordshire County Council (HCC), is developing separate guidance on this.

1.3 Current planning policy for parking is set out in:

- Policy CS8 Sustainable Transport of the Core Strategy (adopted September 2013)
- Dacorum Borough Local Plan 1991-2011 – Appendix 5 Parking Standards.
- Supplementary Planning Document (SPD) on 'Accessibility Zones for the Application of Car Parking Standards.'

1.4 The existing parking standards and associated accessibility guidance are included as **Appendix A**. The standards are maximum standards, with reductions permitted in areas of high accessibility.

1.5 This Technical Review has been developed based on the following evidence/information:

- Policy and guidance
- 2011 Census data
- Local site surveys and parking surveys
- Information on parking standards from other authorities
- Feedback from officers and councillors in applying existing standards
- Responses to consultation letters sent to developers/local business organisations

1.6 We note that parking standards in themselves apply only to development applications, and there are many other aspects of transport policy that will help achieve changes in travel behaviour and will also impact on parking problems. These include:

- The pricing of parking;

- The management of resident's parking zones and other on-street controls, and;
- The spatial distribution of development.

1.7 The report is structured as follows:

- Chapter 2 – provides a brief description of Dacorum borough
- Chapter 3 – describes the policy context
- Chapter 4 - Summarises consultation, other standards and site visits
- Chapter 5 - discusses some general parking standard issues
- Chapter 6 - contains recommendations on the standards

2.0 DACORUM AREA PROFILE

Dacorum General

2.1 Dacorum is a diverse local authority covering 81 square miles in the west of Hertfordshire County. The borough extends from the north of Watford to the Chiltern Hills and has a population of some 145, 000 residents (2011 Census).

2.2 The borough is located adjacent to Buckinghamshire to the north and west, Central Bedfordshire to the north-east, St Albans City and District to the east and Watford and Three Rivers to the south.

2.3 Most residents live in the main large town of Hemel Hempstead (2011 population 95,000). The town centre and Maylands Business Park are designated as key regeneration areas as shown in **Figure 2.1**.

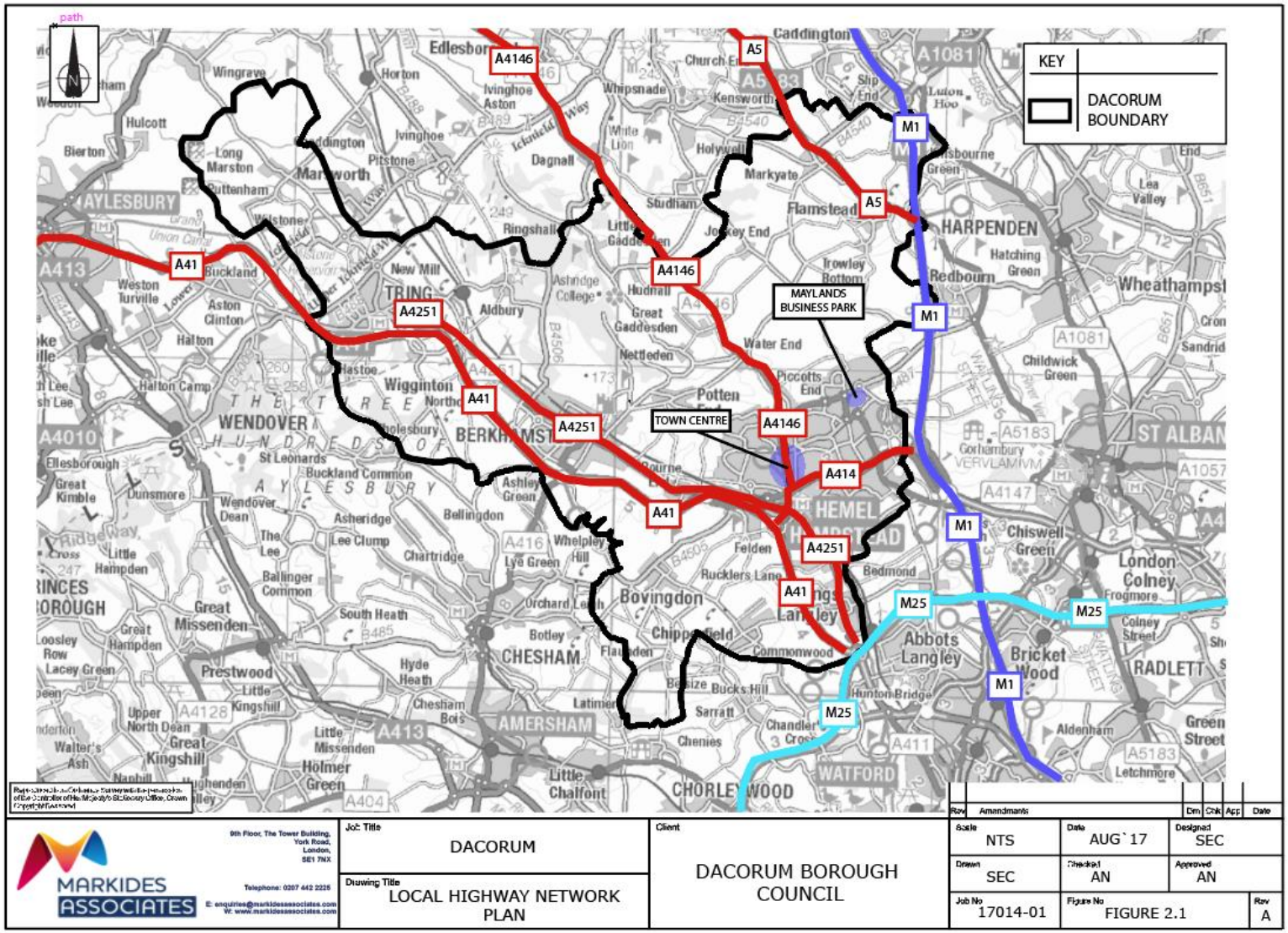
2.4 Although approximately 85% of the borough's area is rural, there are also two main market towns, Berkhamsted and Tring, located 7.5 miles and 12 miles to the north-west of Hemel Hempstead respectively.

Local Highway Network

2.5 The local highway network within Dacorum is shown on **Figure 2.1**. The main routes through the borough are the A41 and the A414. The A41 travels from the south to the east linking London and the M25 through Dacorum to Aylesbury and beyond. The A414 links Hemel Hempstead to the M1 and then travels eastwards through Hertfordshire. There are very limited east-west links across Dacorum Borough.

2.6 Roads within Hemel Hempstead are subject to significant congestion according to county council data[1].The average morning peak speeds in Hemel Hempstead are less than 20mph along the A4251, B4505 and A4146[2], less than 25mph on the A414/A4147, and less than 30mph on the B487 – see **Figure 2.3.**

[1] Hertfordshire Transport Facts 2016, Hertfordshire County Council
[2] Hertfordshire Traffic and Transport Data Report, 2016, Hertfordshire County Council


KEY
DACORUM BOUNDARY
A4146
A5
A41
A4251
A414
M1
M25
MAYLANDS BUSINESS PARK
TOWN CENTRE
HEMEL HEMPSTEAD
BERKHAMSTED
TRING
CHESHAM
AMERSHAM
CHORLEYWOOD
WATFORD
HARPENDEN
ST ALBANS
RADLETT
Abbots Langley
Bovingdon
WENDOVER
MARKIDES ASSOCIATES
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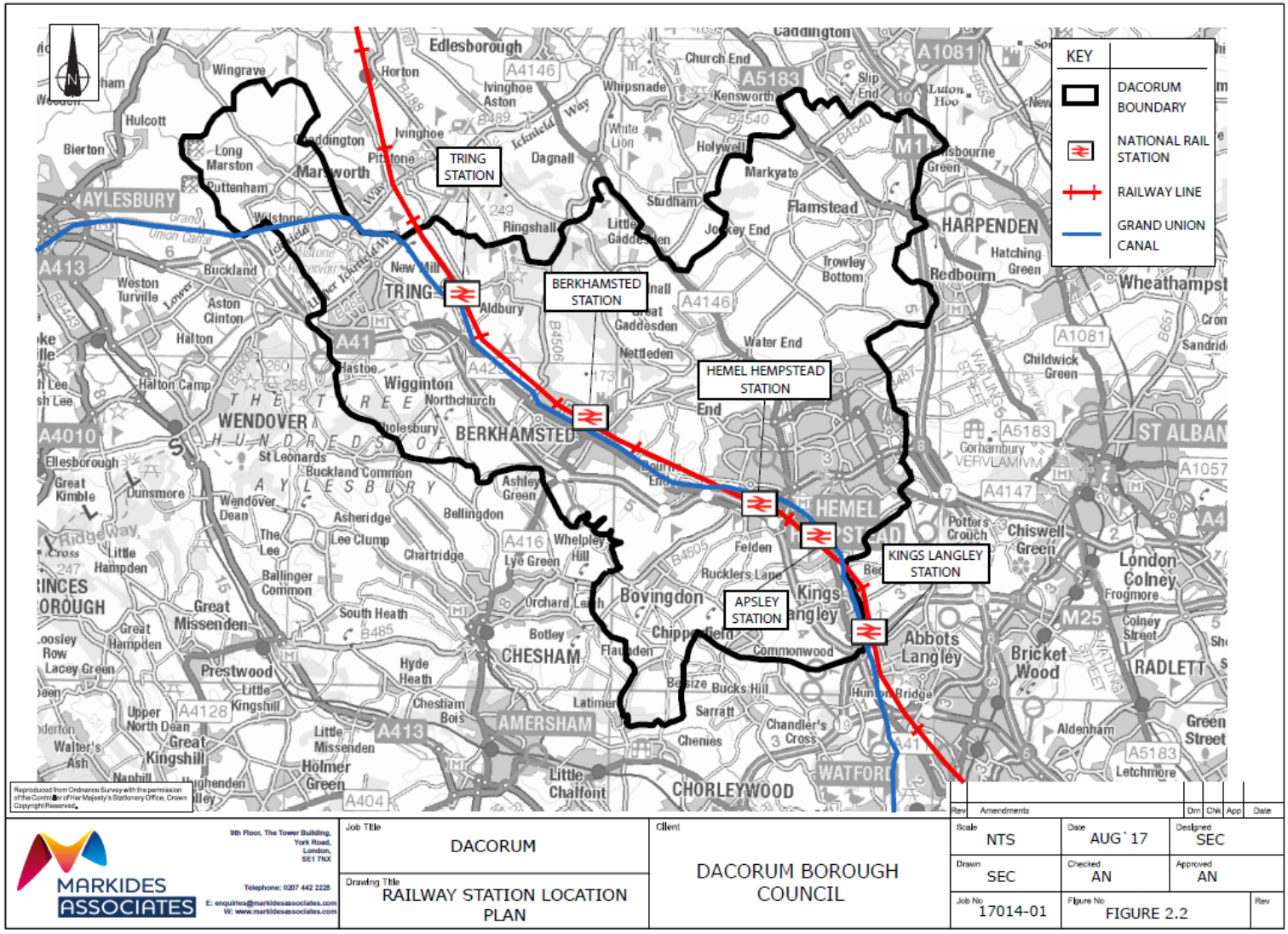
KEY
DACORUM BOUNDARY
NATIONAL RAIL STATION
RAILWAY LINE
GRAND UNION CANAL
TRING STATION
BERKHAMSTED STATION
HEMEL HEMPSTEAD STATION
APSLEY STATION
KINGS LANGLEY STATION
TRING
BERKHAMSTED
HEMEL HEMPSTEAD
CHESHAM
AMERSHAM
CHORLEYWOOD
WATFORD
HARPENDEN
ST ALBANS
RADLETT
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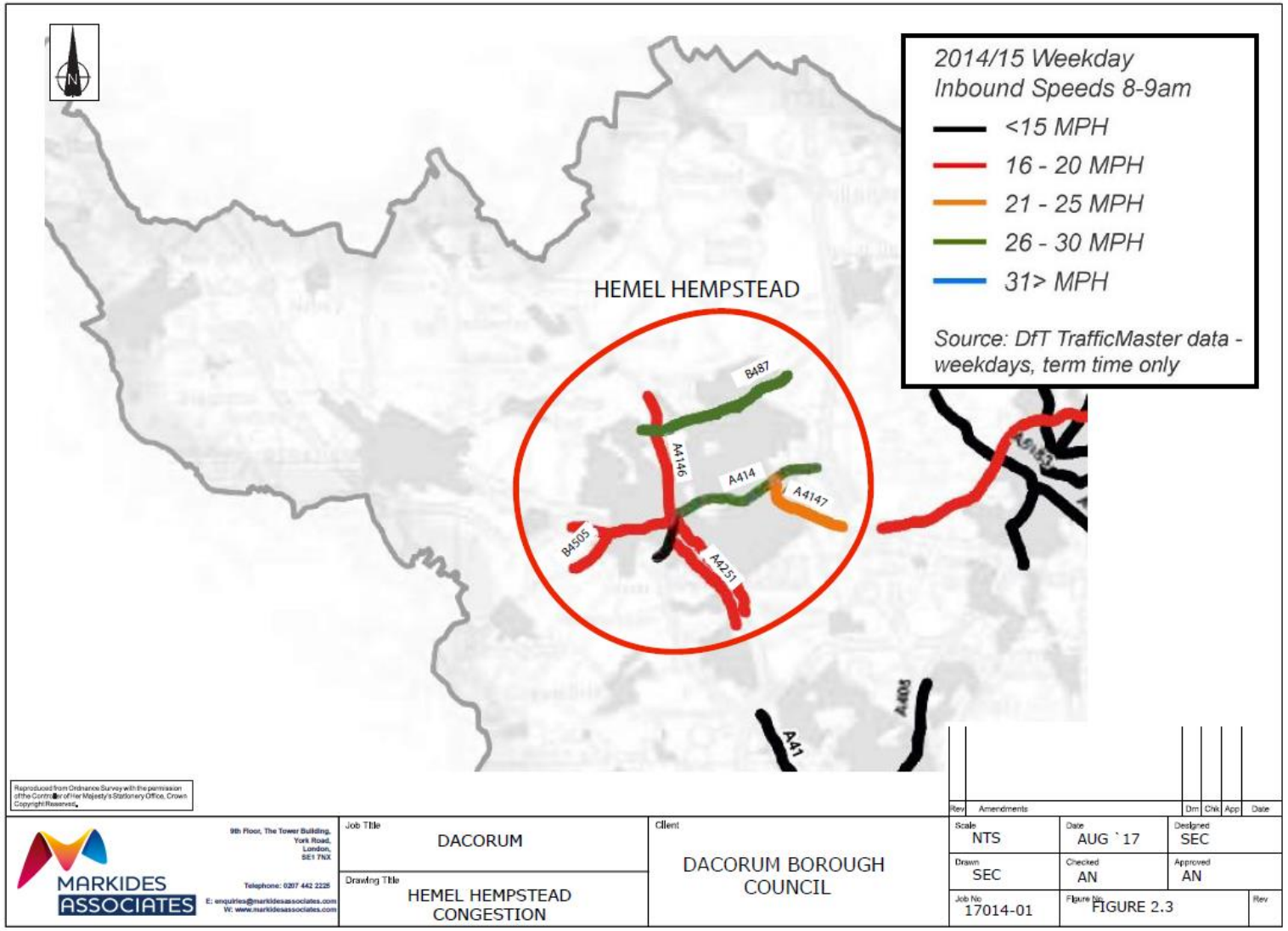
2014/15 Weekday
Inbound Speeds 8-9am
<15 MPH
16 - 20 MPH
21 - 25 MPH
26 - 30 MPH
31> MPH
Source: DfT TrafficMaster data - weekdays, term time only
HEMEL HEMPSTEAD
B487
A4146
A414
A4147
B4505
A4251
A41
A405
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Rail Services

2.7 The Euston to Glasgow east-west mainline follows the A41 through the borough to Tring, then on to Central Bedfordshire. There are 4 mainline stations within Dacorum located at Berkhamsted, Tring, Hemel Hempstead and Apsley. Kings Langley station is located just to the south of the borough. The rail stations are shown on **Figure 2.2**.

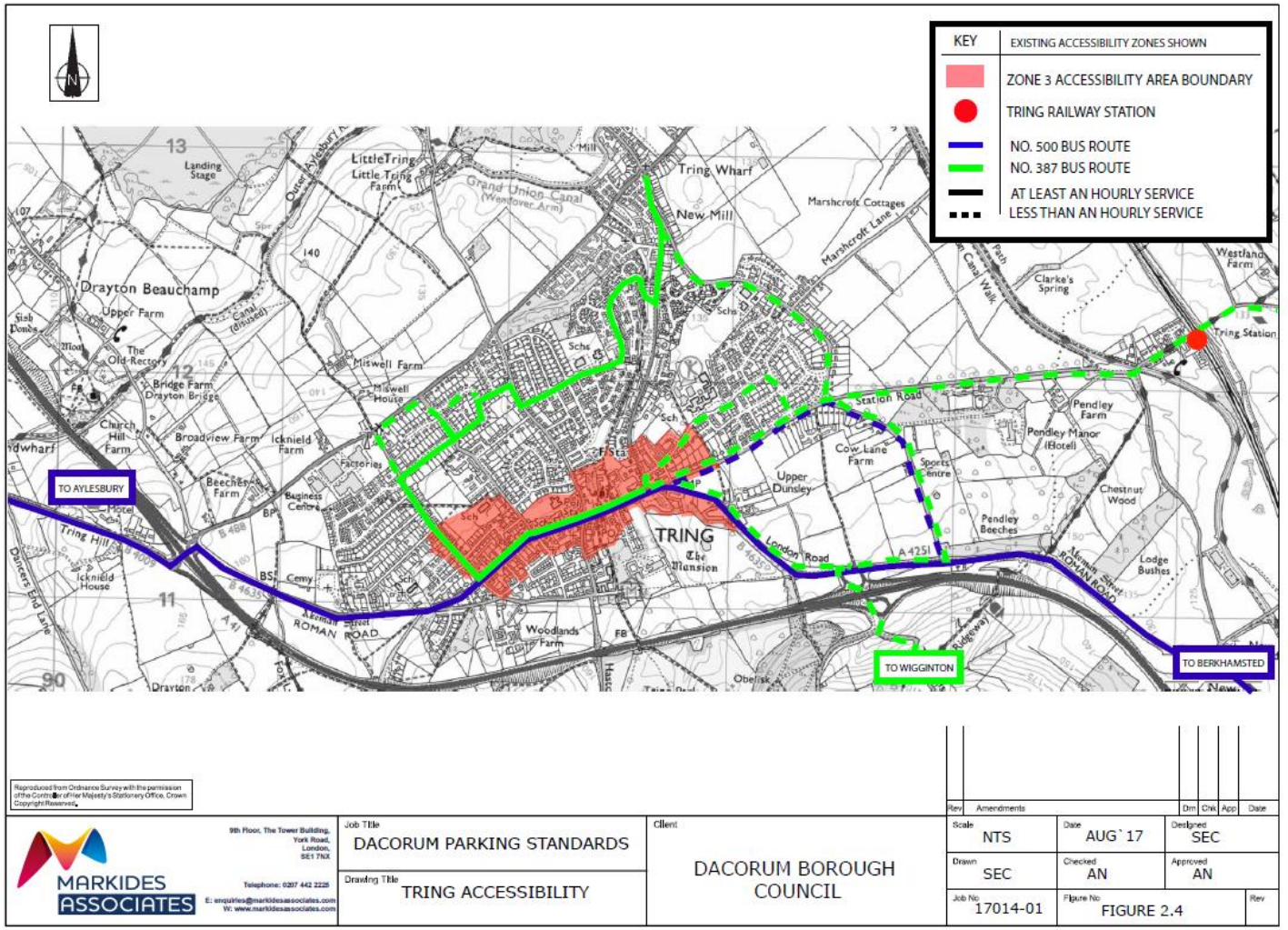
2.8 The Hertfordshire Transport Factsheet 2016 shows that the east-coast mainline through Dacorum is below 80% of capacity and that Kings Langley, Aspley and Hemel Hempstead rail stations all have station constraints due to facilities, line capacity, service frequencies and platform length, based on the number of peak time passengers. Based on statistics from the Office of Rail and Road, in 2015/16 Hemel Hempstead had 1.98 million passengers, Apsley had 0.58 million passengers, Berkhamsted had 1.74 million passengers, Tring had 0.84 million passengers, and Kings Langley had 0.73 million passengers.

Bus Services

2.9 Tring, located to the north-west of the borough, has two bus services (routes 500 and 387) that operate at least hourly; these are shown on **Figure 2.4.**

2.10 Berkhamsted has two routes which operate at least hourly - the 500 and 354/354A. Routes 387 and 354 are local routes operating between Tring and Wigginton, and Chesham and Berkhamsted respectively, and these are shown on **Figure 2.5**. The 500 is the main bus route that links Aylesbury to Watford and all the main towns and villages within the district. This route travels via Apsley, Hemel Hempstead, Berkhamsted and Tring.

2.11 Hemel Hempstead has the highest level of bus service provision within the district, with the highest frequency and range of destinations. The routes available within Hemel Hempstead are shown on **Figure 2.6**. There are 8 bus services that serve Hemel Hempstead that operate at least hourly.


KEY
EXISTING ACCESSIBILITY ZONES SHOWN
ZONE 3 ACCESSIBILITY AREA BOUNDARY
TRING RAILWAY STATION
NO. 500 BUS ROUTE
NO. 387 BUS ROUTE
AT LEAST AN HOURLY SERVICE
LESS THAN AN HOURLY SERVICE
TRING
TO AYLESBURY
TO WIGGINTON
TO BERKHAMSTED
Drayton Beauchamp
Tring Wharf
New Mill
Tring Station
Station Road
London Road
Grand Union Canal
ROMAN ROAD
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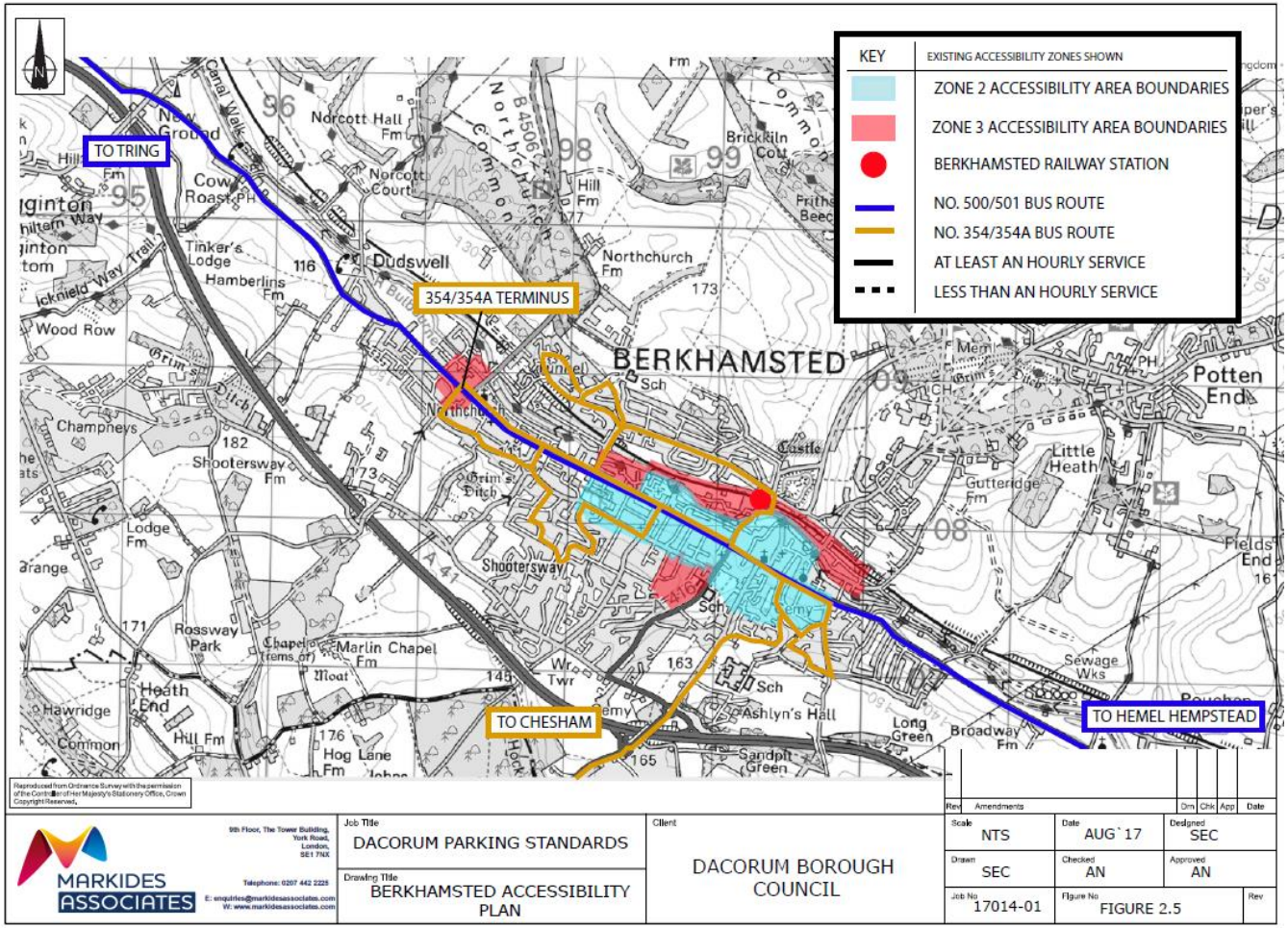
KEY
EXISTING ACCESSIBILITY ZONES SHOWN
ZONE 2 ACCESSIBILITY AREA BOUNDARIES
ZONE 3 ACCESSIBILITY AREA BOUNDARIES
BERKHAMSTED RAILWAY STATION
NO. 500/501 BUS ROUTE
NO. 354/354A BUS ROUTE
AT LEAST AN HOURLY SERVICE
LESS THAN AN HOURLY SERVICE
TO TRING
354/354A TERMINUS
TO CHESHAM
TO HEMEL HEMPSTEAD
BERKHAMSTED
Dudswell
Northchurch
Potten End
Shootersway
Marlin Chapel
Ashlyn's Hall
Sandpit Green
Broadway
Long Green
Little Heath
Fields End
Rossway Park
Heath End
Hawridge Common
Champneys
Wood Row
Hog Lane
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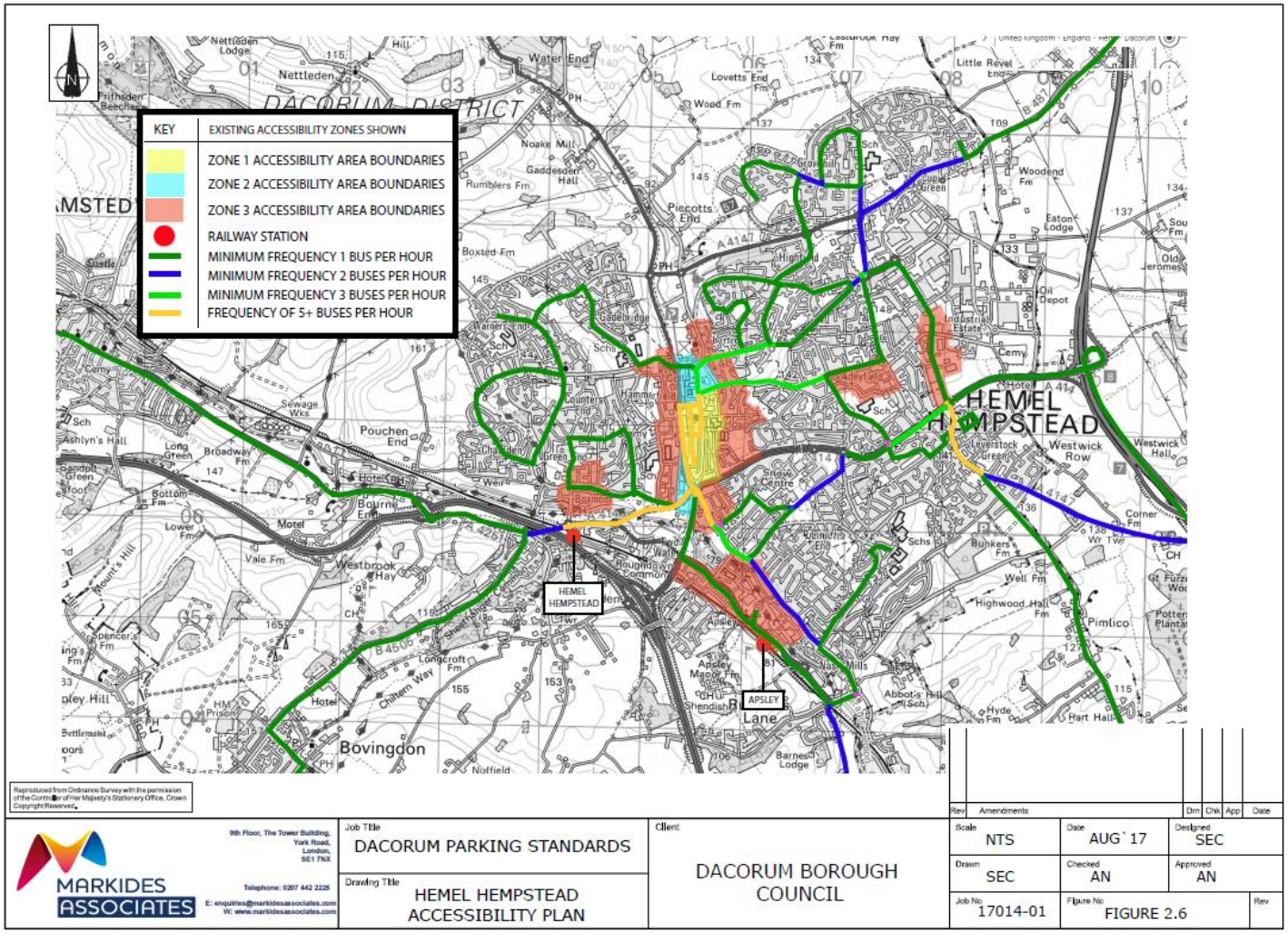
KEY
EXISTING ACCESSIBILITY ZONES SHOWN
ZONE 1 ACCESSIBILITY AREA BOUNDARIES
ZONE 2 ACCESSIBILITY AREA BOUNDARIES
ZONE 3 ACCESSIBILITY AREA BOUNDARIES
RAILWAY STATION
MINIMUM FREQUENCY 1 BUS PER HOUR
MINIMUM FREQUENCY 2 BUSES PER HOUR
MINIMUM FREQUENCY 3 BUSES PER HOUR
FREQUENCY OF 5+ BUSES PER HOUR
HEMEL HEMPSTEAD
APSLEY
Bovingdon
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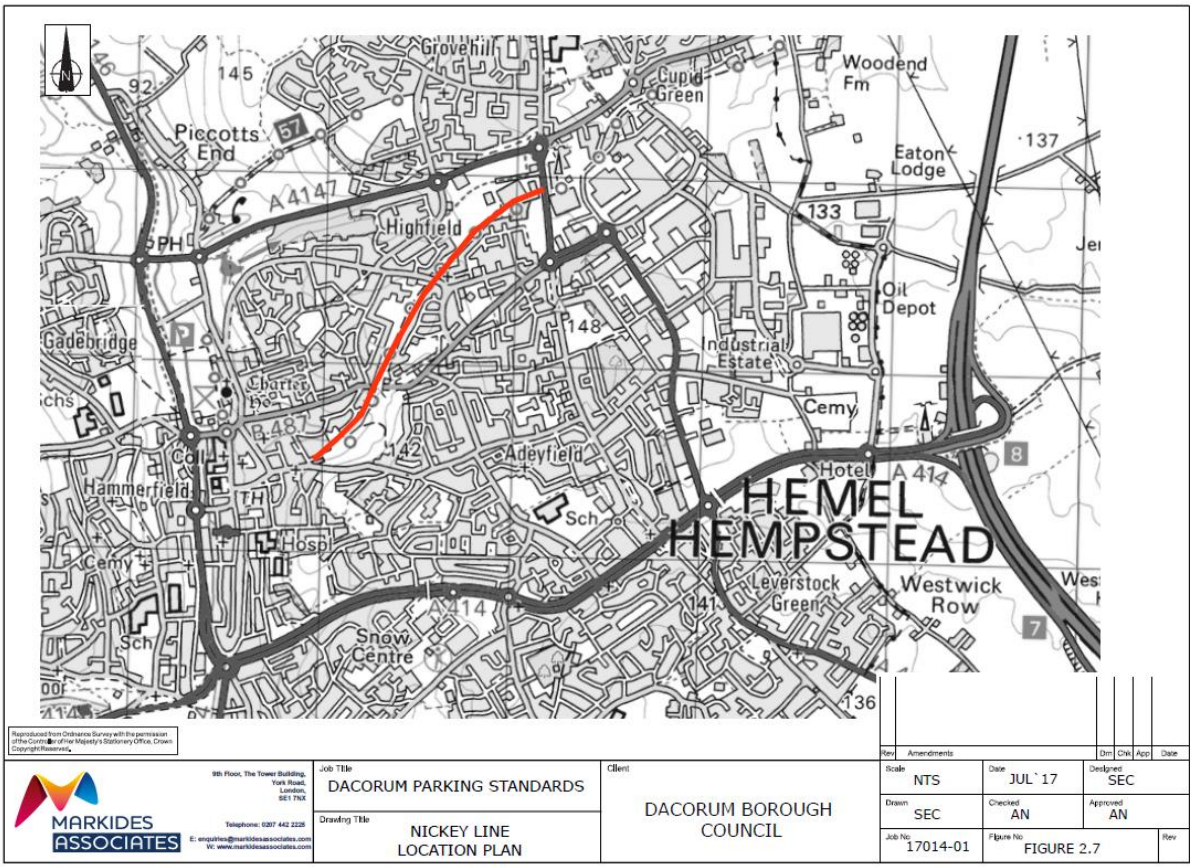
Cycling and Walking Provision

2.12 When complete, National cycle route 57 will travel west to east from Wiltshire to Welwyn Garden City. The section between Hemel Hempstead and Welwyn Garden City is largely traffic free as it follows the Nickey Line. The Nickey Line is approximately 7 miles long and is a shared cycle/footway along a former railway line (historically the Harpenden to Hemel rail line). This is shown in **Figure 2.7**.



2.13 Dacorum has a dense network of public footpaths and bridleways – these are being improved by the borough and HCC.

Grand Union Canal

2.14 The Grand Union Canal follows the same route as the railway line but splits eastwards through Aylesbury to the north of Tring. The rail line and Grand Union Canal are also shown on **Figure 2.2**.

2.15 The existing towpath is being improved to an all-weather surface from Kings Langley to Hemel Hempstead and both cycling and walking are allowed.

Maylands Business Park

2.16 The Maylands Business Park on the periphery to the north-east of Hemel Hempstead is of significance to the borough and wider sub-region as it is a major employment centre and focus of regeneration. The business park covers approximately 3.75 square kilometres, and there are currently approximately 400 different businesses employing 16,500 people. The business park consists of a mix of B1 offices and B2/B8 warehouse, distribution and storage uses. The Maylands Business Park has a masterplan, Travel Plan and Parking Strategy, all discussed in Section 3 below. These policy documents are shaping the significant redevelopment and regeneration of the business park.

Travel to Work – resident population

2.17 According to the 2011 census, some 73% of the resident population of Dacorum drive to work (5% as passengers), 14% travel by public transport, 11% walk and 1.2% cycle. This is shown in Table 2.1, and obviously varies across the borough as shown later.

TABLE 2.1 TRAVEL TO WORK – RESIDENT POPULATION

Method of Travel to Work	% *
Underground	0.8
Train	9.4
Bus	3.3
Taxi	0.43
Motorcycle	0.74
Driving	68.5
Passenger	4.9
Cycling	1.2
Walking	10.8
Total	100%

*Figures have been rounded

Travel to Work- People working in Dacorum [3]

2.18 The travel to work mode share of the workday population (those who travel to work in Dacorum) from the Census 2011 is 79% drive (6% as passengers), 6% travel by public transport and 14% walk or cycle. This is shown in Table 2.2.

TABLE 2.2 TRAVEL TO WORK – WORKDAY POPULATION

Method of Travel to Work	% of Travel *
Underground	0.5
Train	1.8
Bus	3.8
Taxi	0.4
Motorcycle	0.6
Driving	72.3
Passenger	6.4
Cycling	1.4
Walking	12.5
Other	0.3

*Figures have been rounded

Out Commuting Patterns

2.19 Due to the good transport links, many residents work outside the borough; however, Dacorum has the lowest proportion of residents out-commuting compared to the other districts in Hertfordshire. The Census 2011 'location of usual residence and place of work by method of travel to work' analysis for Dacorum shows that 47% of residents live and work within Dacorum Borough with 62% of those residents choosing to drive.

[3] The 2011 Census estimates this where the usually resident population is re-distributed to their places of work, while those not in work are recorded at their usual residence.

2.20 The average commuting distance has increased from 10.4 miles in 2001 to 11.3 miles in 2011.

2.21 There is a wide set of destinations to which Dacorum residents travel to work, including:

- St Albans and Watford (12% of residents' commute to these areas), with over 80% of residents who travel there driving to both;
- London where travel by train predominates; and
- Three Rivers, Aylesbury, Welwyn and Chiltern - 2-3% of residents travel to each for employment purposes, which is most likely due to the proximity of these districts to Dacorum Borough.

In-commuting Patterns

2.22 There is a wide range of origins from which employees travel to work in Dacorum. The top 8 origins include Central Bedfordshire, Aylesbury Vale, Luton, St Albans, Three Rivers, Watford, Chiltern and Welwyn Hatfield. The majority of these in-commuters drive into Dacorum from these areas due to the poor east-west public transport links.

Hertfordshire County Travel Survey 2015

2.23 The Hertfordshire County Travel Survey from 2015 shows that the average household within Dacorum has two people and that 52% of people work full or part time, with 21% in education, 20% retired and 2% out of work.

2.24 An increase in car ownership from the 2012 travel survey was observed, with households with no cars decreasing from 15% to 9%, 1-car households decreasing from 40% to 37% but households with 2 or more cars increasing from 46% to 54%.

2.25 The survey showed that 16% of residents have a bus pass and 49% of residents own a useable bicycle. Some 72% of the population have a full driving licence, which is slightly less than the County average of 73%.

2.26 The percentage of commuters who cycled to work was 1%, which is lower than the County average of 3%, with the highest bicycle ownership being within the 18-24 age range. The distance travelled to work by car was lower in Dacorum at 9.0 miles compared to the

County average of 9.5 miles. This is in line with the total distance travelled, which is lower than the County average.

2.27 The borough had a bus mode share (all trips) of 3% and rail of 4%. Cycling accounted for 1% and walking 25%.

Car Ownership/Availability

2.28 The Census 2011 data has been assessed for car or van availability[4] or Dacorum overall, wards in Dacorum, and for adjacent authorities. While referred to as 'car ownership', it represents 'car ownership and availability', and includes any company cars/vans available for private use. This provides the best available information on the likely number of cars/vans parked at residential properties, but as the analysed is an average there will clearly be a range within a ward or e.g. a tenure type. It does not include any potential visitor parking.

2.29 Dacorum has a car ownership level of 1.39 vehicles per household which is marginally higher than the County average. The car ownership levels for Dacorum, Hertfordshire and adjacent authorities are shown in Table 2.3.

TABLE 2.3 CAR OWNERSHIP – DACORUM, HERTFORDSHIRE AND ADJACENT AUTHORITIES.

Authority	Car Ownership – vehicles per household
Hertfordshire County	1.37
Central Bedfordshire	1.49
Dacorum	1.39
Hertsmere	1.38
Luton	1.08
St Albans	1.42
Three Rivers	1.47
Watford	1.19

[4] The census question is 'How many cars or vans are owned or available for use by members of this household? Include any company cars or vans available for private use'.

Authority	Car Ownership – vehicles per household
Aylesbury Vale	1.51
Chiltern	1.61

2.30 The census indicated that some 16% of Dacorum households do not own cars, and the only two adjacent authorities with a much higher level of car free households are Luton with 27% and Watford with 22%, reflective of the more urban nature of these areas. Hertfordshire County Council and Hertsmere both have 17% of households that do not own cars.

2.31 **Figure 2.8** below shows the car ownership by ward, and compares this to an average, while **Figure 2.9** shows the data geographically. There are three broad 'bands' of car ownership shown:

- The lowest car ownership is in 4 wards all in the centre of Hemel Hempstead, which are some 15-30% lower than the district average.
- The next 'band' is a set of 8 wards mostly in Hemel, although 1 is in Berkhamsted, with car ownership some 10% lower than the average.
- There are 13 wards with average or above average car ownership – some of these are 30% above the average.

2.32 Clearly there are few wards in the district with car ownership significantly below the average.

2.33 It is worth noting that low car ownership does not mean low parking stress, which is related to the availability of on-street space and the demand for parking.

FIGURE 2.8 – DACORUM CAR OWNERSHIP BY WARD (2011 CENSUS)

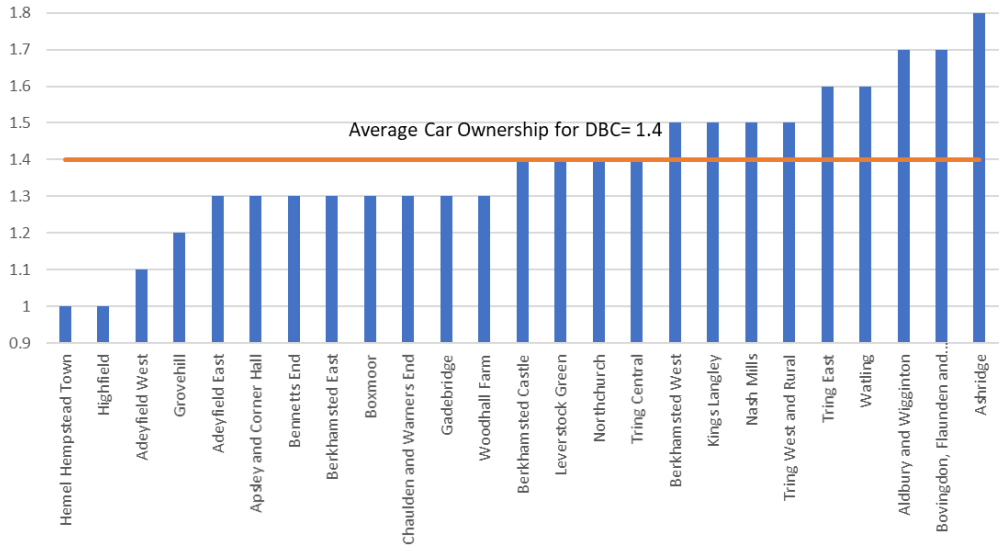
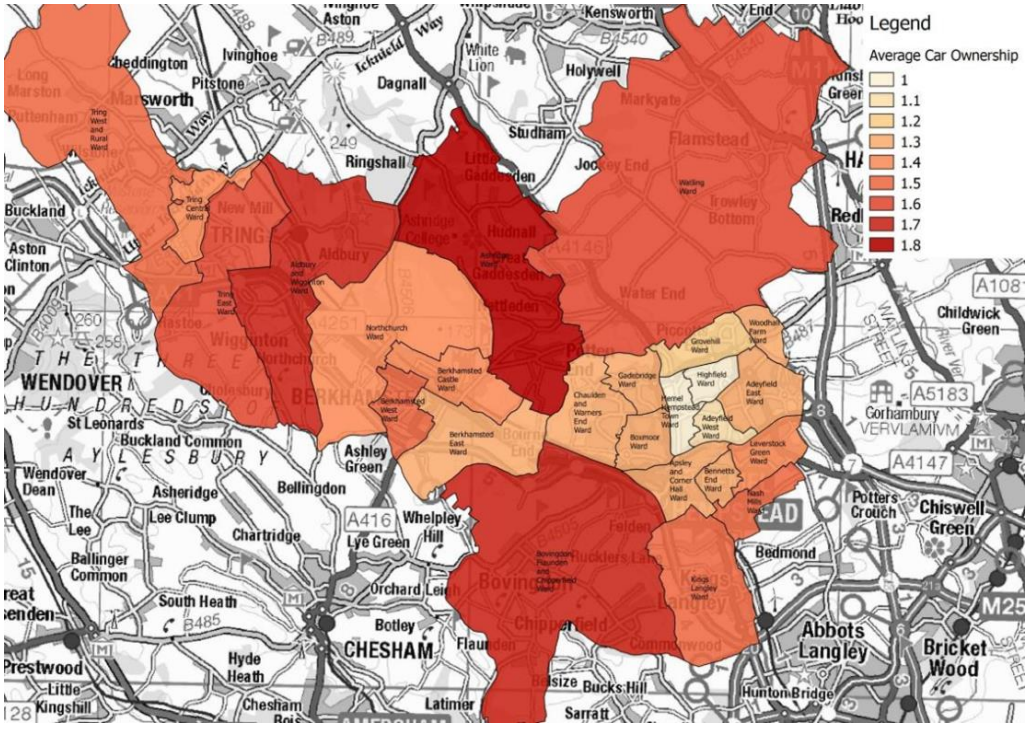


FIGURE 2.9- DACORUM CAR OWNERSHIP BY WARD GEOGRAPHICALLY (2011 CENSUS)



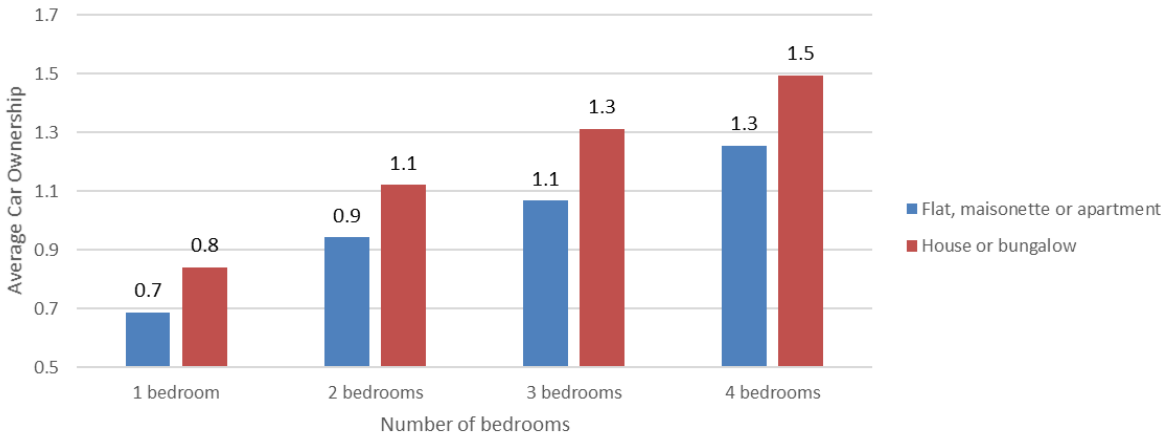
2.34 The figure in Appendix B shows the spread of car ownership in the 3 ‘bands’ of average ownership described above. This shows that there is a range of units in each area/size with differing car ownership. For the smaller 1-bedroomed units, some 50% do not own a

car in central Hemel, while only 34%-40% of these size units in other areas have no car. As unit sizes increase there is less differential between the different areas.

2.35 The Dacorum Wards with railway stations - Apsley and Corner Hall (Apsley Station), Berkhamsted Castle (Berkhamsted Station), Boxmoor (Hemel Hempstead Station) have average car ownership levels which are similar or slightly lower than the district average, while Tring East (Tring Station) is above the average. This is probably reflective of the fact that rail remains a small proportion of overall trips, as noted above.

2.36 **Figure 2.10** below shows a summary of how Dacorum car ownership changes by type of dwelling. This shows that flats or apartments have car ownership levels of typically 81-84% of that of houses. Clearly there will also be some correlation with geographical location, as the areas likely to contain more flats/apartments are likely to be within the core urban areas such as Hemel, where there is lower car ownership. There will also be variation between different types of houses and flats/apartments.

FIGURE 2.10– DACORUM CAR OWNERSHIP BY TYPE OF DWELLING (2011 CENSUS)



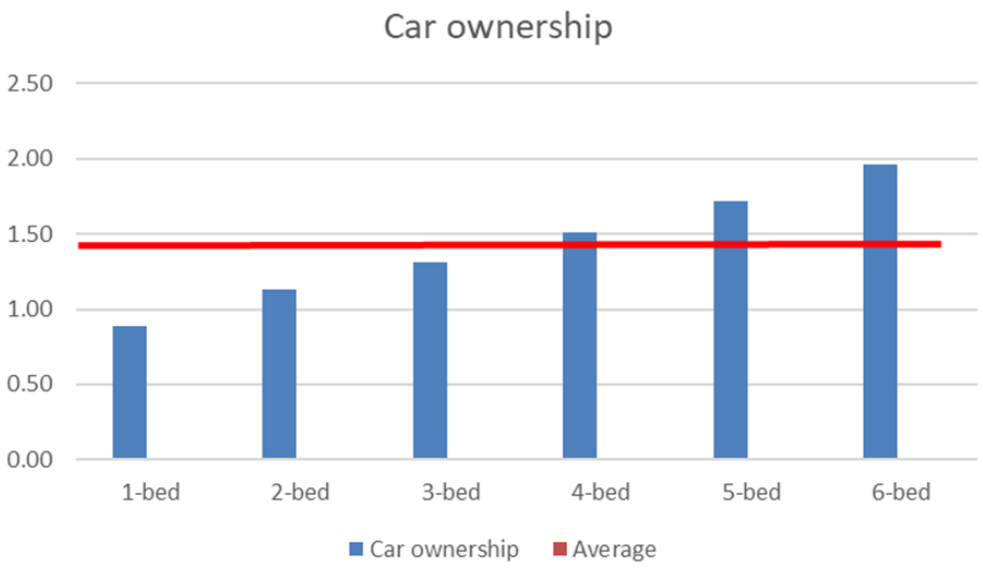
2.37 **Figure 2.11** overleaf shows Dacorum car ownership by dwelling size. Bedrooms have been assumed from the number of 'habitable rooms' in the 2011 census. The definition of a habitable room does not include bathrooms, toilets, halls or landings, or rooms that can only be used for storage. All other rooms, for example, kitchens, living rooms, bedrooms, utility rooms, studies and conservatories are counted.

2.38 The figure assumes the following habitable rooms in each unit:

- 1 bedroom/studio/bedsit – 1-3 habitable rooms;
- 2-bedroom units – total of 4 habitable rooms;
- 3-bedroom units – total of 5 habitable rooms;
- 4-bedroom units – total of 6 habitable rooms;
- more than 4 bedrooms – 7 or more habitable rooms.

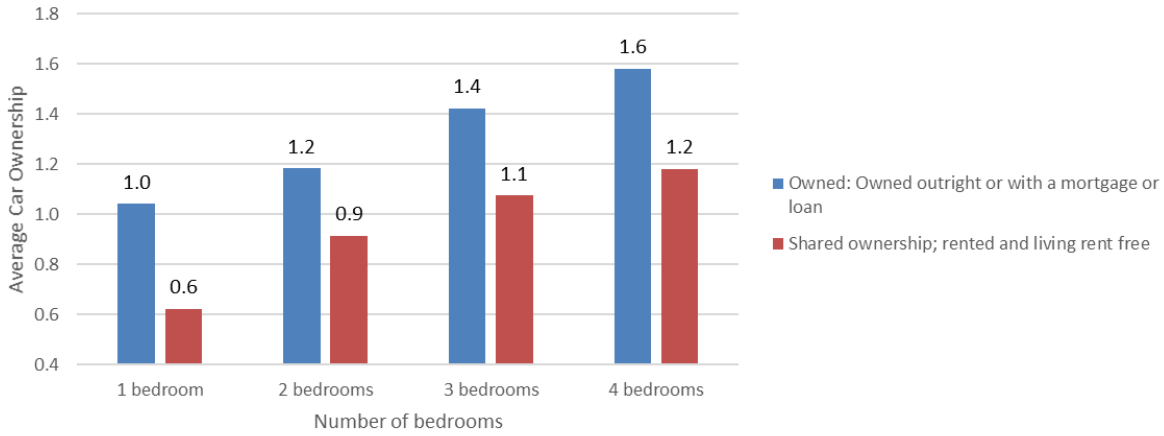
2.39 The figure shows a clear relationship between bedrooms and car ownership.

FIGURE 2.11 – DACORUM CAR OWNERSHIP BY NUMBER OF BEDROOMS (2011 CENSUS)



2.40 **Figure 2.12** shows Dacorum car ownership by tenure - shared ownership, rented or rent free have 60-75% of the car ownership of owned properties. As with flats/apartments, there are likely to be correlations with tenure and geography, with lower car ownership in flats/apartments in core urban areas such as Hemel. The tenure description is not the same as 'affordable housing' – but there is likely to be a correlation with this to some degree. There will also be links with affordability – for example many young people cannot afford to rent a flat and have a car, and their car ownership may therefore be low.

FIGURE 2.12 – DACORUM CAR OWNERSHIP BY TENURE (2011 CENSUS)



2.41 The conclusions drawn from this analysis in relation to parking for residential use is:

- There is significantly lower car ownership in central Hemel;
- There is lower car ownership in other urban areas, but with less difference when compared to the district average
- The size of dwelling (bedrooms or habitable rooms) has a correlation with car ownership, and;
- There are indications that tenure and type of dwelling may also be related to car ownership, although there are likely to be correlations with the other aspects noted above.

Census data on travel to work (destination zones)

2.42 One indication of the demand for employment car parking is the census 2011 data on the mode used to travel to work to jobs in an area. This method of travel by employees is also likely to be broadly reflective of the mode of travel for other trips terminating in that area.

2.43 The figure in Appendix B shows the percentage of employees who drive to work to jobs in Dacorum MSOA's (a census geographical area) These are averages, and there is variation within an MSOA.

2.44 The overall average proportion of employees who drive to work in Dacorum is some 73% and the figure shows that:

- Central Hemel has areas with far lower car mode share for work journeys – some 63%
- Berkhamsted and Tring also have lower than average car commuting to jobs in these towns, some 63-65%.
- Other areas close to Hemel have lower car mode share of some 66-67%.

2.45 This gives an indication of the likely range of demand for 'destination' parking depending on accessibility area, and can be used to give approximate ranges for parking standards of non-residential development. Given that this data corresponds reasonably well with the car ownership accessibility zones discussed above, it is recommended that the same zones be used for non-residential standard adjustments as well.

Traffic Growth

2.46 The Hertfordshire Traffic and Transport Data Report 2016 states that traffic growth was experienced in all ten districts in Hertfordshire when comparing 2014 flows with 2015. The changes in flows, excluding the trunk network, were recorded at 3.1% for Dacorum, which is the fourth lowest growth district in Hertfordshire after Hatfield, St Albans and Hertsmere.

2.47 Dacorum Borough is forecast to experience a traffic increase of 3.5% by 2021 and an 11.2% increase by 2031 (both from 2015 levels based on TEMPRO version 7). There is considerable variation within the individual districts in relation to predicted growth rates which is linked to the proposed increases in housing and jobs in each district.

2.48 The Dacorum Core Strategy 2013 states that Hemel Hempstead will cater for 8,800 new homes within the town, Berkhamsted will cater for 1,180 new homes, and Tring will have 480 homes. There will also be growth in the large villages within the borough. It should be noted that Dacorum are at the early stages of their Local Plan process and therefore the proposed growth and strategic locations once chosen could alter the predicted traffic forecasts.

Air Quality Management Areas (AQMA's)

2.49 Dacorum has 3 AQMA's:

- AQMA No 1 – Hemel Hempstead Lawn Lane, Hemel Hempstead
- AQMA No 2 – Apsley London Road, Apsley
- AQMA No 3 – Northchurch High Street, Northchurch located

2.50 The AQMA maps are included in Appendix C.

Controlled Parking Zones (CPZ's)

2.51 Existing CPZ's in Dacorum are shown in the figures in Appendix C along with the different days and hours of operation. Most of the CPZ's are in Hemel Hempstead, with others in Apsley, Boxmoor (dealing with the railway station at Hemel) and Tring.

3.0 POLICY CONTEXT

3.1 There is no doubt that parking can have impacts on the economic vitality of town centres, help manage congestion, influence patterns of development and the liveability of various communities, and effect the way people access key services and facilities.

3.2 The existing car parking standards are set as maximum standards in accordance with national policy at the time they were written. This effectively established the principle that it would be acceptable to provide fewer parking spaces than the maximum standards if a satisfactory case could be made. This national policy approach to parking has changed with the publication of the National Planning Policy Framework (NPPF) and a subsequent ministerial statement.

National planning policy

3.3 The NPPF removed the requirement to set maximum parking standards. It acknowledges the need to adopt standards that are reflective of unique local circumstances. In setting parking standards, it requires local planning authorities to consider:

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

3.4 The government's direction of travel regarding parking provision is encapsulated in the following ministerial statement issued in March 2015:

> ''*This government is keen to ensure that there is adequate parking provision both in new residential developments and around our town centres and high streets. The imposition of maximum parking standards under the last administration lead to blocked and congested streets and pavement parking. Arbitrarily restricting new off-street parking spaces does not reduce car use, it just leads to parking misery. It is for this reason that the government abolished national maximum parking standards in 2011. The market is best placed to decide if additional parking spaces should be provided. However, many councils have embedded the last administration's revoked*

policies. Following a consultation, we are now amending national planning policy to further support the provision of car parking spaces. Parking standards are covered in paragraph 39 of the National Planning Policy Framework. The following text now needs to be read alongside that paragraph: "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."

3.5 The remainder of this section summarises the transport and parking policy context for parking standards from the following documents:

Hertfordshire County Council

- Local Transport Plan 3, 2011
- Draft Local Transport Plan 4 / Emerging Transport Vision 2050

Dacorum Borough Council

- Dacorum Core Strategy 2013
- Dacorum Local Plan 2004
- Accessibility zones for the application of car parking standards 2002

Joint Policy Documents– Town Centre Urban Transport Plans

- Maylands Master Plan 2007
- Maylands Travel Plan 2011
- Maylands Parking Strategy 2012
- Hemel Hempstead Urban Transport Plan 2007

Hertfordshire County Council

Local Transport Plan 3

3.6 Hertfordshire County Council (HCC) adopted their third Local Transport Plan (LTP3) in 2011. The Local Transport Plan is a statutory document that sets out the County Council's vision and strategy for the long-term development of transport in the county.

3.7 Hertfordshire County Council's current Corporate Plan (2013-2017) identifies the four key priorities which this LTP seeks to support and reflect in its vision and objectives. These priorities are for residents to have the opportunity to:

- Thrive
- Prosper
- Be healthy and safe
- Take part

3.8 The LTP3 approach to transport is articulated through five goals that relate to enhancing the quality of life; health; and the natural, built and historic environment by improving journey experience in terms of comfort, regularity, safety, and the ability to park.

3.9 LTP3 states that the county will work closely with district/borough councils to agree adequate parking enforcement strategies and ensure that the needs of disabled persons are considered in all parking proposals (principally Controlled Parking Zones and Special Parking Areas) and to prevent vehicles impeding the footway.

3.10 Significantly reducing CO2 emissions is a key county-wide and national target, which HCC believes could be achieved through road pricing in congested areas and routes, taxing private car parks, and limiting car parking provisions. These measures may need to be considered in the future and do not form part of the present LTP3 policies.

3.11 Car parking policies and standards form part of the overall policies for the management of the highway network. It is stated that provision and standards for car parking will be determined by Local Planning Authorities and will include provision throughout districts, including urban areas, and for new residential and non-residential development. Proposals for Park and Ride facilities will be considered in the light of Local Development Frameworks and Urban Transport Plans.

Draft Local Transport Plan 4 / Emerging Transport Vision 2050

3.12 Since the development of the LTP3, there have been significant changes to the planning process and economy. Unlocking economic growth has become extremely important and housing growth forecasts have shown that the 10 districts and boroughs within Hertfordshire

need to accommodate a significant increase in housing and employment levels. Because of the predicted growth within the County, the County's transport planning strategy needs to accommodate and support the future aspirations of the borough and Districts. Sustainability is at the forefront, to create sustainable towns and linkages, and generate modal shift from private cars.

3.13 A fundamental aspect of this review is the development of a new Transport Vision for Hertfordshire to 2050. The Transport Vision forms the evidence to support the investment needed for Hertfordshire. By 2050, forecasts predict that the population of Hertfordshire will have grown by around 400,000 to over 1.5m, having a huge impact on congestion and journey times, particularly during peak travel periods.

3.14 The Transport Vision 2050 documents was consulted on in December 2016. They included the 'Hertfordshire Vision Stage 3 Technical Report on Major Scheme Selection' August 2016.

3.15 The adoption of a 'transport user hierarchy' policy is identified within the Transport Vision. This will remove the priority of designing roads and urban areas for vehicle movements, and give priority to other sustainable modes of transport such as walking, cycling and public transport. Car-based commuter needs are given a lower priority in the hierarchy because of the contribution they make to congestion at peak times, and because of the urban space taken up by long-stay car parking.

3.16 The Stage 2 Transport Vision 2050 document identified several potential transport schemes including the use of variable messaging signs (VMS), social media and emerging technologies to provide better information about on-street parking options within Hertfordshire's urban areas, reducing the time spent circulating looking for a space. Other schemes include dynamic pricing, which will allow for different parking charges by time of day, location, demand, type of vehicle and occupancy.

Supplementary Planning Guidance (Hertfordshire County Council, 2002)

3.17 Supplementary planning guidance for parking provision was provided by Hertfordshire County Council regarding all new developments – now revoked, but used by many districts to set standards. It outlined maximum car parking standards for each type of development, based on "accessibility zones", which identified the level of parking provision that should be

provided in particular areas. The majority of Dacorum Borough was located within Zone 4 (provide between 75% and 100% of the maximum standard), the centre of Hemel Hempstead was categorised as Zones 1-3 (ranging from no parking to 75% of the maximum standard). Maylands Business Park contained areas of Zone 3 and Zone 4 parking.

3.18 All new non-residential development is expected to meet this criterion and the resulting ratios for parking spaces per square metre of floor space. For residential developments, all parking should be accommodated on site, ideally achieving an average of 1.5 spaces per dwelling. This figure should be reduced in Zone 1 or 2 areas (i.e. areas where less than 50% of parking demand should be catered for due to higher levels of public transport accessibility).

3.19 This historic SPG was utilised by most district/boroughs in creating their own car parking standards as HCC delegated the car parking authority role to the local authorities.

Dacorum Borough Council

Adopted Core Strategy, 2013

3.20 The purpose of the Core Strategy is to anticipate and manage change in Dacorum over the years to 2031. It needs to balance the need for new development and infrastructure against the need to maintain the environmental assets and unique character of the borough. It is also one of the key tools to help maximise and coordinate new investment in Dacorum and help promote economic regeneration.

3.21 An average of 430 new homes will be provided within the borough each year, for the plan period (2006-2031). This equates to a total of 10,750 homes. The actual level of delivery is expected to be slightly higher, if 'windfall' sites are considered for the whole plan period.

3.22 In addition to new homes, an additional 131,000 sqm (net) of office floorspace will be provided. There will be no net loss of industrial, storage and distribution floorspace over the plan period. This will help deliver about 10,000 new jobs by 2031 and support the drive towards achieving full employment within the borough.

3.23 Policy CS 8 provides (inter alia) that "All new development will contribute to a well-connected and accessible transport system whose principles are to: provide sufficient, safe and

convenient parking based on car parking standards: the application of those standards will take account of the accessibility of the location, promoting economic development and regeneration, supporting shopping areas, safeguarding residential amenity and ensuring highway safety."

Dacorum Local Plan Appendix 5- Dacorum Parking Standards

Accessibility zones for the application of car parking standards 2002

3.24 The current parking standards from Dacorum's Local Plan 2004 are included in **Appendix A.** These follow the same principles as the revoked Hertfordshire Parking Standards Supplementary Planning Guidance 2002.

3.25 Dacorum's maximum parking standards for non-residential development represent the starting point for provision, with restraint to be applied progressively on a zonal basis in urban areas.

3.26 Non-residential development within each of the four 'Accessibility Zones' will be expected to provide the following proportions of the relevant maximum parking standards as shown in **Table 3.1**. The existing accessibility zones are shown for Tring in **Figure 2.4**, Berkhamsted in **Figure 2.5**, and Hemel Hempstead in **Figure 2.6** in Section 2.0 of this report. The accessibility zones are only located in these three urban areas.

3.27 In rural areas, the maximum standards will normally be applied directly, without restraint. The needs of disabled motorists are to be met in full, irrespective of location. Cycle parking provision will also be required.

TABLE 3.1 EXISTING CAR PARKING 'ACCESSIBILITY ZONES' NON-RESIDENTIAL DEVELOPMENT

Zone Type	Car parking provision (% of maximum demand based standard)
1	0-25%
2	25-50%
3	50-75%
4	75-100%

3.28 For residential development, the current approach is for all parking demand to be accommodated on site, although reduced provision may be acceptable for high-density residential proposals in appropriate locations.

3.29 In 2004, it was stated that the residential car parking standards were under review by the County Council and revised standards, which were to achieve an average of 1.5 spaces per dwelling across all new housing developments in accordance with PPG Note 3: Housing, would be included in a revised County Council parking standards SPG. The idea was to reduce car parking standards in the most accessible locations, which within Dacorum were in accessibility zones 1 and 2.

3.30 However, due to the change in central government policy, the County Council did not take forward the parking standards review and instead delegated the parking authority role to the Districts.

Joint Policy Documents

Maylands Master Plan: The Gateway to a Greener Future (Dacorum Borough Council, 2007)

3.31 The Maylands Master Plan has been established to ensure Maylands becomes a sustainable, well connected, green business park, to enable its potential to be the leading business location for the East of England to be realised. As part of the aim to ensure sustainability across the site, a movement strategy has been developed to address the major concerns that several Maylands-based businesses have with day-to-day traffic, access and congestion.

3.32 One of the key components of the movement strategy is an off-site Park & Ride facility. The Park & Ride scheme would also be integrated with the proposed Strategic Bus Link between

Maylands and Hemel Hempstead town centre and railway station. A Park & Ride facility could potentially also provide parking for HGV traffic. The Plan notes that the Park & Ride scheme would ultimately be targeted at intercepting passing traffic rather than providing remote parking to Maylands employees.

3.33 The aim is to use parking management strategies to create either one or two centralised parking locations for the entire business park. Furthermore, the Plan states that the processes and strategies for sustainable travel on the Maylands site should comfortably ensure that it achieves Hertfordshire County Council's Zone 3 standard of parking (i.e. provision for between 50% and 75% of maximum parking demand). It also states that this should remain the case as new developments on-site are established in the coming years.

Maylands Sustainable Transport Strategy- Maylands Parking Strategy January 2012

3.34 The parking strategy was produced in parallel with the Maylands Area Travel Plan and the development of a walking and cycling route from Hemel Hempstead town centre to Maylands Business Park. The parking strategy will support the sustainable growth and development of Maylands Business Park as well as the wider objectives of the Local Transport Plan.

3.35 A series of recommendations have been developed to address the objectives of the strategy and issues preventing these objectives from being achieved. They have been structured across the short, medium, and long-term; and across three themes – reallocating and increasing capacity, demand management, and sustainable transport.

3.36 The recommendations take the form of amending parking charges in public car parks, a parking rental scheme, increasing formalised on-street parking at certain locations, a lorry park, a park and ride, assessing parking standards to alleviate the parking problems for new developments where planning applications are required, implement an area wide travel plan, car sharing scheme, electric vehicle charging points, and improved bus connectivity.

Maylands Area Travel Plan 2011- 2016

3.37 The area wide travel plan supports the aspirations of the Master Plan, providing a programme for the delivery of initiatives that will encourage those working and living at Maylands

Business Park (thereafter referred to as 'the Park') to travel in more sustainable ways. It sets out how individual occupiers, the Maylands Partnership, and the local authorities (Hertfordshire County Council and Dacorum Borough Council) can work together to maximise the use of existing and new sustainable travel opportunities.

3.38 The travel plan has several different roles;

- To provide a long term, sustainable travel management plan for the Park that remains relevant by responding to changing conditions and opportunities as the Park develops.
- To provide a framework for existing and new Maylands businesses to adopt their own site-specific measures and encourage sustainable travel behaviour at individual workplaces.
- To provide a framework against which to assess planning applications for any new commercial development in the area.
- To be a working document for the Maylands Travel Plan Coordinator to plan and undertake actions.

Hemel Hempstead Urban Transport Plan (Hertfordshire County Council, 2007)

3.39 In April 2007, Hertfordshire County Council produced an Urban Transport Plan for Hemel Hempstead to identify short, medium and long-term strategies to shape travel patterns and provide a transport framework for related policy issues. The document identifies several issues and opportunities related to parking in the local area. The plan identified the following three key parking issues in Hemel Hempstead and the surrounding area:

- Low parking charges in the town centre resulted in dwindling levels of support for a Park & Ride scheme;
- There are significant levels of congestion in residential areas from double parking, and;
- There are high levels of "inconsiderate parking" causing potential risks to public safety.

3.40 The plan outlines several potential opportunities to help address these three problems. These include the following:

- Controlled Parking Zones (CPZ's) located in areas where parking problems often occur (and where they are supported by residents). Some are already in place (for

example in the town centre on weekdays and at the local hospital) and others are being proposed, but are facing opposition from residents.

- Congestion management strategies, such as travel plan development and development control requirements.
- Parking enforcement, and using school travel plans to help improve road safety.
- Consideration of a new lorry park on the Maylands site, to address the issue of heavy freight movement in the local area.

Policy context conclusions

3.41 The key conclusions from this review are that:

- Parking standards where relevant must be justified based on the need to manage the network.
- Any parking standards must strike a balance between encouraging sustainable transport and ensuring that parking stress on streets does not cause safety or congestion issues

They need to consider:

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

4.0 OTHER STANDARDS, CONSULTATION AND SITE VISITS/SURVEYS

Other authorities parking standards

4.1 The table in **Appendix E** sets out a summary of parking standards at neighbouring and similar authorities. It should be noted that some of these parking standards predate the NPPF and have not since been revised.

4.2 A summary of the benchmarking exercise is as follows:

- Most other authorities still have maximum standards, the exceptions are some more recent standards such as Hertsmere;
- Other Hertfordshire authorities such as Three Rivers and Watford have very similar standards to the current Dacorum standards, apart from Hertsmere who have recently revised theirs and no longer use maximum standards.
- In terms of residential land use, Dacorum's standards are generally slightly lower than other authorities, although comparisons are difficult due to the variety of ways in which standards are defined.
- For non-residential standards, most authorities use the same standard; one exception is Hertsmere, which has lower retail standards than Dacorum.

TRICS analysis

4.3 Analysis was undertaken using the (Trip Rate Information Computer System (TRICS), which is a database of travel generation (from which parking accumulation can be assumed) from different sites across the UK. Research is somewhat limited by the number of sites of each land use, and the geographical areas where the sites are located, but a summary of the analysis is given in Appendix H. The focus was on non-residential sites, as there were few relevant TRICS sites with overnight parking accumulation.

4.4 TRICS provides information on vehicle movements in and out of site. These were used to derive an estimate of the peak number of vehicles parked on the site during the day. This is often referred to as '. 'peak parking accumulation' for the site, and is estimated by starting from the opening number of cars on site, and adding new arrivals while subtracting departures. The 'peak' accumulation was then used as the parking peak provision. The

numbers are averages across sites, and clearly represent a range, there may also be seasonal variation not in these averages.

4.5 The key findings from this analysis were:

- TRICS estimate of the peak parking requirement (also known as peak parking accumulation) for food stores was around 1 space per 30 sq.m, compared to the 1 space per 15/18/30 sq.m. in the existing standard depending on size of store – however the TRICS sites tended to be the larger stores.
- The TRICS peak accumulation for A3/A4 pub/restaurant uses was far lower than the current standard
- The TRICS peak accumulation for B1 office uses was generally lower than the existing standard, and B1 light industrial and B2 industrial was much lower.
- The TRICS peak accumulation for D1 leisure uses was also lower than the standards.

4.6 Given the difference between specific sites and areas, and the relatively low TRICS sample sizes, it is difficult to compare these standards in detail- however the indications are that the existing Dacorum non-residential standards are higher in general than surveyed sites.

Feedback on current parking standard policy

4.7 A letter was sent to a selection of development organisations and local businesses asking for feedback on different aspects of how well the existing parking standards policies work[5]. Discussions were also held with officers and councillors on the application and use of the current standards – the issues raised are summarised below.

4.8 There were a mix of views from developers/businesses, and some of the aspects raised related more to wider parking issues (such as provision of additional public parking) than the standards. Local employers noted that parking is important to them due to the wide catchment of employees, who did not have access to good public transport – they wished to keep higher standards, for more public parking to be provided and for more lorry parking.

[5] See appendix K for a list of the organisations consulted.

4.9 Developers were generally supportive of the existing standards, which they regarded as less demanding than others, and supported flexibility. They noted their belief that onerous parking standards can have amenity and viability impacts, and felt that any lower standards should be linked to accessibility. They would prefer garages and tandem spaces to be included as parking supply and made suggestions as to actual standards, particularly residential. One suggestion was that in accessible locations, parking standards for smaller non-family households can be reduced significantly.

4.10 Councillors noted that in their view there were many serious parking issues caused by new development in the district, particularly when new development with low levels of on-site parking were implemented in more mature residential areas where there was already existing parking stress. Issues were reported with houses with multiple occupation where living density was increased without parking increases; it was, however, noted that in most such cases planning consent was not required and hence parking standards would not be relevant.

Appeals relating to parking in Dacorum

4.11 As part of this study, a small sample of planning appeals which had parking-related elements were reviewed, and these are summarised in **Appendix D**. Each planning appeal relates to the specific development and relevant circumstances, but the brief review seemed to show that planning inspectors in some cases recognise parking as having a significant effect on the planning application, whilst in other cases the impact is not regarded as severe.

Site visits and Surveys

4.12 A number of site visits and associated surveys were carried out for this study- more detail is provided in **Appendix J**. A summary of the conclusions by land use is provided below.

Residential sites (and mixed residential)

- **Castlemill, Lower Kings Road, Berkhamsted**: 15 flats, 112sq.m. office; total maximum 26.5 spaces; range 24.5-25.5; 20 spaces provided; and no surveyed capacity issues.
- **Dixons Wharf, Wilstone**: 21 flats/houses maximum standard 51 spaces, 40 provided; 90% occupied overnight, approx. 88% occupied daytime. Provision

appears appropriate, although there were few spare spaces - slightly higher provision probably desirable.

- **Rose and Crown, Beechcroft, Tring:** C2 Residential 35 units; 337 sq.m commercial (vacant); total 51 spaces permitted max, provided 35; surveys indicate well within capacity overnight.
- **Apsley Lock:** 54 flats, hotel (116 rooms), restaurant 560 sq.m. Hotel standard 117, provided 43; restaurant standards and provided 56; flats standard approx. 81, provided 124, and 65 shared spaces. Hotel spaces at capacity overnight, restaurant peaks at approx. 50% capacity, shared spaces at capacity overnight, residential 76%; some 35 spaces provided more than standard. Overall hotel, residential and shared spaces within capacity.
- **Apsley Marina:** 417 residential units, marina, some retail/restaurant use. Total maximum parking provision allowed 690 spaces. Actual provision is 558 spaces. Surveys indicate 100-% occupancy overnight, 70-86% during day. Some obstructive/unsafe parking observed – indications are that parking provision was too low.
- **Image site, central Hemel:** 6,983sqm Office B1, 1,631sqm retail, 448 flats. Total parking provision far lower than max standard. However, parking surveys do not indicate excess of demand over supply – circa 70% full overnight, 40% daytime. Owner applied for planning permission for more spaces on an adjacent site, to offset alleged shortfalls in the original development. The scheme is still less than 1 to 1 ratio but it indicates the pressure to provide parking even in accessible locations.
- **Stag Lane, Berkhamsted:** 150 units. Total 191 maximum standards, 197 provided (including on-street parking). Surveys indicate overall within capacity (72-75%) but signs of inappropriate parking on footways etc. Indication overall parking not adequate or too many spaces allocated.

Retail/Leisure

- **Aldi, London Road:** 1,450 sq.m. A1 food retail; parking of 81 meets with max standards, accessibility zone 4. Fully occupied all surveys, some circulating vehicles. Small shortfall (5 spaces) on survey days, no observed on-street issues. Disabled spaces full (but not all disabled parkers), cycling 10% full, no motorcycle spaces.

- **Jarman Park:** mixed use leisure and restaurants, 17-screen cinema (1,788 seats), 3,320sqm A3/A5 uses, 5,345sqm of D2 leisure. Based on the uses the site could have 596 spaces for the cinema and 357 spaces for A3, with leisure being assessed on its merits - actual provision 975 spaces. The parking is therefore below the maximum standards, but was not observed to be more than 60% occupied at time of survey. Parking therefore overprovided, scope to consider shared uses.
- **Jarman Park McDonalds:** A3 Food restaurant and drive through 328 sq.m. Based on the parking standards, McDonalds could have a maximum parking level of 66 spaces or 50 spaces with a 75% reduction being in zone 4; however, only 36 provided. The site is never fully occupied, although close to occupation at peak trading at the weekend parking seems broadly appropriate.
- **Jarman Park Tesco:** A1 Food retail 8,854sqm. Tesco Extra- max parking range permitted 442 to 590; actual provision 558. Based on surveys, 200-380 spaces free on a Saturday, therefore overprovision – some allowance probably needed for seasonal peak parking
- **Tesco Express, 207 Fletcher Way, Hemel Hempstead:** A1 Food Convenience retail 267 sq.m. 9 parking spaces max permitted; there is a parking overprovision of 15 car parking spaces. There have been 7-12 vehicles recorded parking within the site through the occupancy surveys, with 11 at peak time on a Sunday when the larger retail stores are closed. The parking standards therefore appear to be broadly appropriate in this instance for retail units less than 500 sq.m., albeit this site has an overprovision. Indicates that leisure uses are quite specific in needs.
- **Snow Centre.** Site is within Zone 4 and could have between 400 and 533 spaces; 283 spaces provided, significantly below the maximum parking standard. There were vehicles parked outside of bays, but parking is not at full occupancy at peak time weekends (83 spare spaces).
- **Travelodge, Hemel Hempstead Gateway Hotel:** 108 bed Hotel, 93 sq.m. Subway, 371 sq.m. Toby Carvery, and 93 sq.m. Domino's Pizza. Taking individual land uses and max. car parking standard, could have more than 295 spaces; actual car parking 129. The car park is only 57% occupied at peak occupancy on a weekend evening. Shared parking considerations.

Employment/Other

- **EBB Depot, Whiteleaf Road, Hemel:** B2/B8 mixed. 126 vehicles parked formally during day, 23 parked informally – total 149 cars. Max standards 138 to 208. Actual demand appears closer to B8 standard, just higher if all assumed to be B8, but not enough marked spaces.
- **Smiths Detection:** B1 Office 9,065 sq.m. Max standard 302 spaces, range permitted 151-226; 123 provided. Surveys indicate parking is close to capacity.
- **Tudor Primary School, Redwood Drive, Hemel:** max standard is 1 per full-time staff plus 1 per 100 pupils; approx. 35 spaces permitted, 29 provided. Survey indicates within capacity.

4.13 The conclusions from the site audits are that:

- There are a variety of outcomes when comparing demand vs standards, and thus the location and type of land use is important.
- In broad terms, the current maximum standards appear appropriate for non-residential development and may be overproviding for larger retail/leisure uses
- For residential development, it appears that the maximum standards may be reasonably close to actual demand.
- Shared use and linked trips need to be considered for mixed use site.

5.0 PARKING STANDARDS GENERAL

General

5.1 The availability and convenience of parking at the destination of the trip can have a real effect on the choices people make regarding travel. Policies within the National Planning Policy Framework (NPPF) seek to manage the demand for car travel and encourage the use of more sustainable forms of travel, particularly public transport, walking and cycling.

5.2 Car parking and its location also has an impact upon the quality of the environment – how it looks, how it functions and on safety, and as noted in consultation for this project, extensive car parking can require more land for development and affect the viability of some developments.

5.3 Research has indicated that attempts to curb car ownership through restricting parking are unlikely to be effective in limiting the number of cars a household would acquire unless the area is very accessible to public transport and other modes, there are many local facilities within easy walking distance, and (usually) there are on-street controls preventing uncontrolled parking. Experience from many residential developments has been that rather than encouraging a shift away from car ownership, restrictive parking standards in some locations have simply intensified the demand for any available on-street parking.

5.4 Therefore, there is the presumption that vehicle parking must be designed into new development schemes to include accommodation for on-site parking; on-street parking can only be proposed if there is sufficient capacity.

The general use of parking standards

5.5 There is clear evidence from officers, councillors and site visits that parking standards are required to manage the network and reduce pressure on the on-street supply, which leads to parking that can increase congestion and reduce road safety.

5.6 Basing all standards on a maximum approach is likely to lead in some cases to under-provision of parking and pressure on scarce on-street resources. We therefore recommend that the standards move away from a maximum approach to a ‘requirement’ approach, which can be adjusted upward or downward if robust evidence is provided. We also recommend that these standards be related to accessibility zones, with a reduction in the

required standard in the most accessible areas. In effect, this will result in a range of standards around a given standard, depending on site circumstances.

Principles of standards

5.7 Based on the available evidence, the principles used for the derivation of new standards are as follows:

- For residential standards, an average car ownership across the borough by size of dwelling has been used to set a general standard, after which an allowance for visitor parking of 20% has been applied, and the standard has then been increased by a further 20% to allow for the ranges of ownership around the average shown in the census. The resultant standard has then been reduced in the 2 highest accessibility zones, and new standards derived for these zones.
- For non-residential standards, again a general requirement across the borough has been specified. Then, based on evidence of mode share from the census, a range of percentage reductions in the 2 accessibility zones has been recommended.
- However, these standards need to be flexible, and we have suggested the factors the council could consider in determining changes above or below these; we also suggest more use of parking stress surveys when developments are considered, and have provided guidance on these.

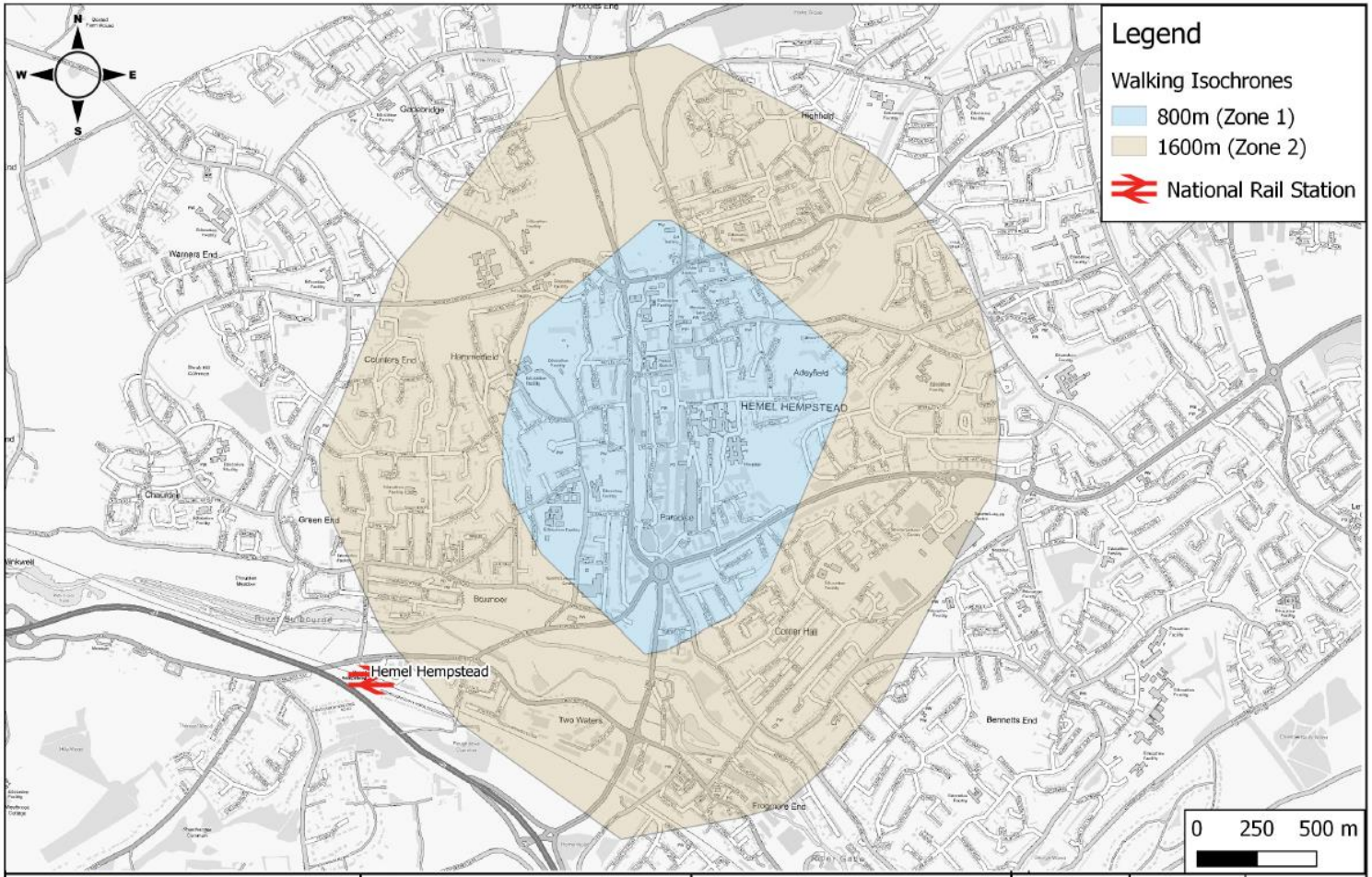
Accessibility zones

5.8 The existing standards have a relatively fine-grained approach to designating 4 accessibility zones based on public transport and local facilities. The view of this report is that public transport accessibility combined with access to many local facilities is only high in the core urban areas of Hemel Hempstead and to some degree Berkhamsted.

5.9 For residential development, car ownership reduces by some 15-30% from the average in central Hemel, and we regard this as a suitable reduction range for residential parking here, which we refer to as Accessibility Zone 1. We have accordingly reduced the 'general' borough standard by some 30% to reflect this. We suggest defining this zone by an approximate 10-minute walk (or some 800m) of Hemel centre, as shown in **Figure 5.1**. There are then a few other areas in central Berkhamsted and the fringes of Hemel, where car ownership is some 10% below the average, which we suggest should be regarded as

Accessibility Zone 2, with 10% being the reduction applied to develop a revised standard. We recommend an 800m radius of central Berkhamsted and an 800-1600m radius (10-20 minutes) walk of Hemel centre for this zone. These areas are shown for Hemel in **Figure 5.1**, and Berkhamsted in **Figure 5.2**, but are only approximate at this stage - they can be refined when the principle is agreed. The presence of on-street controls and local parking stress will also be important in making decisions on reductions in these zones.

5.10 In all other areas, we suggest that the requirement would apply as a starting point, but be applied flexibly if robust evidence can be provided to the council.


Legend
Walking Isochrones
800m (Zone 1)
1600m (Zone 2)
National Rail Station
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HEMEL HEMPSTEAD
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Warners End
Gadebridge
Highfield
Corners End
Hammerfield
Adeyfield
Chaulden
Green End
Bourne
Corner Hall
Two Waters
Bennetts End
Frogmore End
Parkside
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MARKIDES ASSOCIATES
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Job Title
Dacorum Parking Standards Review
Drawing Title
Accessibility Zones 1 & 2
Hemel Hempstead
Client
Dacorum Borough Council
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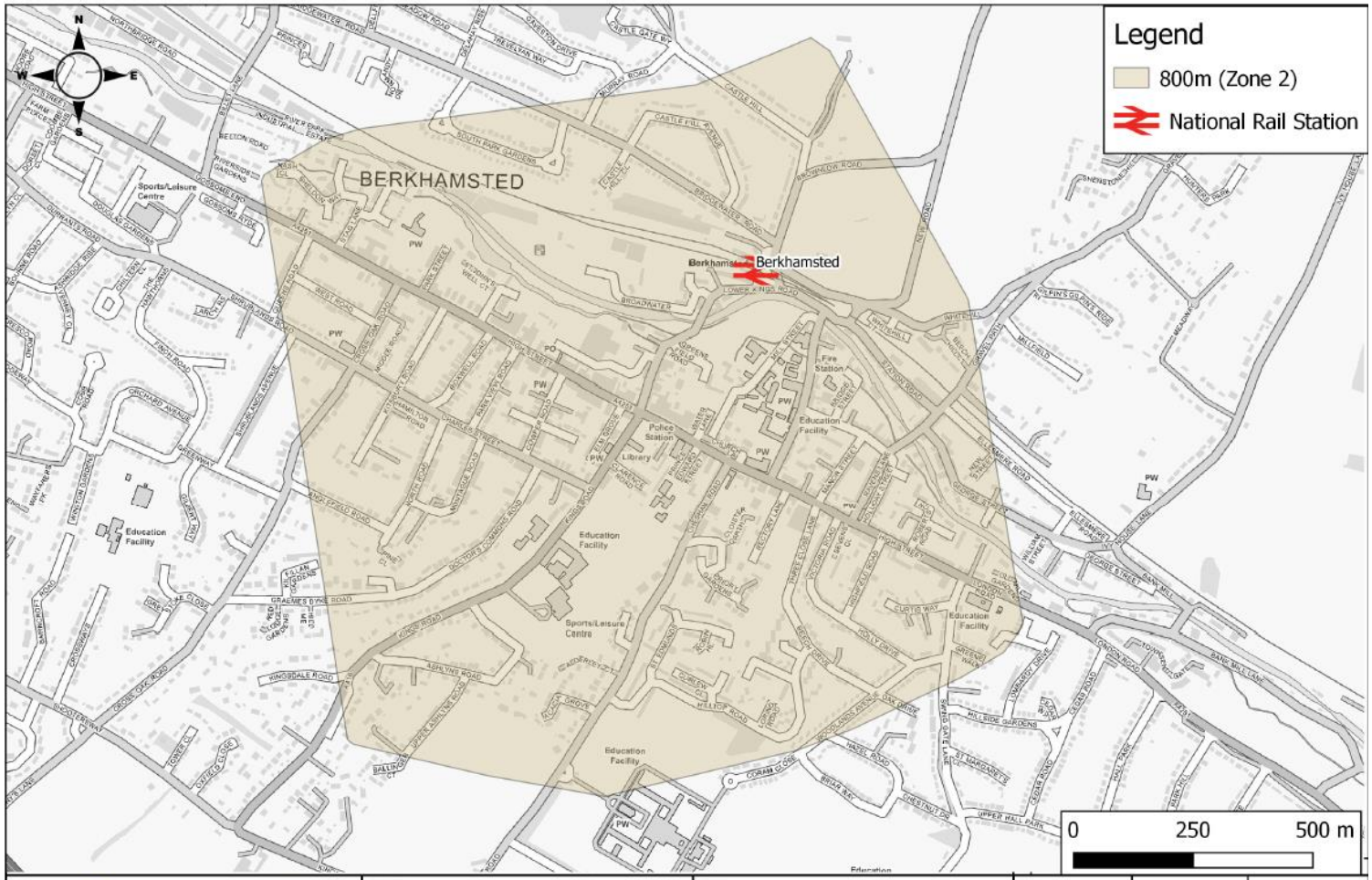


MARKIDES ASSOCIATES 9th Floor, The Tower Building, York Road, London, SE1 7NX Telephone: 0207 442 2225 E: enquiries@markidesassociates.com W: www.markidesassociates.com	Job Title: Dacorum Parking Standards Review Drawing Title: Accessibility Zone 2 - Berkhamsted	Client: Dacorum Borough Council	Scale: 1:17000	Date: 24/08/2017	Designed: PF
			Drawn: PF	Checked: AN	Approved: AN
			Job No: 17014-00	Figure No: 5.2	Rev: 01

5.11 For non-residential development, reductions from the requirement can help to encourage mode shift, particularly where there are travel choices and on-street controls. Looking at the data on mode of travel to work in different Dacorum areas, it appears that as described above, there are some clear reductions from the average in Hemel centre (some 15% below average) and Berkhamsted and Hemel fringes (10% below average). While the data indicates there are some other areas with lower work car mode share, we suggest it is sensible to use the same accessibility zones as described above, and permit reductions of 15-30% on Zone 1 and 10-20% in Zone 2 from the requirements for non-residential development. These ranges are higher than the average reduction as there will ranges around these averages. There is obviously still flexibility to consider higher reductions and reductions elsewhere with suitable evidence.

Visitor parking at residential development

5.12 In new developments, visitor parking is not normally provided within the residential curtilage. Visitor demand can, to some extent, be offset by other residents being away at the time or not owning a car. This balancing effect is most significant when a high proportion of parking spaces are unallocated and so available to both visitors and residents. Research[6] shows that no special provision is needed for visitors where at least half of the parking provision associated with the development is unallocated. Where this is not the case, it may be appropriate to allow for additional demand for visitor parking of up to 0.2 spaces per dwelling. The use of unallocated spaces can therefore significantly reduce the overall number of parking spaces to be provided in any scheme. Visitor parking can be provided in the form of adopted on-road provision, provided the highway is designed for that purpose and assessment shows there will be adequate capacity.

5.13 The recommended standards for residential development in this report include an estimate of approximately 20% for visitor parking within the standard – this therefore assumes no more than 50% of spaces are allocated to particular units. Should this not be the case, further assessment of need will be required.

[6] Jenks and Noble, 1996 study in Reading; Space to Park

Garages

5.14 Research[7] indicates that only some 36-44% of garages are used for parking in England.

5.15 The Manual for Streets (2007) recommends that the inclusion of garages should be considered on a scheme by scheme basis, based on the following factors:

- Car ports are unlikely to be used for storage and should therefore count towards parking provision;
- The availability of alternative spaces, including on-street parking - where this is limited, residents are more likely to park in their garages;
- The availability of separate cycle parking and general storage capacity, garages are often used for storing bicycles and other household items; and
- The size of the garage - larger garages can be used for both storage and car parking, with many authorities recommending a size of 6m by 3m.

5.16 We note that that research for this project indicates that car ports may also not be used for parking, and that in many cases car ports and garages can be converted to other uses under permitted development rights.

5.17 **Appendix L** contains a summary of the different options for using garages in parking standards, highlighting the advantages and disadvantages of each.

5.18 Our recommendation is that garages should be counted as parking provision if they meet certain size and positioning standards, and an example of these is set out in **Appendix L**.

Tandem parking

5.19 Tandem (in-line) parking generally means that the provision of two parking places one after another, configured like a single, double-length perpendicular parking place. Tandem parking is inconvenient and both spaces may not be used at all times. It should not be used off-site; however, it may be appropriate on-plot if an additional vehicle parking on the highway would not have unacceptable consequences. We recommend that the presumption is for tandem spaces counting as part of the parking provision if on-plot.

[7] Manual for Streets, 2007, 8.3.40

Shared uses

5.20 When different types of uses occupy the same area, there is the potential for parking spaces to be shared. For example, a development with commercial and leisure uses can experience peak commercial parking demand on a weekday at midday, but peak leisure use on a weekday in the evening and on the weekends. In these circumstances, requiring full provision for each use individually is likely to lead to an over-provision of parking.

5.21 One example in Dacorum is Jarman Park, where several D2 Leisure and A3 restaurants share a site. The parking provision is some 975 spaces, and surveys for this study indicated a peak occupancy of 60% on a Saturday evening in May. The site is in a 'low accessibility zone'. Even allowing for some 'high peak' use, parking is clearly in oversupply for these uses.

5.22 However, determining shared use demand and supply is complex, and it is recommended that the council use the starting point that each use's parking requirements should be identified separately, with a Transport Assessment then being used to determine final numbers. Assessment will need to consider control of the spaces.

Electric vehicles

5.23 Ultra-low emission vehicles (ULEV) are those with significantly lower levels of tailpipe emissions than conventional vehicles. The level of investment from the Government into the ULEV market is expected to significantly accelerate the uptake, use and ownership of electric vehicles in the country. For this report, an Electric Vehicle (EV) is considered as any road vehicle with a battery that is intended to be charged from mains electricity, which therefore includes plug-in hybrids, extended range EVs and pure electric EVs.

5.24 There are various estimates of electric car take-up, but it seems clear that this is rapidly increasing. UBS estimates that by 2025, one-third of all cars sold in Europe will be battery-powered; Volvo has announced they will only be manufacturing electric or hybrid vehicles by 2019, and France has recently announced that they will ban sales of petrol and diesel cars by 2040. More recently the DfT announced that the government would also be ending the sale of all new conventional petrol and diesel cars and vans by 2040[8]. As the cost of

[8] https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/633270/air-quality-plan-detail.pdf

electric vehicles reduces and range increases, there will also be an increasing commercial pressure to use them.

5.25 An electric car powered from today's grid could emit between 15% and 40% less CO2 over its lifetime than a comparably sized petrol car and this will improve as the UK electricity generating sector moves to low carbon energy sources. Electric cars also bring further advantages in terms of reducing noise pollution and improving air quality.

5.26 To achieve increased EV usage, widespread charging infrastructure improvements will be necessary. Although the provision of public charging points will be important, the Government expects that charging infrastructure at home will predominate.

5.27 Recharging at home, at night, off-peak, is considered to be not only the most convenient for drivers, but also maximises the environmental and economic benefits of plug-in vehicles by using cheaper, lower carbon night-time electricity generation. It also makes best use of the available electricity network capacity. Recharging where people are employed will assist extending vehicle range in addition to any home charging.

5.28 New development provides the best opportunity to accelerate the scale of provision for electric vehicles and should include charging provision for EV use as standard. The National Planning Policy Framework supports the provision of EV plug-in recharging infrastructure within new employment and residential developments recommending that: "Plans *should protect and exploit opportunities for the use of sustainable transport modes for the movement of goods or people. Therefore, developments should be located and designed where practical to incorporate facilities for charging plug-in and other ultra-low emission vehicles*".

5.29 The distinction between active and passive provision is as follows:

- Active provision for electric vehicles: an actual socket connected to the electrical supply system that vehicle owners can plug their vehicle into.
- Passive provision for electric vehicles: the network of cables and power supply necessary so that at a future date a socket can be added easily. It is significantly cheaper and less disruptive to install the underlying infrastructure for EV charge points during construction than to retrofit later.

5.30 There are currently three speeds for EV charging – trickle, fast and rapid. Trickle charging is currently the only method that uses standardised plugs and sockets. Trickle charging is therefore likely to be the most common method of charging in the future. Low cost trickle

charging points can be integrated into new housing and commercial developments. However, for some large mixed-use developments, economies of scale may also allow the viable provision of fast and rapid charging. The type of charging point will be decided on a case-by-case basis depending on the type and scale of development.

5.31 It is recommended that Dacorum follow the principles of the London Plan and ensure that 20 per cent of all spaces must be for electric vehicles with an additional 20 per cent passive provision for electric vehicles in the future. It is suggested that this requirement apply to all residential schemes with sites larger than 10 dwellings, employment schemes with over 500 sqm net internal area, and retail schemes with over 1000 sqm net internal area.

5.32 New development that requires regular freight deliveries should be expected to include charging infrastructure provision dedicated for use by electric-powered freight delivery vehicles, to be determined on a site by site basis. In exceptional circumstances, where the full provision cannot be made on site, alternative arrangements of financial contribution towards the provision of off-site publicly accessible charging points may be acceptable.

Blue badge parking

5.33 Guidance is set out in the Department for Transport's Traffic Advisory Leaflet 05/95 Parking for Disabled People and Inclusive Mobility, both available from www.dft.gov.uk, and British Standard (BS) 8300 'Design of buildings and their approaches to meet the needs of disabled people Code of practice'. Detailed guidance on layout and access to spaces /buildings is given in Part M of the Building Regulations ,2010.

5.34 With regards to the provision of parking for those with disabilities, Inclusive Mobility (2005) provides more specific guidance on recommended minimum levels as follows:

I. Car parks provided for public use by local authorities and private companies: 5%;

II. Car parks associated with existing employment premises: 2% of total car park capacity or one space (whichever is the greater) plus an additional spaces per disabled employee;

III. Car parks associated with new employment premises: 5% of the total car park capacity (to accommodate both employees and visitors);

IV. Car parks associated with shopping, leisure, or recreational facilities or open to the general public: a minimum of one space per employee who is a disabled motorist plus 6% of the total capacity for visitors;

V. Where the provision of disabled parking spaces close to the building is not possible, a setting down point for disabled passengers should be provided.

5.35 The more recent BS 8300:2009 has similar standards though also recommends the provision of enlarged spaces (5% for employment use and 4% for shopping and leisure) which are capable of being converted to a designated disabled space if warranted by future demand.

5.36 The existing Dacorum standard is: '*An element of parking designed and reserved for disabled people should be provided in major developments which necessitate public access or accommodate a large number of employees. Normally 4% of the total car parking provision should be so allocated. An element of purpose-designed disabled person's parking should also be provided to serve specialist elderly or handicapped housing schemes. The level of provision will be determined in relation to the nature of the scheme'*.

5.37 Site surveys for this project do not indicate significant issues with the blue badge parking provided, however it is recommended that the existing standards be amended to reflect the Inclusive Mobility guidance set out in paragraph 5.34.

5.38 Blue badge parking is part of the overall total of parking required by the standards, not additional to it.

Motorcycle parking

5.39 DfT statistics show motorcycles to be some 3.5% of total vehicle registrations in the UK in 2015[9]. Although the picture for motorcycles is complicated by a peak centred around 2008-9, the previous rapid growth up to around 2004 seems to have levelled off.

5.40 Traffic Advisory Leaflet 2/02, March 2002 from the DfT sets out advice on motorcycle parking – particularly on design issues - no specific advice is given on the extent of off-street provision.

5.41 Institute of Highways Engineers – Guidelines for Motorcycling, Cycle parking, notes the significant increase in motorcycling, and the problems of insufficient parking and theft. It

[9] DFT Vehicle Licensing Statistics: Quarter 4 (Oct - Dec) 2015

highlights educational establishments, employment sites, retail and leisure and transport interchanges as being important locations for motorcycle parking, as well as residential development. No guidance is given on off-street provision.

5.42 Provision in other authorities varies, and typical provision on other standards is at a rate of up to 5% of motorcycle spaces of total parking. In some cases, provision of motorcycle parking is treated as a substitute for car parking (other than parking for people with disabilities and space for service vehicles).

5.43 Site surveys for this project did not indicate any capacity issues with provided motorcycle parking, although we are not aware of a current standard. It would seem appropriate to request the provision of an additional 4% of total parking spaces for motorcycles for all non-residential development. For residential development motorcycle; parking may depend on other provision (e.g. garages and car ports) and each case should be treated on its merits.

Cycle parking

5.44 The existing standards set out requirements for cycle parking, and site visits or surveys have not provided evidence of cycle parking capacity issues. In these circumstances, it is recommended that they be retained.

6.0 RECOMMENDED PARKING STANDARDS

Objectives and the parking requirements

6.1 Because of the sometimes-conflicting objectives to parking policy, a balance needs to be struck between different objectives:

- The need to provide adequate parking spaces to serve the various types of development;
- The need to influence a shift to sustainable modes of travel such as public transport, walking and cycling in urban centres with high accessibility to key services and facilities;
- The need to reduce congestion, particularly in the main centres;
- The need to make sure that parking provision does not adversely impact on highway safety;
- The need to manage air quality to improve the well-being of the community, and;
- The need to maximise the use of land to meet the development needs of the area.

6.2 The recommended standards provide a **requirement** above or below which provision would need to be justified. It allows some flexibility for parking provision to be tailored to specific site conditions and other locational and sustainability requirements. Careful judgment will have to be exercised always in order not to undermine the objectives of the Core Strategy.

Flexibility around requirements

6.3 The car parking standards show the required level of provision – there will be an initial presumption that these should be provided. Developers proposing car parking above or below these levels should provide robust evidence to support their case.

6.4 The council may consider that car-free or reduced parking developments may be appropriate in certain circumstances. These circumstances may include change of use or redevelopment of existing buildings in town and local centres where sufficient public car parking exists and it is not possible to provide parking on site. In these circumstances consideration may be given to the uses proposed, the availability of public parking, the levels of on-street stress and the previous parking provision on the site.

6.5 In considering any evidence for departures from the requirements, the council should consider:

- Existing on-street parking supply and demand including controlled parking zones[10];
- Land use type proposed and room provision per unit;
- The potential for shared parking;
- The layout, design and form of the parking provision;
- Accessibility by sustainable modes and provision of local facilities;
- Evidence from similar local developments;
- Information from residents and councillors on parking issues, and;
- Mitigation proposals.

6.6 Where new development is proposed within an existing or proposed Controlled Parking Zone that has low levels of spare capacity, the expectation is that all parking requirements should be met on site.

6.7 In circumstances where it is believed that proposed parking provision will significantly effect on-street conditions, the council should request that on-street surveys be carried out to determine the parking stress, and the effect that a development could have. A guide for such surveys is provided in **Appendix I.**

6.8 Where necessary the required level of provision should be rounded up or down to the nearest whole number.

6.9 Accessibility zones have been identified based on the availability of public transport and local facilities. Two zones have been defined: (1) Zone 1 High Accessibility, only in Hemel Hempstead centre; (2) Medium accessibility – Berkhamsted centre and Hemel centre fringe. In these zones, the standards have been reduced. All other areas are expected to be subject to the standard parking requirement as a starting point. Disabled car parking provision in

[10] Appendix I provides guidance on how surveys can be used to determine on-street parking stress

the accessibility zones should not be subject to any discounting and should be provided to the full standard.

6.10 Developers should consider electric vehicle charging infrastructure when designing new development. All new developments which include parking facilities are encouraged to:

I. Be designed to provide opportunities for charging electric and plug-in hybrid vehicles;

II. Include cabling for charging infrastructure; and

III. Provide charging infrastructure.

6.11 Minimum requirements for EV charging infrastructure will be sought for the following developments:

- New housing (particularly apartments and dwellings without private driveways);
- Offices and employment uses;
- Large retail schemes.

6.12 The minimum recommended requirement is 20% active and 20% passive provision in these developments (see definition in paragraph 5.29 above).

6.13 Parking may be catered for on-street where:

- The highway is wide enough to allow for the parking of cars and the free passage of large vehicles such as delivery lorries, refuse trucks and fire appliances;
- There is no evidence/record of parking problems in the locality, and;
- On-street parking in the immediate vicinity of the development would not cause an unacceptable safety hazard to pedestrians, cyclists and other road users.

6.14 Motorcycle parking should normally be provided in addition to any car parking requirements; as a guideline, 5% of total parking spaces should be for powered two-wheelers.

6.15 Parking and access requirements for servicing vehicles are additional to any required parking standard and will be assessed on a case by case basis.

C3 – residential development

6.16 The starting principle is that all parking demand should be accommodated on site; and the standards shown are 'requirements' - departures from these may be justified with appropriate evidence. Three standards for the C3 use have been provided:

- Accessibility Zone 1 – up to 30% reduction
- Accessibility Zone 2 – up to 10% reduction.
- Rest of the borough – full requirement

6.17 These reductions may require evidence of on-street conditions and/or other similar developments before reductions are accepted.

6.18 The C3 standards will apply to all housing (including apartments and flats as well as houses) and to any affordable or social housing. The Council may wish to consider that a different level of parking to that required is appropriate in some cases, where supported by robust evidence and justification.

6.19 Allocation of parking to individual units increases the amount of parking needed. Non-allocated parking makes use of different levels of ownership, including those without vehicles, to use the land given over to parking in the most efficient way. It can also satisfy the reasonable needs of visitor parking because of the occupancy patterns across the day.

6.20 The recommended standards for residential development in this report include an estimate of approximately 20% for visitor parking – this therefore assumes no more than 50% of spaces are allocated to particular units. Should this not be the case, further assessment of visitor need will be required.

6.21 The standards will be applied according to the number of bedrooms a property has, however, provision of 'habitable rooms' will also be considered. The relationship between the number of bedrooms and habitable rooms[11] is set out below. If the application shows that there are more habitable rooms per unit than that assumed, the council may wish to require up to 1 additional parking space per additional habitable room, unless evidence is produced showing that such provision is not required.:

[11] The definition of a habitable room does not include bathrooms, toilets, halls or landings, or rooms that can only be used for storage. All other rooms, for example, kitchens, living rooms, bedrooms, utility rooms, studies and conservatories are counted.

- 1 bedroom/studio/bedsit – total of 2 habitable rooms;
- 2-bedroom units – total of 4 habitable rooms;
- 3-bedroom units – total of 5 habitable rooms;
- 4-bedroom units – total of 6 habitable rooms;
- more than 4 bedrooms – total of bedrooms + 2 habitable rooms per unit.

6.22 The issue of whether garages should be treated as parking spaces for the purposes of a planning application is a difficult issue given that many garages are not used for parking by residents. Different councils take different approaches to this issue and a summary of the pros and cons of various options are discussed in appendix L. Our recommendation for how to treat garages is set out below, but the Council may wish to consider a different approach if they feel this is appropriate.

6.23 Garages will be counted as parking spaces if robust evidence can be provided that the garages are of a size, including storage space, that will result in a high probability of use for parking. In conditions of high parking stress on-street, the council may require additional parking in addition to the garages.

6.24 Car-free residential development will not normally be considered, unless developers can provide robust evidence that this will be appropriate. This type of development will not normally be acceptable outside Accessibility Zone 1.

TABLE 6.1 RECOMMENDED RESIDENTIAL PARKING STANDARDS (C3) GENERAL

Use Class	Description	Required parking	Cycle parking	Comment
C3 residential – general	General needs		1 space per unit if no garage or shed provided	Units above 4 bedrooms assessed on merit
	Studio/bedsit	1.25 space per unit		
	1 bedroom	1.25 spaces per unit		
	2 bedrooms	1.75 spaces per unit	, 2 per unit for 2-bedrooms and above	
	3 bedrooms	2.3 spaces per unit		
	4 bedrooms	3 spaces per unit		

TABLE 6.2 RESIDENTIAL PARKING STANDARDS (C3) – RANGE BY ACCESSIBILITY ZONE[12]

Use Class	Description	General parking requirement -per bedroom (from Table 3.1)	Reduced parking requirement – Zone 1 – per bedroom	Reduced parking requirement– Zone 2 per bedroom
C3 residential – general	Studio/bedsit	1.25	0.9	1
	1 bedroom	1.25	1	1.1
	2 bedrooms	1.75	1.3	1.6
	3 bedrooms	2.3	1.75	2.2
	4 bedrooms	3	2	2.5

6.25 A worked example of the application of the standard is as follows:

- If the development is in the highest accessibility zone, Zone 1, and is for 30 2-bedroomed units, the parking requirement would be 39 spaces (30*1.3) (**Table 6.2**)
- If the development is in Zone 2, and is for 30 2-bedroomed units, the parking requirement would be 48 spaces (30*1.6) (**Table 6.2**)

[12] The reductions have been calculated from the borough standard requirement by applying the factors referred to in section 5.9 above

- If the development is any other location in the borough, and is for 30 2-bedroomed units, the parking requirement would be 53 spaces (30*1.75) (**Table 6.1 or 6.2**).
- This requirement can be adjusted, at council discretion, based on further information provided by the applicant. It includes an allowance of 20% for visitor parking, if 50% or more of the spaces are not allocated to specific units, otherwise further evidence is required on this issue.

Dwelling Houses with Multiple Occupation

6.26 Legislation and case law relating to HMO is complex and requires careful consideration of each specific case. It was noted during this study that many changes to HMO's do not require planning permission, and hence many not fall under the parking standards. A property is an HMO if it is let as a main or only home to at least three tenants, who form more than one household and who share a kitchen, bathroom or toilet.

6.27 When assessing planning applications, it is recommended that the Council should seek to ensure that the proposals provide adequate levels of car parking to meet the future requirements of the likely occupants. Where possible, the car parking should be provided off street.

6.28 The starting point should be for the provision of 0.5 parking spaces per bedroom (either on-site or off-street depending on the parking capacity available in the area) unless otherwise justified by providing details, for example, as to what measures will be taken to deal with anticipated traffic impacts of the scheme. Applications will normally be expected to include a parking survey.

TABLE 6.3 RESIDENTIAL PARKING STANDARDS (C3) – ELDERLY PERSONS ACCOMMODATION

Use Class	Description	Required parking	Cycle parking
C3 residential – elderly persons accommodation	Retirement dwellings, no warden control, 1 bedroom	1.5 spaces per unit including 0.25 visitor space	1 s/t space per 3 units; 1 l/t space per 5 units
	Sheltered housing, warden control 1 or 2 bedrooms	0.75 space per unit including 0.25 visitor space	
	Other unit sizes	To be determined on case by case basis	

6.29 **Table 6.3** sets out the standards for C3 use Elderly Persons Accommodation, distinguishing between warden controlled and non-warden controlled facilities. The reductions for accessibility zones will not apply automatically to this use, but may be accepted based on evidence provided. Use class category C2 (Residential Institutions) is dealt with in the non-residential standards below.

Non-residential parking standards

6.30 The other recommended use standards are shown below. These largely replicate existing standards, with changes highlighted in shading, with footnote explanations of the change.

6.31 These are required standards, with provision above and below required to produce evidence acceptable to the council of the proposed provision. These requirements may be reduced through evidence being provided by the following percentages in different accessibility zones (the council will require evidence of impact before agreeing to these reductions):

- 15-30% in Accessibility Zone 1
- 10-20% in Accessibility Zone 2.

6.32 As with residential standards, the council may require evidence of on-street parking stress, on-street controls, travel plans and other similar developments before accepting reductions.

Use Class	Description	Required car parking Standards	Cycle parking standards
A1 Retail foodstores	(a) Small food shops up to 500 m^2 GFA	1 space per 30 m^2 GFA	1 s/t space per 150 m^2 GFA plus 1 1/t space per 10 maximum staff on site at any one time
	(b) Food supermarkets exceeding 500 m^2 GFA but not exceeding 2,500 m^2 RFA	1 space per 22 m^2 GFA[13]	
	(c) Food superstores/hypermarkets exceeding 2,500 m^2 RFA	1 space per 18 m^2 RFA	1 s/t space per 250 m^2 GFA plus 1 l/t space per 10 maximum staff on site at any one time.
	(d) Food retail parks	each case on individual merits (shared parking & an overall reduction in provision, taking into account linked trips on site)	
A1 Non-food retail	(a) Non-food retail warehouses with garden centres	1 space per 25 m^2 GFA	1 s/t space per 350 m^2 GFA plus 1 l/t space per 10 maximum staff on site at any one time
	(b) Non-food retail warehouses without garden centre	1 space per 35 m^2 GFA	
	(c) Garden centres up to 4,000 m^2 RFA	1 space per 25 m^2 GFA	
	(d) Garden centres exceeding 4,000 m^2 RFA	decided in each case on individual merits	
	(e) Non-food retail parks where individual land use components are known	each case on individual merits (shared parking & an overall reduction in provision, taking into account linked trips on site	
	(f) Non-food retail parks where individual land use components are not known	1 space per 40 m^2 GFA (shared parking)	

[13] TRICS and site survey data indicates over-provision of food retail parking generally, TRICS data suggests approx. 1 space per 30 sq.m., but this has been adjusted to 1 space per 22 sq.m (i.e. more parking provision) to allow for some seasonal peaks. This still reflects a reduction from the previous standard, which was 1 space per 18 sq.m – an 18% reduction. A similar proportionate reduction has been applied to the larger superstores., which were previously 1 space per 15 sq.m..

Use Class	Description	Required car parking standards	Cycle parking standards
A2 Financial & professional Services	Banks, building societies, estate agencies, betting shops	1 space per 30 m^2 GFA	1 s/t space per 200 m^2 GFA plus 1 1/t space per 10 f/t staff (Note: A2 offices should be treated as B1 offices
A3, A4 and A5 Food & drink	(a) Restaurants/cafes	1 space per 5 m^2 floorspace of dining area plus 3 spaces per 4 employees	1 s/t space per 100 m^2 GFA plus 1 1/t space per 10 maximum staff on site at any one.
	(b) Public houses/bars	1 space per 3 m^2 of floorspace of bar area plus 3 spaces per 4 employees	
	(c) Hot food takeaway shops (excluding fast food drive thru restaurants)	1 space 3 $m^{2\ of}$ floorspace of public area plus 3 spaces per 4 employees	
	(d) Fast food drive thru restaurants	1 space per 8 m^2 GFA	
	(e) Roadside restaurants	1 space per 4 m^2 of floorspace of dining area plus 3 spaces per 4 employees	1 1/t space per 10 maximum staff on site at any one time.
	(f) Transport café	1 lorry space per 3.5 m^2 GFA plus 3 spaces per 4 employees	
B1 Business	(a) B1 (a) offices	1 space per 35 m^2 GFA[14]	1 s/t space per 500 m ^{2}GFA plus 1 l/t space per 10 f/t staff
	(b) B1 (b) research & development, high-tech/B1 (c) light industry	1 space per 35 m^2 GFA	
B2 General industry	General industry	1 space per 75 m2 GFA15 (lorry provision to be checked against benchmark standards)	

[14] TRICS evidence is that demand is lower for B1 than existing standard, even in out of town locations
[15] Standards decreased, TRICS evidence is that parking demand far lower than existing standard.

Use Class	Description	Required car parking standards	Cycle parking standards
B8 Storage & distribution	Wholesale distribution, builder's merchants, storage	cars 1 space per 75 m^2 GFA Parking provision for lorries to be considered on a case by case basis.	1 l/t space per 10 f/t staff
Business Parks	Mixed B1/B2/B8 (unless heavily orientated to B8) for use where individual land use components are not known	1 space per 40 m^2 GFA (lorry provision to be checked against benchmark standards)	1 s/t space per 500 m^2 GFA plus 1 l/t space per 10 f/t staff
C1 Hostels & hostels	(a) Hotels	1 space per bedroom (including staff accommodation) plus 1 space per manager plus 2 spaces per 3 staff minus spaces related to staff bedrooms plus 1 space per 5 m^2 dining area plus 1 space per 5 m^2 dining area plus 1 space per 3 m^2 bar area plus 1 space per 5 m^2 public area in conference facility plus 1 space per 6 m^2 of public area in exhibition hall plus a minimum of 1 coach parking space per 100 bedrooms	1 l/t space per 10 beds plus 1 l/t space per 10 maximum staff on site at any one time
	(b) Hostels (i) Small (single parent or couple with no children)	3 spaces per 4 units	1 l/t space per 3 units
	(ii) Family (2 adults & 2 children)	1 space per unit	

Use Class	Description	Required car parking standards	Cycle parking standards
C2 Residential institutions	(a) Institutions/homes with care staff on premises at all times (excluding nursing homes, hospitals, residential schools, colleges or training centres)	1 space per 5 residents' bed spaces plus 1 space per 2 staff (non-resident); parking for resident staff to be based on general needs standard	1 s/t space per 20 beds plus 1 l/t space per 10 staff on duty at any one time
	(b) Elderly persons residential & nursing homes (Category 3)	0.25 spaces per resident bed space; parking for resident staff to be based on general needs standard	
	(c) Hospitals	1 space per 0.5 beds or to be decided on individual merits (including a full transport assessment & proposals in a green transport plan); special hospitals must be considered individually	
	(d) Education – halls of residence	1 spacer per 2 full-time staff plus 1 space per 6 students (but with linkage to student transport plans where appropriate)	1 l/t space per 10 f/t staff plus 1 l/t space per 3 students

Use Class	Description	Required car parking standards	Cycle parking standards
C3 Residential Zone 1 Zone 2 Elsewhere Fractions of a space indicate the use of assigned and unassigned spaces.	(i) Studio/bedsits (ii) 1-bedroom dwellings (iii 2-bedroom dwellings (iv) 3-bedroom dwellings (v) 4 or more bedroom dwellings (i) Studio/bedsits (ii) 1-bedroom dwellings (iii 2-bedroom dwellings (iv) 3-bedroom dwellings (v) 4 or more bedroom dwellings (i) Studio/bedsits (ii) 1-bedroom dwellings (iii 2-bedroom dwellings (iv) 3-bedroom dwellings (v) 4 or more bedroom dwellings	0.9 spaces per unit 1 spaces per unit 1.3 spaces 1.75 spaces 2 spaces 1 spaces per unit 1.1 spaces per unit 1.6 spaces 2.2 spaces 2.5 spaces 1.25 spaces per unit 1.25 spaces per unit 1.75 spaces 2.3 spaces 3 spaces	1 l/t space per unit if no garage or shed provided, 2 per unit for 2 bedrooms and above
	(b) Houses in multiple occupation	0.5 spaces per tenancy unit	
	(c) Elderly person accommodation (i) Retirement dwellings – no warden control, 1 or 2 bedrooms (Category 1) (ii) Sheltered dwellings – warden control (Category 2)	1.5 spaces per unit including 0.25 visitor space 0.75 space per unit including 0.25 visitor space	1 s/t space per 3 units plus 1 l/t space per 5 units

Use Class	Description	Required car parking standards	Cycle parking standards
D1 Non – residential institutions	(a) Public halls/places of assembly (excluding D2)	1 space per 9 m^2 GFA or 1 space per 3 fixed seats plus 3 spaces per 4 staff members	1 s/t space per 200 m^2 GFA plus 1 l/t space per 10 staff on duty at any one time
	(b) Community/family centres	1 space per 9 m 2 ^{GFA} plus 1 space per full-time staff member or equivalent	
	(c) Day centres	1 space per 2 staff members plus 1 space per 3 persons attending or 1 space per 9 m^2GFA	
	(d) Places of worship	1 space per 10 m^2 GFA	
	(e) Surgeries & clinics	3 spaces per consulting room plus 1 space per employee other than consulting doctors/dentists/vets	1 s/t space per consulting room plus 1 l/t space per 10 staff on duty at any one time
	(f) Libraries, miscellaneous cultural buildings	1 space per 30 m^2 GFA of freestanding development (otherwise assessed on merits)	1 s/t space per 100 m^2 GFA plus 1 l/t per 10 f/t staff
	(g) Miscellaneous cultural buildings	2 spaces plus 1 space per 30 m^2 of public floorspace	

Use Class	Description	Required car parking standards	Cycle parking standards
D1 Non – residential institutions (continued)	(h) Educational establishments (including residential)		1 l/t space per 10 f/t staff plus primary school: 1 l/t space per 15 students secondary school: 1 l/t space per 5 students
	(i) Schools	1 space per full-time member of staff plus 1 space per 100 pupils plus 1 space per 8 pupils over 17 years old plus 1 space per 20 pupils under 17 years old	
	(ii) Further education	1 space per full-time member of staff plus 1 space per 5 full-time students	further education: 1 l/t space per 5 students
	(iii) Nursery schools/playgroups	1 space per 4 pupils	nursery schools/playgroups: none additional
	Note: overspill parking for community purposes (outside school day) should be catered for by use of dual purpose surfaces such as school play areas.		

Use Class	Description	Required car parking standards	Cycle parking standards
D2 Assembly & leisure	(a) Places of entertainment/leisure parks for use when individual land use components are known	To be decided in each case on individual merits: parking for individual land use components should be based on the standards set out in this Guidance, but with an overall reduction in provision to reflect linked trips on site (all parking should be shared and an overall reduction of 25% should form the starting point for discussion)	On merit, depending upon mix of uses
	(b) Places of entertainment/leisure parks for use when individual land use components are not known	1 space per 15 m^2 GFA (shared parking)	
	(c) Cinemas (including multiplexes)	1 space per 4 seats[16]	Cinemas up to 500 seats: 1 s/t space per 20 seats plus 1 l/t space per 10 staff on duty at any one time Cinemas over 500 seats: 25 s/t spaces plus 1 s/t space per 100 seats more than 500 plus 1 l/t space per 10 staff on duty at any one time

[16] TRICS data suggests 1 space per 5 seats, 1 per 4 assumed (existing standard 1:3)

Use Class	Description	Required car parking standards	Cycle parking standards
D2 Assembly & leisure (continued)	(d) Swimming pools	1 space per 15 m ^{2} GFA	1 s/t space per 25 m ^{2} GFA plus 1 l/t space per 10 f/t staff
	(e) Tennis/badminton	4 spaces per court	
	(f) Squash courts	3 spaces per court	
	(g) Ice rinks	1 space per 12 m ^{2} GFA of rink	
	(h) Fitness centres/sports clubs	1 space per 15 m ^{2} GFA	
	(i) Ten pin bowling	2 spaces per lane[17]	1 s/t space per 3 lanes or rink plus 1 s/t space per 25 spectator seats plus 1 l/t space per 10 f/t staff
	(j) Indoor bowls	4 spaces per rink	
	(k) Outdoor sports grounds (i) with football pitches (ii) without football pitches	 20 spaces per pitch 50 spaces per hectare	1 s/t space per 10 players/participants at busiest period
	(l) Golf (i) 18-hole golf course (ii) 9-hole golf course (iii) golf driving range (iv) golf courses larger than 18 holes &/or for more than local use	 100 spaces 60 spaces 1.5 spaces per tee to be decided in each case on individual merits	 10 l/t spaces per 18 holes 5 l/t spaces per 9 holes 5 s/t spaces per 20/30 tee driving range pro rata to above

[17] TRICS data suggests reductions

Use Class	Description	Required car parking standards	Cycle parking standards
Motor trade related	(a) Showroom car sales	3 spaces per 4 employees plus 1 space per 10 cars displayed	1 l/t space per 10 f/t staff
	(b) Vehicle storage	3 spaces per 4 employees plus 2 spaces per showroom space or provision at rate of 10% annual turnover	
	(c) Hire cars	3 spaces per 4 employees plus 1 space per 2 hire cars based at site	
	(d) Ancillary vehicle storage	3 spaces or 75% of total if more than 3 vehicles	
	(e) Workshops	3 spaces per 4 employees plus 3 spaces per bay (for waiting & finished vehicles) in addition to repair bays	
	(f) Tyre & Exhaust	3 spaces per 4 employees plus 2 spaces per bay	
	(g) Parts stores/sales	3 spaces per 4 employees plus 3 spaces for customers	
	(h) Car wash/petrol filling station	3 spaces per 4 employees plus 3 waiting spaces per bay or run in to row or bays (additional parking is required where a shop is provided	1 l/t space per 10 f/t staff plus 5 s/t spaces if shop included

Use Class	Description	Required car parking standards	Cycle parking standards
Passenger transport facilities	(a) Rail stations	To be decided in each case on individual merits	5 l/t spaces per peak period train
	(b) Bus stations	To be decided in each case on individual merits	2 l/t spaces per 100 peak period passengers
Parking for disabled motorists Notes: 1. The parking needs of disabled motorists shall be met in full irrespective of location i.e. where the zonal procedure results in on-site parking restraint, there shall be no corresponding reduction in disabled spaces. 2. The number of disabled spaces specified are part of total capacity, not additional.	(a) Employment generating development (i) up to 200 space car park (demand-based as calculated from above standards) (ii) more than 200 space car park (demand-based as calculated from above standards) (b) Shops/premises to which the public have access/recreation (i) up to 200 space car park (demand-based as calculated from the above standards) (ii) more than 200 space car park (demand-based as calculated from above standards) (c) Residential (i) General (ii) Elderly persons dwellings up to 10 spaces (demand-based as calculated from above standards) more than 10 spaces (demand-based as calculated from above standards)	Individual spaces for each disabled employee plus 2 spaces or 5% of total capacity, whichever is greater 6 spaces plus 2% of total capacity 3 spaces or 6% of total capacity whichever is greater 4 spaces plus 4% of total capacity 1 space for every dwelling built to mobility standards 3 spaces 1 space per 4 spaces	- - - - -

APPENDIX A – EXISTING PARKING STANDARDS AND ACCESSIBILITY GUIDANCE

APPENDIX 5

APPENDIX 5

PARKING PROVISION

Introduction

A5.1 The County Council has adopted Supplementary Planning Guidance (SPG) for parking provision at new development. This document sets out recommended maximum car parking standards for each of the Use Classes and requires the identification of 'Accessibility Zones' at the local level. The task of defining which geographical areas fall into which accessibility zone has been left to individual districts.

A5.2 To enable the practical application of this demand-based approach to parking provision, the Borough Council has undertaken work to define zones and has subsequently adopted 'Accessibility Zones for the Application of Car Parking Standards' as a supplement to this SPG. This document contains detailed zone maps for the three towns within the Borough. These were adopted by the Borough Council in July 2002.

A5.3 Most of the Dacorum Borough falls within Zone 4, where normal maximum car parking standards apply. Some areas of the three towns (Hemel Hempstead, Berkhamsted and Tring) fall within Zones 1-3 where less parking will be required.

A5.4 Further advice regarding this zonal approach is provided in the Best Practice Guide: *Parking Provision at New Development,* published by the County Council.

Non-Residential Development

A5.5 The maximum standards for non-residential development represent the starting point for provision, with restraint to be applied progressively on a zonal basis in urban areas.

A5.6 New non-residential development within each of the four 'Accessibility Zones' will be expected to provide the following proportions of the relevant maximum parking standard:-

ZONE TYPE	CAR PARKING PROVISION (% of maximum demand-based standard)
1	0-25%
2	25-50%
3	50-75%
4	75-100%

A5.7 In rural areas the maximum standards will normally be applied directly, without restraint. The needs of disabled motorists are to be met in full, irrespective of location. Cycle parking provision will also be required.

Residential Development

A5.8 For residential development, the SPG currently expects all parking demand to be accommodated on site; although reduced provision may be acceptable for high-density residential proposals in appropriate locations. These standards are currently under review by the County Council. The objective of this review is to achieve an average of 1.5 spaces per dwelling across all new housing development in each authority area, in accordance with guidance in Planning Policy Guidance Note 3: Housing.

A5.9 The review proposes a two-tier approach, with the residential standards further reduced in the most accessible locations. These are those areas located within Zones 1 and 2 in the Dacorum Borough Council's Accessibility Zones SPG. The County Council proposes to include new residential standards in a revised County SPG.

A5.10 The Borough Council intends the standards for Dacorum to be consistent with those adopted county-wide by the County Council. The standards included in the table for General Needs Residential Use are the same as those proposed by the County Council but not yet formally adopted by it.

A5.11 The County Council propose that provision, usage and the reaction of the housing market to the new residential standards are monitored and the standards modified as necessary.

A5.12 Fractions of parking space may arise due to unassigned spaces being incorporated into a proposal. Unassigned spaces are primarily provided for visitors and may be incorporated into the streetscape, provided this is compatible with amenity considerations.

Design and Layout

A5.13 A standard minimum size car parking space is taken as being 2.4 m x 4.8 m. This applies to a hardstanding, or to the internal clear dimensions of a garage or carport. For a hardstanding a minimum depth of manoeuvring space between rows of spaces or other limits is 6 m. Where spaces take the form of garages or carports this should be increased to 7.3 m. Where spaces are provided in lay-bys, or with direct access onto the public highway, bay length should be a minimum of 6 m with, in addition, tapers in and out of the lay-by at each end (5m long minimum). The minimum width of the lay-by should not be less than 2.4 m. All spaces should be capable of independent usage, except where provided within a dwelling curtilage. In this case double parking is acceptable, provided that double parking spaces, garages or carports have a length of at least 10 m when specifically designed for double end-on parking.

A5.14 Where spaces are provided in private drives fronting garages, the garage doors should be set not less than 5.5 m from the highway boundary. The latter is usually the back of the footway but may be the back of the verge or easement strip where no footway is required to be provided. The minimum highway requirement is a 1 m wide easement strip behind the kerb of the public highway.

A5.15 An element of parking designed and reserved for disabled people should be provided in major developments which necessitate public access or accommodate a large number of employees. Normally 4% of the total car parking provision should be so allocated. Spaces should be wider than normal, at 3.3 m, (or where in rows, standard 2.4 m width spaces should have a 0.9 m width marked out space between every disabled bay), appropriately marked and signed, and located conveniently in relation to building entrances or pedestrian areas. An element of purpose-designed disabled person's parking should also be provided to serve specialist elderly or handicapped housing schemes. The level of provision will be determined in relation to the nature of the scheme.

A5.16 Nationally over a quarter of all reported crime is car related. Where and how cars are parked is therefore crucial to both the quality and safety of new development. For residential development, in-curtilage parking arrangements are preferred. Where communal parking is required, cars should be located in small groups and subject to natural surveillance. All parking should be arranged so as not to endanger the safety of pedestrians and other road users. Further advice is contained in *Secured Car Parks* produced by the Association of Chief Police Officers and Circular 5/94- *Planning Out Crime.*

A5.17 Achievement of parking provision at the expense of the environment and good design will not be acceptable. Large unbroken expanses of parking or excessive hard surfacing areas at building frontages are undesirable. All parking must be adequately screened and landscaped.

A5.18 Parking spaces should always be positioned in close proximity to the building served and be clearly identifiable with that development. In cases where communal garaging or parking facilities are provided, they must be conveniently located. The relationship of building and parking facility should be such that walking distances to the parking spaces are shorter then to the nearest carriageway parking opportunities.

A5.19 All parking areas should be clearly marked out in bays to assist in efficient use and management. Whilst it is often desirable to use surface material texture and colour differences to delineate spaces, it must be done in such a way as to ensure that the layout remains clear despite weathering.

Maximum demand-based car parking standards (the starting point for progressive reductions in on-site provision) & cycle parking standards

Use Class	Description	Maximum car parking Standards	Cycle parking standards
A1 Retail foodstores	(a) Small food shops up to 500 m^2 gfa	1 space per 30 m^2 gfa	1 s/t space per 150 m^2 gfa plus 1 1/t space per 10 maximum staff on site at any one time
	(b) Food supermarkets exceeding 500 m^2 gfa but not exceeding 2,5000 m rfa	1 space per 18 m^2 gfa	
	(c) Food superstores/hypermarkets exceeding 2,500 m^2 rfa	1 space per 15 m^2 rfa	1 s/t space per 250 m^2 gfa plus 1 l/t space per 10 maximum staff on site at any one time.
	(d) Food retail parks	to be decided in each case on individual merits (shared parking & an overall reduction in provision, taking into account linked trips on site)	
A1 Non-food retail	(a) Non-food retail warehouses with garden centres	1 space per 25 m^2 gfa	1 s/t space per 350 m^2 gfa plus 1 l/t space per 10 maximum staff on site at any one time.
	(b) Non-food retail warehouses without garden centre	1 space per 35 m^2 gfa	
	(c) Garden centres up to 4,000 m^2 rfa	1 space per 25 m^2 gfa	
	(d) Garden centres exceeding 4,000 m^2 rfa	decided in each case on individual merits	
	(e) Non-food retail parks where individual land use components are known	decided in each case on individual merits (shared parking & an overall reduction in provision, taking into account linked trips on site	
	(f) Non-food retail parks where individual land use components are not known	1 space per 40 m^2 gfa (shared parking)	

Use Class	Description	Maximum car parking standards	Cycle parking standards
A2 Financial & professional Services	Banks, building societies, estate agencies, betting shops	1 space per 30 m^2 gfa	1 s/t space per 200 m^2 gfa plus 1 1/t space per 10 f/t staff (Note: A2 offices should be treated as B1 offices
A3 Food & drink	(a) Restaurants/cafes	1 space per 5 m^2 floorspace of dining area plus 3 spaces per 4 employees	1 s/t space per 100 m^2 gfa plus 1 1/t space per 10 maximum staff on site at any one.
	(b) Public houses/bars	1 space per 3 m^2 of floorspace of bar area plus 3 spaces per 4 employees	
	(c) Hot food takeaway shops (excluding fast food drive thru restaurants)	1 space 3 m^2 of floorspace of public area plus 3 spaces per 4 employees	
	(d) Fast food drive thru restaurants	1 space per 8 m^2 gfa	
	(e) Roadside restaurants	1 space per 4 m^2 of floorspace of dining area plus 3 spaces per 4 employees	1 1/t space per 10 maximum staff on site at any one time.
	(f) Transport café	1 lorry space per 3.5 m^2 gfa plus 3 spaces per 4 employees	
B1 Business	(a) B1 (a) offices	1 space per 30 m^2 gfa	1 s/t space per 500 m^2gfa plus 1 l/t space per 10 f/t staff
	(b) B1 (b) research & development, high-tech/B1 (c) light industry	1 space per 35 m^2 gfa	
B2 General industry	General industry	1 space per 50 m^2 gfa (lorry provision to be checked against benchmark standards)	

Use Class	Description	Maximum car parking standards	Cycle parking standards
B8 Storage & distribution	Wholesale distribution, builders merchants, storage	1 space per 75 m^2 gfa (lorry provision to be checked against benchmark standards)	1 l/t space per 10 f/t staff
Business Parks	Mixed B1/B2/B8 (unless heavily orientated to B8) for use where individual land use components are not known	1 space per 40 m^2 gfa (lorry provision to be checked against benchmark standards)	1 s/t space per 500 m^2 gfa plus 1 l/t space per 10 f/t staff
C1 Hostels & hostels	(a) Hotels	1 space per bedroom (including staff accommodation) plus 1 space per manager plus 2 spaces per 3 staff minus spaces related to staff bedrooms plus 1 space per 5 m^2 dining area plus 1 space per 5 m^2 dining area plus 1 space per 3 m^2 bar area plus 1 space per 5 m^2 public area in conference facility plus 1 space per 6 m^2 of public area in exhibition hall plus a minimum of 1 coach parking space per 100 bedrooms	1 l/t space per 10 beds plus 1 l/t space per 10 maximum staff on site at any one time
	(b) Hostels (i) Small (single parent or couple with no children)	3 spaces per 4 units	1 l/t space per 3 units
	(ii) Family (2 adults & 2 children)	1 space per unit	

Use Class	Description	Maximum car parking standards	Cycle parking standards
C2 Residential institutions	(a) Institutions/homes with care staff on premises at all times (excluding nursing homes, hospitals, residential schools, colleges or training centres)	1 space per 5 residents' bed spaces plus 1 space per 2 staff (non resident); parking for resident staff to be based on general needs standard	1 s/t space per 20 beds plus 1 l/t space per 10 staff on duty at any one time
	(b) Elderly persons residential & nursing homes (Category 3)	025 spaces per resident bed space; parking for resident staff to be based on general needs standard	
	(c) Hospitals	1 space per 0.5 beds or to be decided on individual merits (including a full transport assessment & proposals in a green transport plan); special hospitals must be considered individually	
	(d) Education – halls of residence	1 spacer per 2 full-time staff plus 1 space per 6 students (but with linkage to student transport plans where appropriate)	1 l/t space per 10 f/t staff plus 1 l/t space per 3 students

Use Class	Description	Maximum car parking standards	Cycle parking standards
C3 Residential Zones 1 and 2* Elsewhere Fractions of a space indicate the use of assigned and unassigned spaces.	(a) General needs (i) 1 bedroom dwellings/bedsits (ii) 2 bedroom dwellings (iii) 3 bedroom dwellings (iv) 4 or more bedroom dwellings (i) 1 bedroom dwellings/bedsits (ii) 2 bedroom dwellings (iii) 3 bedroom dwellings (iv) 4 or more bedroom dwellings	1 space 1 space 1.5 spaces 2 spaces 1.25 spaces 1.5 spaces 2.25 spaces 3 spaces	1 l/t space per unit if no garage or shed provided
	(b) Houses in multiple occupation (i.e. separate households sharing facilities)	0.5 spaces per tenancy unit	
	(c) Elderly person accommodation (i) retirement dwellings – no warden control, 1 or 2 bedroom (Category 1) (ii) Sheltered dwellings – warden control (Category 2)	1.5 spaces per unit including 0.25 visitor space 0.75 space per unit including 0.25 visitor space	1 s/t space per 3 units plus 1 l/t space per 5 units

*As defined in Dacorum Borough's Supplementary Planning Guidance "Accessibility Zones for the Designation of Car Parking Standards".

Use Class	Description	Maximum car parking standards	Cycle parking standards
D1 Non – residential institutions	(a) Public halls/places of assembly (excluding D2)	1 space per 9 m^2 gfa or 1 space per 3 fixed seats plus 3 spaces per 4 staff members	1 s/t space per 200 m^2 gfa plus 1 l/t space per 10 staff on duty at any one time
	(b) Community/family centres	1 space per 9 m^2 gfa plus 1 space per full-time staff member or equivalent	
	(c) Day centres	1 space per 2 staff members plus 1 space per 3 persons attending or 1 space per 9 m^2 gfa	
	(d) Places of worship	1 space per 10 m^2 gfa	
	(e) Surgeries & clinics	3 spaces per consulting room plus 1 space per employee other than consulting doctors/dentists/vets	1 s/t space per consulting room plus 1 l/t space per 10 staff on duty at any one time
	(f) Libraries, miscellaneous cultural buildings	1 space per 30 m^2 gfa of freestanding development (otherwise assessed on merits)	1 s/t space per 100 m^2 gfa plus 1 l/t per 10 f/t staff
	(g) Miscellaneous cultural buildings	2 spaces plus 1 space per 30 m^2 of public floorspace	

Use Class	Description	Maximum car parking standards	Cycle parking standards
D1 Non – residential institutions (continued)	(h) Educational establishments (including residential)		1 l/t space per 10 f/t staff plus primary school: 1 l/t space per 15 students secondary school: 1 l/t space per 5 students
	(i) Schools	1 space per full-time member of staff plus 1 space per 100 pupils plus 1 space per 8 pupils over 17 years old plus 1 space per 20 pupils under 17 years old	
	(ii) further education	1 space per full-time member of staff plus 1 space per 5 full-time students	further education: 1 l/t space per 5 students
	(iii) nursery schools/playgroups	1 space per 4 pupils	nursery schools/playgroups: none additional
	Note: overspill parking for community purposes (outside school day) should be catered for by use of dual purpose surfaces such as school play areas.		

Use Class	Description	Maximum car parking standards	Cycle parking standards
D2 Assembly & leisure	(a) Places of entertainment/leisure parks for use when individual land use components are known	To be decided in each case on individual merits: parking for individual land use components should be based on the standards set out in this Guidance, but with an overall reduction in provision to reflect linked trips on site (all parking should be shared and an overall reduction of 25% should form the starting point for discussion)	On merit, depending upon mix of uses
	(b) Places of entertainment/leisure parks for use when individual land use components are not known	1 space per 15 m^2 gfa (shared parking)	
	(c) Cinemas (including multiplexes)	1 space per 3 seats	Cinemas up to 500 seats: 1 s/t space per 20 seats plus 1 l/t space per 10 staff on duty at any one time Cinemas over 500 seats: 25 s/t spaces plus 1 s/t space per 100 seats in excess of 500 plus 1 l/t space per 10 staff on duty at any one time

Use Class	Description	Maximum car parking standards	Cycle parking standards
D2 Assembly & leisure (continued)	(d) Swimming pools	1 space per 15 m^2 gfa	1 s/t space per 25 m^2 gfa plus 1 l/t space per 10 f/t staff
	(e) Tennis/badminton	4 spaces per court	
	(f) Squash courts	3 spaces per court	
	(g) Ice rinks	1 space per 12 m^2 gfa of rink	
	(h) Fitness centres/sports clubs	1 space per 15 m^2 gfa	
	(i) Ten pin bowling	4 spaces per lane	1 s/t space per 3 lanes or rink plus 1 s/t space per 25 spectator seats plus 1 l/t space per 10 f/t staff
	(j) Indoor bowls	4 spaces per rink	
	(k) Outdoor sports grounds (i) with football pitches	20 spaces per pitch	1 s/t space per 10 players/participants at busiest period
	(ii) without football pitches	50 spaces per hectare	
	(l) Golf (i) 18 hole golf course	100 spaces	10 l/t spaces per 18 holes
	(ii) 9 hole golf course	60 spaces	5 l/t spaces per 9 holes
	(iii) golf driving range	1.5 spaces per tee	5 s/t spaces per 20/30 tee driving range
	(iv) golf courses larger than 18 holes &/or for more than local use	to be decided in each case on individual merits	pro rata to above

Use Class	Description	Maximum car parking standards	Cycle parking standards
Motor trade related	(a) Showroom car sales	3 spaces per 4 employees plus 1 space per 10 cars displayed	1 l/t space per 10 f/t staff
	(b) Vehicle storage	3 spaces per 4 employees plus 2 spaces per showroom space or provision at rate of 10% annual turnover	
	(c) Hire cars	3 spaces per 4 employees plus 1 space per 2 hire cars based at site	
	(d) Ancillary vehicle storage	3 spaces or 75% of total if more than 3 vehicles	
	(e) Workshops	3 spaces per 4 employees plus 3 spaces per bay (for waiting & finished vehicles) in addition to repair bays	
	(f) Tyre & Exhaust	3 spaces per 4 employees plus 2 spaces per bay	
	(g) Parts stores/sales	3 spaces per 4 employees plus 3 spaces for customers	
	(h) Car wash/petrol filling station	3 spaces per 4 employees plus 3 waiting spaces per bay or run in to row or bays (additional parking is required where a shop is provided	1 l/t space per 10 f/t staff plus 5 s/t spaces if shop included

Use Class	Description	Maximum car parking standards	Cycle parking standards
Passenger transport facilities	(a) Rail stations	To be decided in each case on individual merits	5 l/t spaces per peak period train
	(b) Bus stations	To be decided in each case on individual merits	2 l/t spaces per 100 peak period passengers
Parking for disabled motorists Notes: 1. The parking needs of disabled motorists shall be met in full irrespective of location i.e. where the zonal procedure results in on-site parking restraint, there shall be no corresponding reduction in disabled spaces. 2. The number of disabled spaces specified are part of total capacity, not additional.	(a) Employment generating development (i) up to 200 space car park (demand-based as calculated from above standards)	Individual spaces for each disabled employee plus 2 spaces or 5% of total capacity, whichever is greater	-
	(ii) more than 200 space car park (demand-based as calculated from above standards)	6 spaces plus 2% of total capacity	-
	(b) Shops/premises to which the public have access/recreation (i) up to 200 space car park (demand-based as calculated from the above standards)	3 spaces or 6% of total capacity whichever is greater	-
	(ii) more than 200 space car park (demand-based as calculated from above standards)	4 spaces plus 4% of total capacity	-

Use Class	Description	Maximum car parking standards	Cycle parking standards
Parking for disabled motorists (continued)	(c) Residential (i) General (ii) Elderly persons dwellings up to 10 spaces (demand-based as calculated from above standards) more than 10 spaces (demand-based as calculated from above standards)	 1 space for every dwelling built to mobility standards 3 spaces 1 space per 4 spaces	-

Car parking notes

- gfa = gross floor area
- rfa = retail floor area

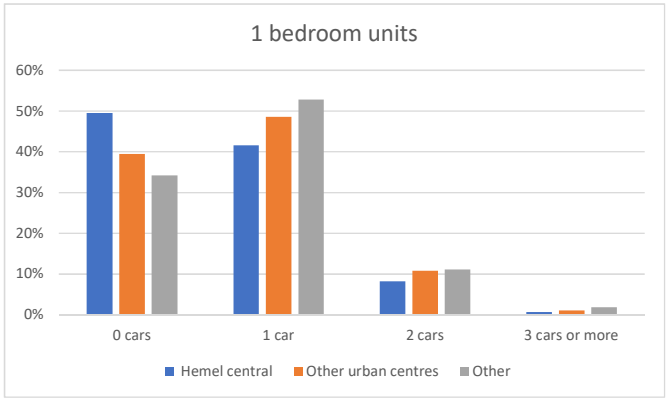
Cycle parking notes

- Space = space to park 1 bicycle
- l/t = long term
- s/t = short term
- f/t staff = full-time staff equivalents
- l/t cycle parking provision of a ratio of 1 space per 10 f/t staff is equivalent to a modal split of 10% by bicycle
- provision of showers and changing facilities are also important if staff cycling is to be encouraged

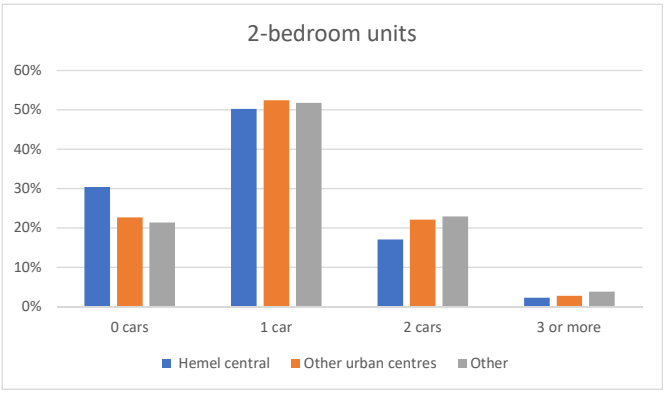
APPENDIX B – CENSUS 2011 CAR OWNERSHIP AND MODE SHARE ANALYSIS

SUMMARY OF RESIDENTIAL STANDARD CALCULATION					
	Visitor allowance factor	1.2			
		bedrooms			
Zone	**Initial census averages**	**1**	**2**	**3**	4
1	Hemel central	0.6	0.9	1.2	1.4
2	Other urban centres	0.7	1	1.3	1.5
General	Other	0.8	1.1	1.4	1.6
	Dacorum average	0.7	1	1.3	1.5
	Increase for visitors				
1	Hemel central	0.7	1.1	1.4	1.7
2	Other urban centres	0.8	1.2	1.6	1.8
General	Other	1.0	1.3	1.7	1.9
	Increase by 20% to allow for range around average	1.20			
1	Hemel central	0.86	1.30	1.73	2.02
2	Other urban centres	1.01	1.44	1.87	2.16
General	Other	1.15	1.58	2.02	2.30
	Redcution for zones			70%	80%
	Final recommendation - rounded andadjusted from above				
	Use Class		**General parking requirement**	**Required parking – Zone 1**	**Required parking – Zone 2**
	C3 residential – general	**Description**			
		Studio/bedsit	1.25	0.90	1.00
		1 bedroom	1.25	1.00	1.10
		2 bedrooms	1.75	1.30	1.60
		3 bedrooms	2.3	1.75	2.20
		4 bedrooms	3	2.00	2.50

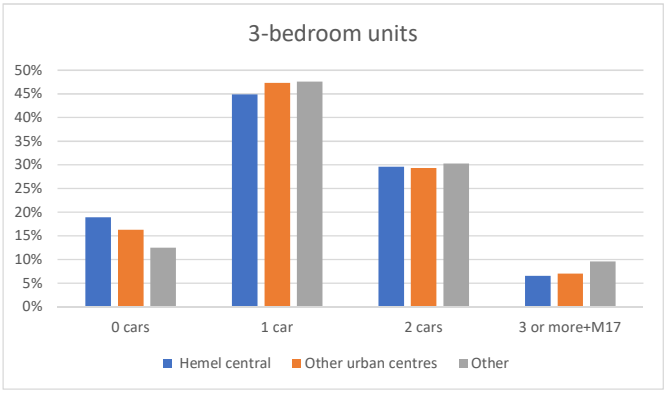
Car ownership by unit size and 'accessibility zone'



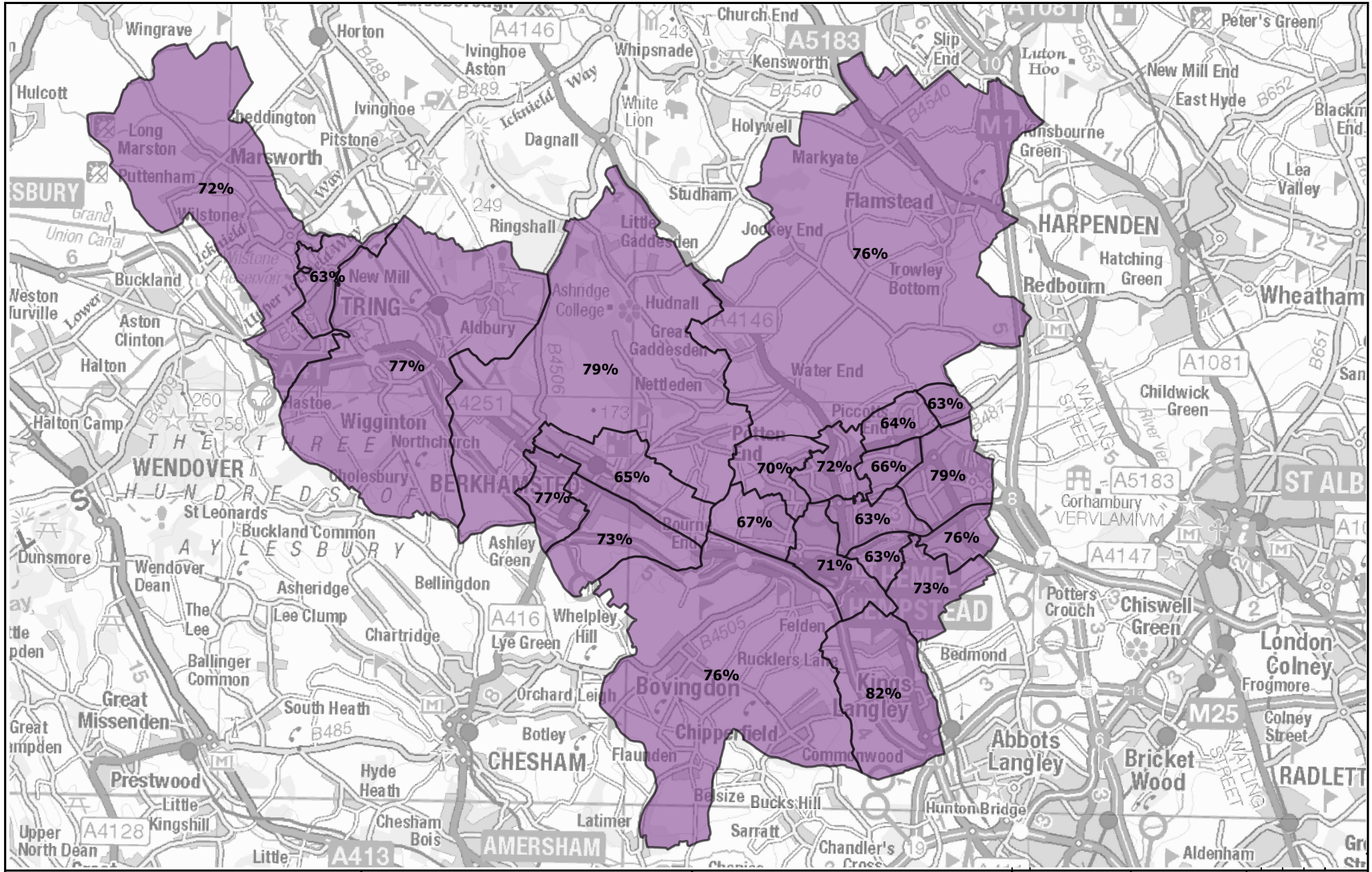
	1 bed	0 cars	1 car	2 cars	3 or more
1	Hemel central	50%	42%	8%	1%
2	Other urban centres	40%	49%	11%	1%
3	Other	34%	53%	11%	2%



	2 bed	0 cars	1 car	2 cars	3 or more
1	Hemel central	30%	50%	17%	2%
2	Other urban centres	23%	52%	22%	3%
3	Other	21%	52%	23%	4%



	3 bed	0 cars	1 car	2 cars	3 or more+M17
1	Hemel central	19%	45%	30%	7%
2	Other urban centres	16%	47%	29%	7%
3	Other	12%	48%	30%	10%



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W: www.markidesassociates.com

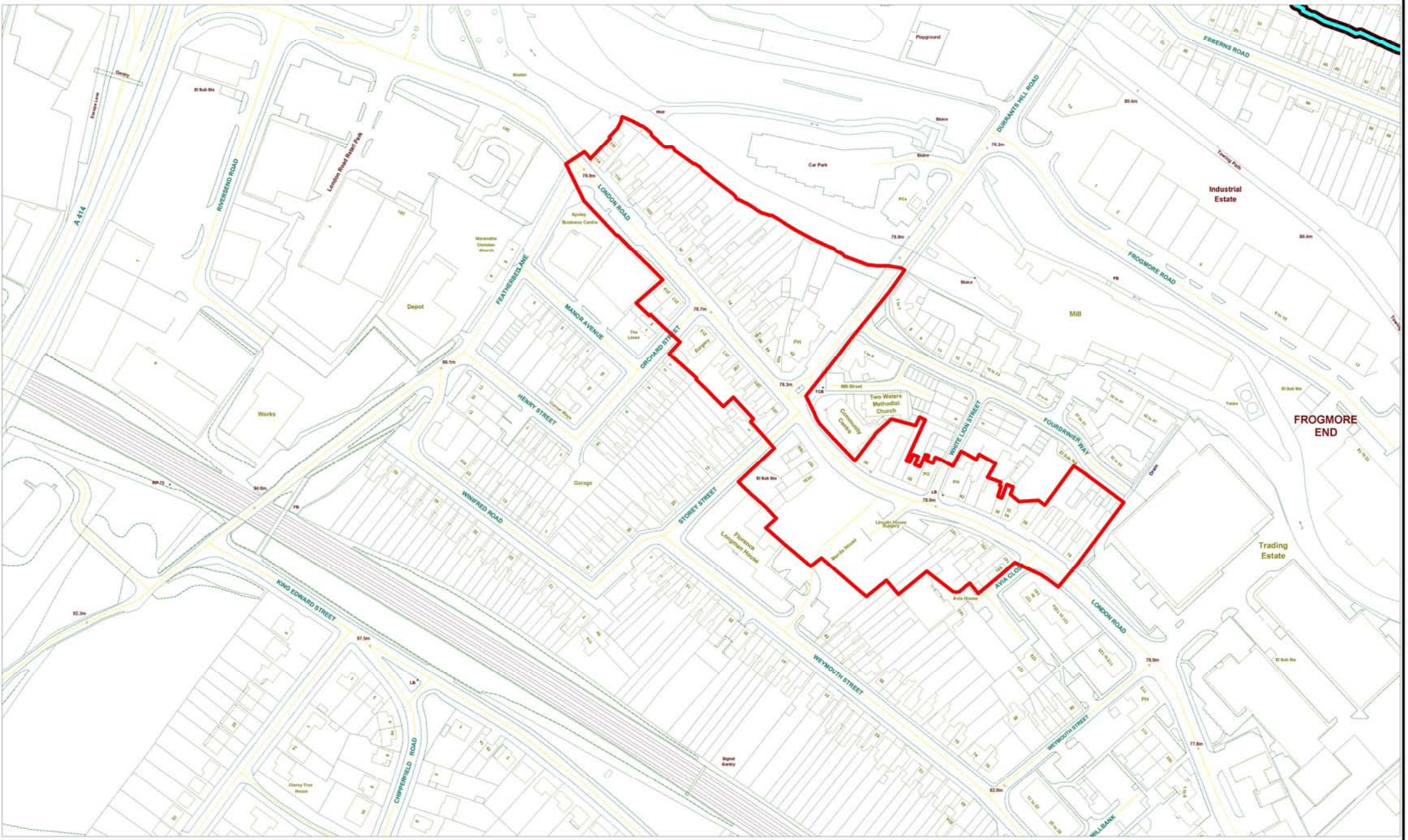
Job Title: Dacorum Parking Standards Review	Client: Dacorum Borough Council	Scale: 1:200000	Date: 13/09/2017	Designed: PF
Drawing Title: Appendix B - Drive to work to MSOAs		Drawn: PF	Checked: AN	Approved: AN
		Job No: 17014-00	Figure No: Appendix B	Rev: 1

APPENDIX C – AQMA AND CPZ INFORMATION

CPZ hours and days of operation

Area	Zone	Hours of operation
Apsley	"A" zone	Monday to Sunday, 10am to 10pm
Beaumayes, Hemel Hempstead	"B" zone	Monday to Friday, 8am to 6pm
Boxmoor	"X" zone	Monday to Friday, 9am to 10am and 2pm to 3pm
Corner Hall, Hemel Hempstead	"S" zone	Monday to Saturday, 8am to 6pm
Cotterells, Hemel Hempstead	"C" zone	Monday to Sunday, 8am to 8pm
Hospital area, Hemel Hempstead	"H" zone	Monday to Saturday, 8am to 8pm
Kodak, Hemel Hempstead	"K" zone	Monday to Sunday, 8am to 10pm
Roughdown, Hemel Hempstead	"R" zone	Monday to Friday, 8am to 6pm
Tring Station	"TS" zone	Monday to Sunday, 8am to 6pm

Air Quality Management Area Order No. 2



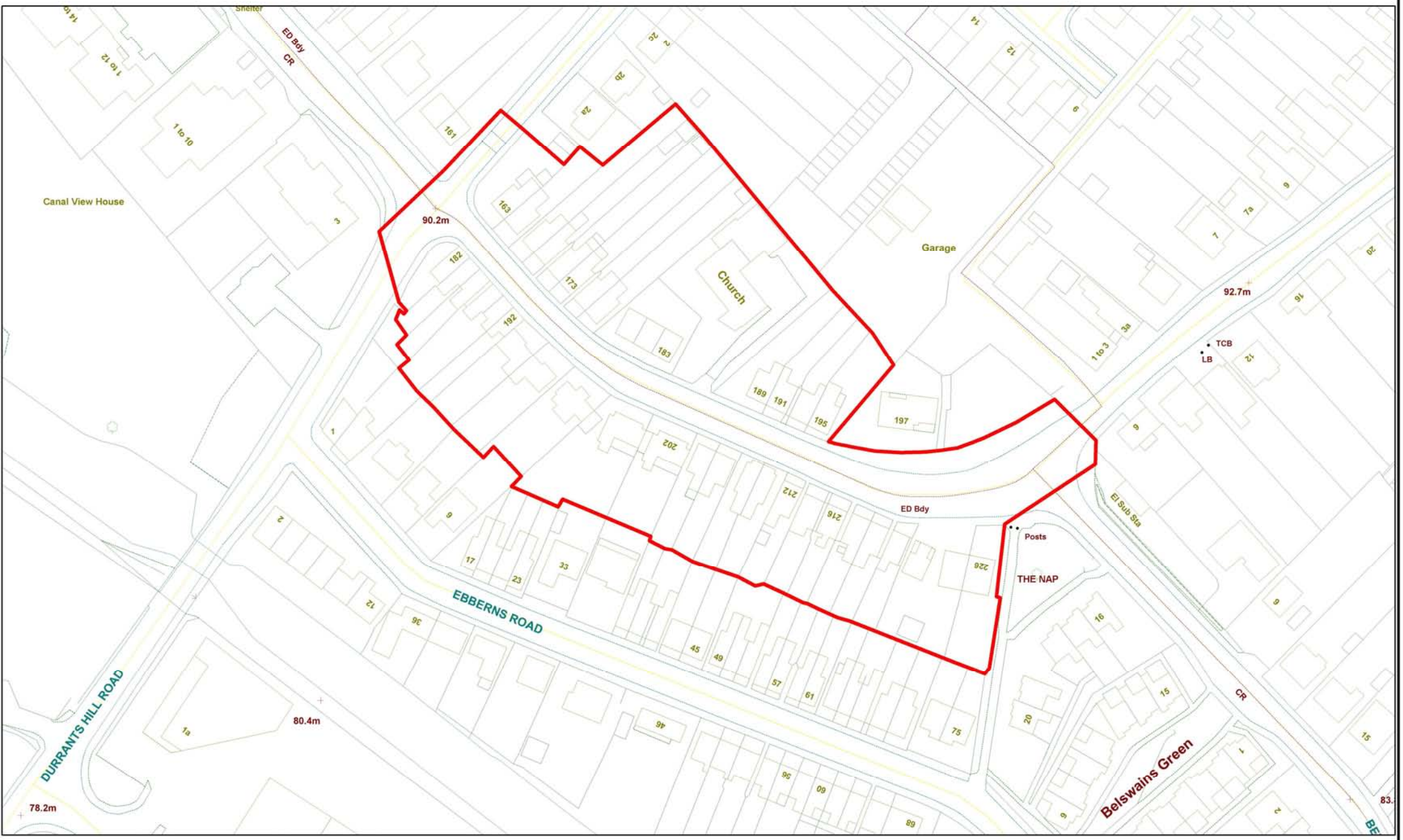
Regulatory Services

Date:30/05/2012

Scale:1:2500
Tile Ref:
TL0505SE

N

Air Quality Management Area Order No. 1

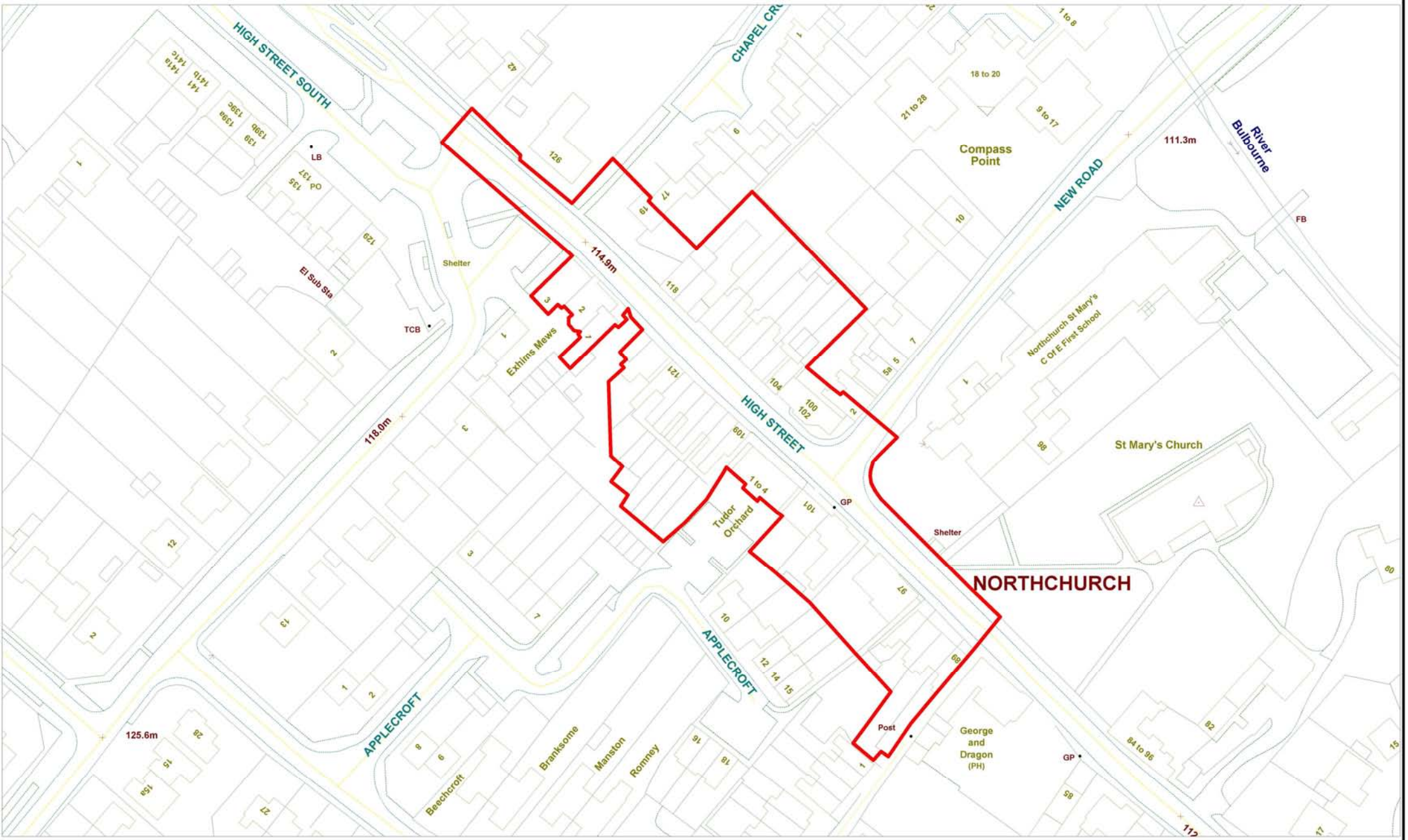


Regulatory Services

Date:30/05/2012

Scale:1:1250
Tile Ref:
TL0505NE

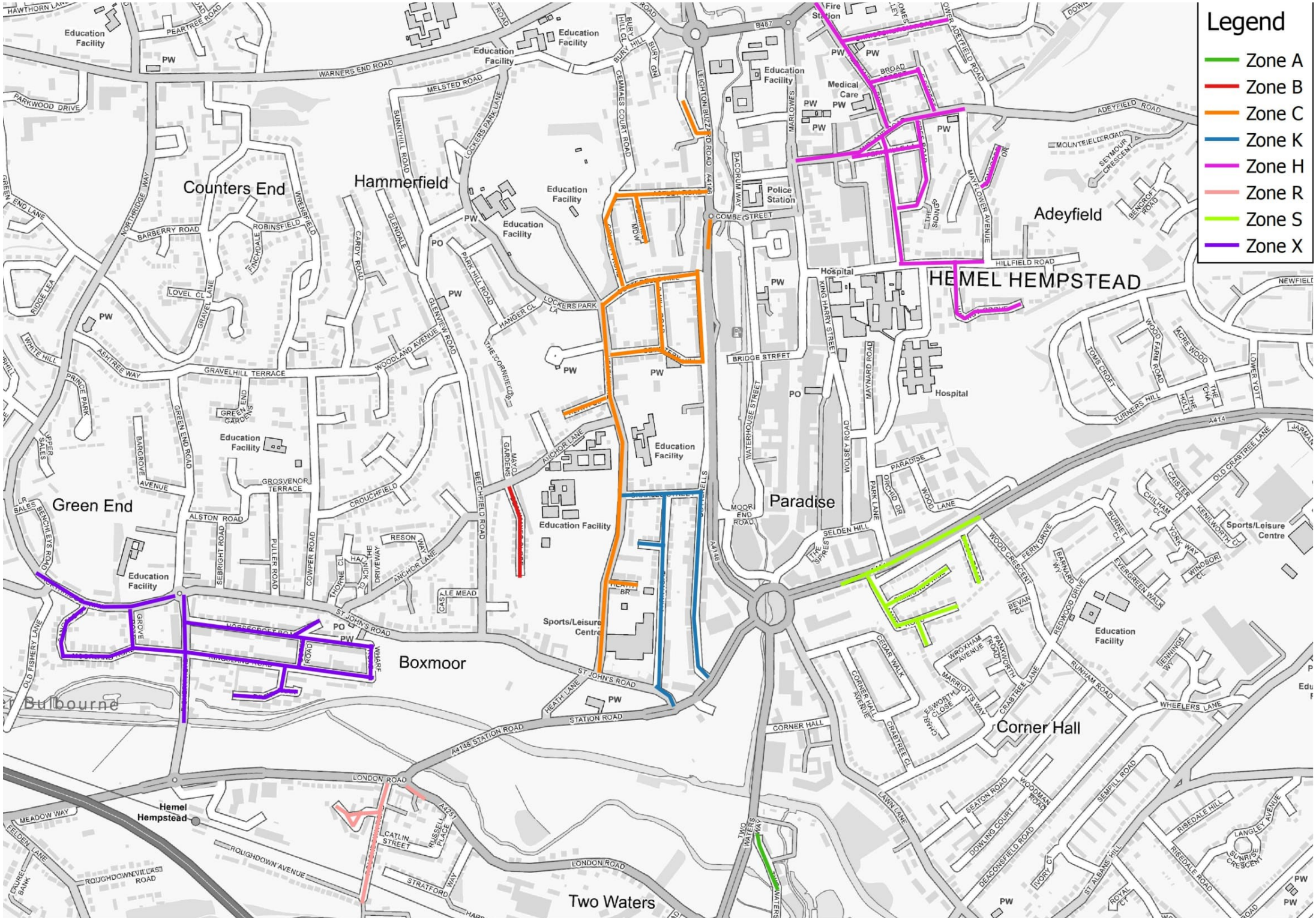
Air Quality Management Area Order No. 3



Regulatory Services

Date:30/05/2012

Scale:1:1250
Tile Ref:
SP9708NW


Legend
Zone A
Zone B
Zone C
Zone K
Zone H
Zone R
Zone S
Zone X
HEMEL HEMPSTEAD
Counters End
Hammerfield
Adeyfield
Green End
Boxmoor
Paradise
Corner Hall
Two Waters
Bulbourne
Hemel Hempstead
Hospital
Police Station
Fire Station
Medical Care
Education Facility
Sports/Leisure Centre
WARNERS END ROAD
MELSTED ROAD
ADEYFIELD ROAD
HILLFIELD ROAD
BRIDGE STREET
COMBE STREET
ST JOHN'S ROAD
STATION ROAD
A4146 STATION ROAD
LONDON ROAD
A414
A4146
B487
BROADWATER ROAD
LEIGHTON BUZZARD ROAD
WATERHOUSE STREET
MAYNARD ROAD
KING HARRY STREET
MARLOWES
DACORUM WAY
MAYFLOWER AVENUE
BEECHFIELD ROAD
GLENVIEW ROAD
SUNNYHILL ROAD
LOCKERS PARK LANE
PARK HILL ROAD
HANGER CL
CEMMAES COURT ROAD
BURY HILL
BURY GN
HILL CL
NORTHRIDGE WAY
BARBERRY ROAD
ROBINSFIELD
WRENSFIELD
CARDY ROAD
GLENDALE
WOODLAND AVENUE
GRAVELHILL TERRACE
ASHTREE WAY
GRAVEL LANE
LOVEL CL
RIDGE LEA
WHITE HILL
PRINCE PARK
GREEN END ROAD
GREEN END GARDENS
BARGROVE AVENUE
GROSVENOR TERRACE
CROUCHFIELD
ALSTON ROAD
SEBRIGHT ROAD
PULLER ROAD
COWPER ROAD
THORNE CL
HANDWICK DRIVEWAY
RESON WAY
ANCHOR LANE
MAYO GARDENS
CASTLE MEAD
THE CORNFIELDS
MOOR END ROAD
SELDEN HILL
PARADISE
WOLSEY ROAD
PARK LANE
ORCHID DR
WOOD LANE
THE SPIRES
WOOD CRESCENT
FERN DRIVE
BARNARD WY
BURNEY CL
EVERGREEN WALK
CHILTERN CL
YORK WAY
KENILWORTH CL
WINDSOR CL
CAISTER CL
OLD CRABTREE LANE
BEVAN CL
REDWOOD DRIVE
CEDAR WALK
CORNER HALL AVENUE
CRABTREE CL
CRABTREE LANE
WROXHAM AVENUE
PANKWORTH ROAD
MARRIOTTS WAY
ESKWORTH CLOSE
CHARLL CL
RUNHAM ROAD
WHEELERS LANE
JENNINGS WY
LAWN LANE
SEATON ROAD
WOODMAN ROAD
DOWLING COURT
DEACONSFIELD ROAD
SEMPILL ROAD
ST ALBANS HILL
IVORY CT
ROYAL CT
RISEDALE HILL
RISEDALE ROAD
LANGLEY AVENUE
SUNRISE CRESCENT
TWO WATERS WAY
CATLIN STREET
RUSSELL PLACE
A4251
ROUGHDOWN AVENUE
ROUGHDOWN VILLAS ROAD
STRATFORD WAY
MEADOW WAY
FELDEN LANE
COURTEL BANK
OLD FISHERY LANE
GROVE ROAD
NORRESCOTT ROAD
WHARF
LR SALES
BENCHLEYS ROAD
UPPER SALES
THE SIDINGS
MOUNTFIELD ROAD
SEYMOUR CRESCENT
BENGROFT ROAD
NEWFIELD
TOMS CROFT
WOOD FARM ROAD
ACRE WOOD
LOWER YOTT
TURNERS HILL
THE HOLT
THE CHA
JARMAN
PW
PO
BR


Legend
Zone TS
STATION ROAD
CLARKE'S SPRING
Tring
STATION ROAD
BEGGARS LANE
Chestnut Wood

APPENDIX D – PLANNING APPEALS RELATING TO PARKING IN DACORUM

Appeal	Comments
APP/A1910/W/16/3151498 Land adjacent to 26 Station Road, Berkhamsted, Hertfordshire HP4 2EY 4 dwellings	The appeal proposal would formalise publicly available parking on land adjacent to the highway and would provide 10 parking spaces. The proposal would result in a small loss of between 2 and 4 parking spaces available to residents. Whilst it is evident that there is a high demand for parking in the area, the proposed development would lead to only a very small reduction in the overall level parking provision – not held to be so significant as to warrant refusing planning permission on this ground.
APP/A1910/W/16/3145385 Land rear of 126-132 George Street, Berkhamsted, Hertfordshire HP4 2EJ Detached dwelling	The proposed dwelling would be served by two tandem car parking spaces of limited width. The appellant's and Council's comments noted that the number of spaces would be in accordance with the Council's residential car parking guidelines for the proposed dwelling. However, the access arrangements and turning area for the parking spaces would be restricted by the width of the road and the unrestricted on road parking in the immediate vicinity of the appeal site. No swept path analysis or other similar evidence has been submitted by the appellant to show that the car parking spaces for the proposed dwelling would work in such restricted circumstances. The proposal would effectively provide only one replacement off-street parking space for No. 132 (which currently has two). The new access for this parking space would potentially result in the loss of further off-street parking along William Street. Overall, considered that the increased pressure on, and loss of off-street parking in this instance, is not considered to be acceptable.
APP/A1910/W/16/3145933 89, 87, 85 and 71 Sunnyhill Road, Hemel Hempstead HP1 1S 26 dwellings	The evidence indicates there is a small deficit of parking provision within the estate; the layout indicates 59 bays would be required and there are 56 shown. In addition, given the tandem parking layouts for most plots, it seems likely that it would sometimes be impractical and inconvenient to park both vehicles within the curtilage of dwellings, even where this is indicated as such on the layout. Consequently, I am not persuaded that there would not be an increased demand for on-street parking on Sunnyhill Road, were the development to be allowed, as there would be limited availability within the estate for visitor or service delivery parking. Whilst not necessarily normally consider these concerns sufficient to warrant dismissal of the appeal in the absence of other considerations, they support an overall reasoning that the proposals would represent overdevelopment of the site.

APPENDIX E – COMPARISON OF PARKING STANDARDS

Car Parking Standards Comparison		Dacorum 2004		Luton 2011 (superceded) + 2014 (under consultation)	Central Beds 2010	Watford 2003	Three Rivers 2013	St Albans 2002	Hertsmere 2014
Land Use	Description	Standard GFA	Maximum						
A1	Retail - Food	Small food shop up to 500sqm	1 space per 30 sqm	TBD	I sp per 14 sqm	1 space per 30 sqm	1 space per 30 sqm	1 sp per 30sqm	1 sp per 14 sqm
		Food supermarkets exceeding 500sqm up to 2500sqm	1 space per 18sqm		1 sp per 35 sqm	1 space per 18sqm	1 space per 18sqm	1 space per 15sqm	
		food supermarket/hypermarket exeeding 2500sqm	1 space per 15sqm		NA	1 space per 15sqm	1 space per 15sqm	NA	
		Food retail parks	Decided on merits			Decided on merits	1 space per 14 sqm		
	Retail - Non-food	Non-food retail warehouses with garden centres	1 space per 25sqm	TBD	I sp per 20 sqm <1000sqm*	1 space per 25sqm	1 space per 25sqm	1 sp per 30 sqm	1 sp per 35 sqm
		non-food retail warehouses without garden centre	1 space per 35sqm		1 sp per 35 sqm >1000sqm*	1 space per 35sqm	1 space per 35sqm		
		garden centres up to 4,000sqm	1 space per 25 sqm			1 space per 35 sqm	1 space per 35sqm		
		garden centres exceeding 4,000sqm	Decided on merits		NA	Decided on merits	Decided on merits		
		non-food retail parks where use known	Decided on merits			Decided on merits	Decided on merits		
		non-food retail park where use unknown	1 space per 40sqm			1 space per 40 sqm unallocated	1 space per 40 sqm unallocated		
A2	Offices/ Financial	Banks building societies estate agents betting shops	1 sp per 30sqm	1 sp per 30 sqm	1 sp per 30 sqm	1 sp per 30 sqm	1 sp per 30 sqm	1 sp per 30 sqm	1 sp per 30 sqm
A3	Cafes, restaurants, public houses, wine bars, takeaway, drive-thru etc.	Restaurants/cafes	1 space per 5sqm of dining space plus 3 spaces per 4 staff	1 sp per 30 sqm	1 sp per 25 sqm	1 sp per 5sqm + 3sp per 4 employees	1 sp per 5sqm + 3sp per 4 employees	1 sp per 5sqm dining floorspace	1 sp per 5sqm dining floorspace
A4		public houses/bars	1 space per 3sqm of dining space			1 sp per 3sqm + 3sp per 4 employees	1 sp per 3sqm + 3sp per 4 employees	1 sp per 3sqm bar 1 sp per 3sqm pfa	
		hot food takeaways	1 space per 8sqm			1 sp per 8sqm	1 sp per 8sqm	1 sp per 8sqm	
		fast food drive thru	1 space per 4sqm of dining space plus 3 spaces per 4 staff			1 sp per 4sqm + 3sp per 4 emp.	1 sp per 5 sqm + 3sp per 4 emp.	1 sp per 4sqm dining floorspace	
A5		roadside restaurants							NA
		transport café	1 lorry space per 3.5sqm plus 3 spaces per 4 staff			1 lorry sp per 3.5sqm + 3sp per 4 emp.	1 lorry sp per 3.5sqm + 3sp per 4 emp.	1 lorry sp per 3.5 sqm	
B1	Business Use	B1a office	1 sp per 30sqm	1 sp per 30 sqm	1sp per 30sqm in urban zones 1sp per 25sqm in rural zones	1 sp per 30sqm	1 sp per 30sqm	1 sp per 30 sqm	1 sp per 30sqm
		B1b Research and development, high tech, B1c Light industry	1 space per 35sqm			1 space per 35sqm	1 space per 35sqm		1 space per 35sqm
B2	Industry	general industry	1 space per 50sqm	1 sp per 30 sqm	1 sp per 100 sqm 1 sp per 30 sqm	1 space per 50sqm	1 space per 50sqm	1 space per 50sqm	1 sp per 25 sqm 10 sp + 1 sp per 35 sqm
B8	Warehousing, Storage and General distribution	wholesale distribution, builders merchants, storage	1 space per 75sqm	1 sp per 50 sqm	1sp per 200sqm (>500sqm) 1sp per 30sqm (<500sqm)	1 space per 75sqm	1 space per 75sqm + 1 lorry sp per 200 sqm	1 space per 75sqm	1 sp per 25sqm (<250sqm) or 10 sp + 1 sp per 35sqm (>250sqm)
	Business Parks	Mixed B1/B2/B8 (Unless largely B8)	1 space per 40sqm.	NA	NA	1 space per 40sqm.	1 space per 40sqm + 1 lorry sp per 200	NA	1 space per 40sqm.

C1	**Hotels**		1sp per bedroom + 1 space per	1sp per bedroom + appropriate standards for	1sp per bedroom plus 1 for public	1sp per bedroom (4) + 1 sp per manager +	1sp per bedroom (4) + 1 sp per manager +	1 sp per bedroom (3) + 1 sp per manager +	1 sp per bedroom + 2 sp per 3 f/t staff +
C1	**Hostels**	Small (single parent or couple with no children), family (2 adults and 2 children)	3 spaces per 4 units for small hostels and 1 space per unit for family hostels.	1 sp per 4 rooms and not more than existing provision if converted from a dwelling	NA	3 spaces per 4 units for small hostels and 1 space per unit for family hostels.	3 spaces per 4 units for small hostels and 1 space per unit for family hostels.	3 spaces per 4 units for small hostels and 1 space per unit for family hostels.	3 spaces per 4 units for small hostels and 1 space per unit for family hostels.
C2	**Hospitals**	(excluding hospitals, nursing homes, residential schools, colleges and training centres)	1 space per 0.5 beds or decided on merits	TBD	1 sp per 4 members of staff plus 1 per 3 visitors	1 space per 0.5 beds or decided on merits	1 space per 0.5 beds or decided on merits	1 space per 0.5 beds or decided on merits	Decided on Merit
	Insitutions/Homes with care staff on presmises at all times.		1 space per 5 residents bed spaces + 1 space per 2 staff non resident.	NA	NA	1 sp per 5 residents	1 sp per 5 residents + 1 sp per 2 non-resident staff	1 sp per 5 residents + 1 sp per 2 non-resident staff	NA
C2	**Elderly persons residential and nursing homes**		0.25 spaces per resident bed space, parking for resident staff based on needs	0.3 - 0.5 sp per bed (TBD by number of residents)	1 sp per 4 beds plus 1 per 2 staff	0.25 sp per resident bed space	0.25 sp per resident bed space + 1 sp per 2 non-resident staff	1 sp per 5 residents + 1 sp per 2 non-resident staff	1 sp per 5 resident bed spaces + 1 sp per 2 non-resident staff
	Education halls of residence		1 space per 2 full time staff plus 1 space per 6 students	NA	1 per bed (inc staff bed) plus 1 per 2 non residential and ancillary staff	1 sp per 2 f/t staff + 1 sp per 6 students	1 sp per 2 f/t staff + 1 sp per 6 students	1 sp per 2 f/t staff + 1 sp per 3 students	1 sp per 2 f/t staff + 1 sp per 6 students
C3	**C3 Dwellings**	1 bedroom	1 space zone 1/2 or 1.25 spaces	1 sp per dwelling	1 sp per unit plus 0.24 sp per unit	Zone 1/2 = 1 sp per dwelling. Zone 3/4 =	1.75 sp per dwelling (1 assigned sp)	Pending. In interim, **Policy 40** applies, subject to zoning	1.5 sp per unit
		2 bedroom	1 space zone 1/2 or 1.5 spaces elsewhere	2 sp per dwelling	2 sp per unit plus 0.24 sp per unit unallocated visitors	Zone 1/2 = 1 sp per dwelling. Zone 3/4 = 1.5 sp per dwelling	2 sp per dwelling (1 assigned sp)		2 sp per unit
		3 bedroom	1.5 spaces zone 1/2 or 2.25 spaces elsewhere		3 sp per unit plus 0.24 sp per unit unallocated visitors	Zone 1/2 = 1.5 sp per dwelling. Zone 3/4 = 2.25 sp per	2.2 sp per dwelling (2 assigned sp)		2 sp per unit
		4 + bedroom	2 spaces zone 1/2 or 3 spaces elsewhere	3 sp per dwelling	4 sp per unit plus 0.24 sp per unit unallocated visitors parking	Zone 1/2 = 2 sp per dwelling. Zone 3/4 = 3 sp per dwelling	3 sp per dwelling (3 assigned sp within curtilage)		4-bed: 3 sp per unit; 5-bed: 4sp per unit; 6-bed: 5sp per unit + 1 sp per bedroom thereafter
C4	**Sheltered Housing**		0.75 spaces per unit including 0.25 spaces per visitor	1 sp for house manager plus 0.19 for 1 bedroom, 0.44 for 2 bedrooms, 0.08 sp per apartment for visitors	1 sp per 2 units + 1 sp per 4 units	1sp per unit (no warden) 0.5 sp per unit (warden)	1.5sp per unit (no warden) 0.75 sp per unit (warden) + 0.25 visitor sp	Pending. In interim, **Policy 43** applies	1-bed no warden = 1.5 sp per unit; 2 bed no warden = 2 sp per unit; 1/2 bed warden = 1 per unit; other= case by case
	Elderly persons accomodation/retirement dwellings		1.5 spaces per unit including 0.25 visitor spaces	See C2	See C2	See C2	See C2	See C2	NA
	Houses in multiple occupancy		0.5 spaces per tenancy unit	NA	NA	NA	0.5 sp per tenancy	0.5 sp per tenancy	NA

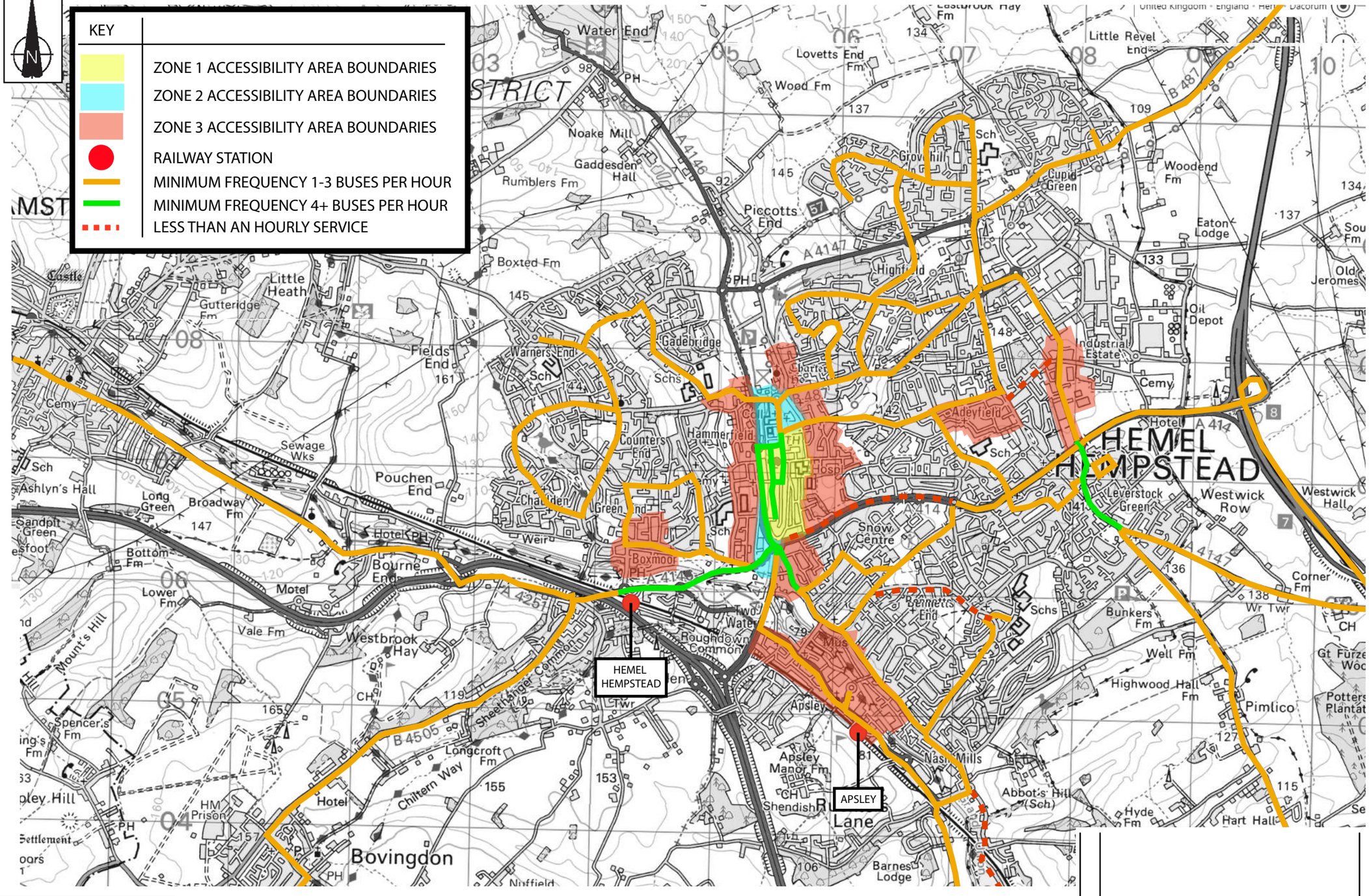
D1	**Education**	Pre-school, play and nurseries Primary Schools Secondary Schools Higher/further education and adult training centres	1 space per 4 pupils 1 space per full time member of staff plus 1 space per 100 pupils plus 1 space per 8 1 space per full time member of staff plus 1 space per 5 full time students	1 sp per 2 staff 1sp per 2 staff plus 1 space per 15 students (total, not full time equivalent) on all developments	1 per 12 pupils for parents plus 2 per 3 1 per 20 pupils for parents plus 2 per 3 staff plus 1 per 7 staff for visitors 1 sp per 30 pupils for 1 sp per 2 staff plus 1 per 15 students	1 sp per 4 pupils 1sp per full-time staff + 1 sp per 100 pupils + 1 sp per 8 pupils >17yo + 1 sp 1sp per full-time 1sp per full-time staff + 1 sp per 5 full-time students	1 sp per 4 pupils 1sp per full-time staff + 1 sp per 8 pupils >17yo + 1 sp per 5 pupils <17yo 1sp per full-time 1sp per 2 full-time staff + 1 sp per 15 full-time students	1 sp per 4 pupils 1 sp per 2 staff + 1 sp per 15 pupils	1 sp per 4 pupils 1 sp per f/t staff + 1 sp per 20 pupils + 1 visitor sp per 100 pupils 1 sp per f/t staff + 1 sp per 20 pupils <17yo + 1 sp per 8 pupils >18yo + 1 sp per 5 f/t further education pupils + 1
D1	**Non residential institutions**	Public Hall/ Place of Assemby	1 space per 9sqm or 1 space per 3 fixed seats plus 3 spaces per 4 staff members	NA	NA	1 sp per 9sqm or 1 sp per 3 fixed seats + 3 sp per 4 staff	1 sp per 9sqm or 1 sp per 3 fixed seats + 3 sp per 4 staff	1 sp per 9sqm or 1 sp per 3 fixed seats + 3 sp per 4 staff	1 sp per 9sqm OR 1 sp per 3 fixed seats + 3 sp per 4 f/t staff
		Community Centre	1 space per 9sqm plus 1 space per full time staff member			1 sp per 9sqm + 1 sp per full time staff	1 sp per 9sqm + 1 sp per full time staff	1 sp per 9sqm + 1 sp per f/t staff.	1 sp per 9sqm + 1 sp per f/t staff
		Medical and other health practices	3 spaces per consulting eoom plus 1 spce per employee other than doctor/dentist/vet	4sp per consulting room plus 1 sp per 2 staff	5 per consulting rooms	3sp per consulting room + 1 sp per employee other than consulting doctor/dentist/vet	3sp per consulting room + 1 sp per employee other than consulting doctor/dentist/vet	3sp per consulting room + 1 sp per employee other than consulting doctor/dentist/vet	3 sp per consulting room + 1 sp per f/t non-consultant staff
		Places of Worship	1 space per 10sqm		1 per 5sqm	1sp per 10sqm	1sp per 10sqm	1 sp per 10sqm	1 sp per 10sqm
		Libraries	1 space per 30sqm of freestanding development	NA	1 per 50sqm	1sp per 30sqm	1sp per 30sqm	1 sp per 30sqm	2 sp + 1 sp per 30sqm public floorspace
		Miscellaneous cultural buildings	2 spaces plus 1 space per 30sqm of public floorspace		1 per 4sqm	2 sp + 1 sp per 30sqm public floorspace	2 sp + 1 sp per 30sqm public floorspace	2 sp + 1 sp per 30sqm of public floorspace	NA
D2	**Assembly and Lesiure**	Places of entertainment/lesiure parks when individual components are known	Decided on merits			Decided on merits	1 sp per 22 sqm	1 sp per 22 sqm	
		Daycentres	1 space per 2 staff members plus 1 space per 3 persons attending or 1 space per 9sqm	NA	NA	1 sp per 2 staff + 1 sp per 3 persons attending or 1 sp per 9sqm	1 sp per 2 staff + 1 sp per 3 persons attending or 1 sp per 9sqm	NA	1 sp per 9sqm OR 1 sp per 4 visitors + 1 sp per f/t staff
		Cinemas and theatres	1 space per 3 seats.	Case by case	1 sp per 5 seats	1 sp per 3 seats	1 sp per 5 seats	1 sp per 5 seats	1 sp per 3 seats on free standing development
		Places of entertainment/lesiure parks when individual components are unknown	1 space per 15sqm		NA	1 sp per 15sqm allocated	1 sp per 22 sqm	1 sp per 22 sqm	NA
		indoor bowls	4 spaces per rink		NA	4 sp per rink	4 sp per rink	NA	NA
		outdoor sports grounds	20 spaces per pitch		TBD by max. No. Particpants	20sp per pitch	20sp per pitch	20sp per pitch	1 sp per pitch + 1 sp per 5 paying spectators
		outdoor sports ground without football pitches	50 spaces per hectare			50sp per ha	50sp per ha	50sp per ha	1 sp per pitch + 1 sp per 5 paying spectators
		golf	18 hole - 100 spaces, 9 hole 60 spaces, driving range 1.5 spaces per tee, over 18 holes to be decided on merits	NA		100 sp (18 holes) 60sp (9 holes) 1.5 sp per tee (driving range)	100 sp (18 holes) 60sp (9 holes) 1.5 sp per tee (driving range)	100 sp (18 holes) 60sp (9 holes) 1.5 sp per tee (driving range)	100 sp plus 50 overflow (18 holes); 1.5 sp per 5 tees driving range
		ice rinks	1 space per 12sqm		General sports - >1000 sqm = 1 sp per 22 sqm/ <1000sqm = 1 sp per player + 1 sp per 5 sqm	1 sp per 12sqm ice rink	1 sp per 12sqm ice rink		1 sp per 12 sqm rink area
		Itness centre/sports club	1 space per 15sqm			1 sp per 15sqm	1 sp per 22sqm	NA	1 sp per 7sqm public floorspace
		ten pin bowling	4 spaces per lane			4 sp per lane	4 sp per lane		3 sp per lane
		swimming pool	1 space per 15sqm			1 sp per 15sqm	1 sp per 22sqm		1 sp per 10sqm public floorspace + 1 sp per 2 f/t staff
		tennis/badminton	4 spaces per court			4 sp per court	4 sp per court	4 sp per court	2 sp per court
		squash courts	3 spaces per court			3sp per court	3sp per court	NA	2 sp per court

SG	**Motor trade vehicles**	Tyre and Exhaust Centres	3 spaces per 4 employees plus 2 spaces per bay	NA	3 sp per 4 staff	3 sp per 4 staff + 2 sp per bay	3 sp per 4 staff + 3 sp for customers	3 sp per 4 staff + 2 sp per bay	3 sp per 4 staff + 2 sp per bay
		Vehicle Service stations	NA			3 sp per 4 staff + 3 sp per bay + repair	3 sp per 4 staff + 3 sp per bay + repair	3 sp per 4 staff + 3 sp per bay + repair	3 sp per 4 staff + 3 sp per bay
		PfS	3 spaces per 4 employees plus 3 waiting spaces per bay or run in to row or bays		1 sp per 2 staff	3 sp per 4 staff + 3 waiting sp per bay or run in	3 sp per 4 staff + 3 waiting sp per bay or run in	3 sp per 4 staff + 3 waiting sp per bay or run in	3 sp per 4 staff + 3 waiting sp per bay
		Showroom Car Sales	3 spaces per 4 employees plus 1 space per 10 cars displayed			3 sp per 4 staff + 1 sp per 10 cars displayed	3 sp per 4 staff + 1 sp per 10 cars displayed	3 sp per 4 staff + 1 sp per 10 cars displayed	3 sp per 4 staff + 1 sp per 10 cars displayed
		Vehicle Storage	3 spaces per 4 employees plus 2 spaces per showroom space or provision at a rate of 10% annual turnover		NA	3 sp per 4 staff + 2 sp per showroom space or provision at rate of 10% annual turnover	3 sp per 4 staff + 2 sp per showroom space or provision at rate of 10% annual turnover	3 sp per 4 staff + 2 sp per showroom space or provision at rate of 10% annual turnover	3 sp per 4 staff + 2 sp per showroom space or provision at rate of 10% annual turnover
		Hire Cars	3 spaces per 4 employees plus 1 space per 2 hire cars based at site			3 sp per 4 staff+ 1 sp per 2 hire cars based at site	3 sp per 4 staff+ 1 sp per 2 hire cars based at site	3 sp per 4 staff+ 1 sp per 2 hire cars based at site	3 sp per 4 staff+ 1 sp per 2 hire cars based at site
		Ancilliary Vehicle Storage	3 spaces or 75% of total if more than 3 vehicles			3 sp or 75% of total if >3 veh.	3 sp or 75% of total if >3 veh.	3 sp or 75% of total if >3 veh.	3 sp or 75% of total if >3 veh.
		Vehicle parts stores/sales	3 spaces per 4 employees plus 3 spaces per customer			3 sp per 4 staff + 3 customer sp	3 sp per 4 staff + 3 sp for customers	3 sp per 4 staff + 3 sp for customers	3 sp per 4 staff + 3 sp for customers
	Rail Stations	NA							
	Bus Stations	NA	Decided on merits	NA	NA	Decided on merits	NA	NA	NA
					* Garden centres				

APPENDIX F – CONSULTATION RESPONSES

Consultee	Comments
St William Homes	High car parking standards can create significant challenges for residential development, particularly on brownfield sites, in terms of density, poorer amenity and viability. Request flexibility in standards. In accessible locations, parking standards for smaller non-family households can be reduced significantly from 1-1.5 spaces per unit or could be car free. Larger properties could have 1-2 spaces, less than the current 2-3 spaces required. Accessibility defined as within walking/cycling distance of town or local centre and near to bus stops/ train stations. Larger homes require at least one parking space to be included in the sale; studio and one-bedroom do not consider a parking space as a necessary requirement in higher accessibility areas.
Taylor Wimpey North Thames (Armstrong Rigg)	Welcome flexibility, maximum standards related to accessibility. Suggest 1 bed – 1 space; 2 beds 1-1.5 spaces, 3 beds – 2 spaces; 4 beds 2-3 spaces, 5+ bed – 3 spaces. Recommend allow garages and tandem spaces to be included in parking calculations. Prefer similar treatment to non-residential standards – with 4 zones and progressive reductions Suggest accessibility and parking standards related to these 4 zones.
Brassier Freeth Property Consultants	Parking important to Dacorum employers, draw staff from wide radius. Little alternative to the car, few public spaces in Maylands. Suggest B1 (a) offices 1:20sq.m.; B1 (b), (c) 1:20; general industrial 1:30-; B8 1:75 and 1:50 depending on size Scrap business park standard, apply above standards. Business will require maximum number of spaces, reduction in standards will impact on local roads, will need more permit schemes.
Novo UK	Parking very important for (Hemel Town centre) business – staff from wide catchment Convenience of parking is an issue, increased demand, would like season tickets in Water Gardens car park Need 1 space per member of staff – B1 office. Concerns re 'back lot' unregulated parking
Martin Brower (HHBA)	Parking important to employers' due to wide catchment. Lorry parking is an important issue for deliveries. Would not recommend reduction imparking standards due to accessibility.
Underwood's Solicitors (Hemel Hempstead)	Parking important for employers, not enough free local parking for more staff, and pubic parking for clients Suggest no reduction for better accessibility, to reduce pressure on-street.

APPENDIX G – ACCESSIBILITY MAPS



Rev	Amendments	Drn	Chk	App	Date

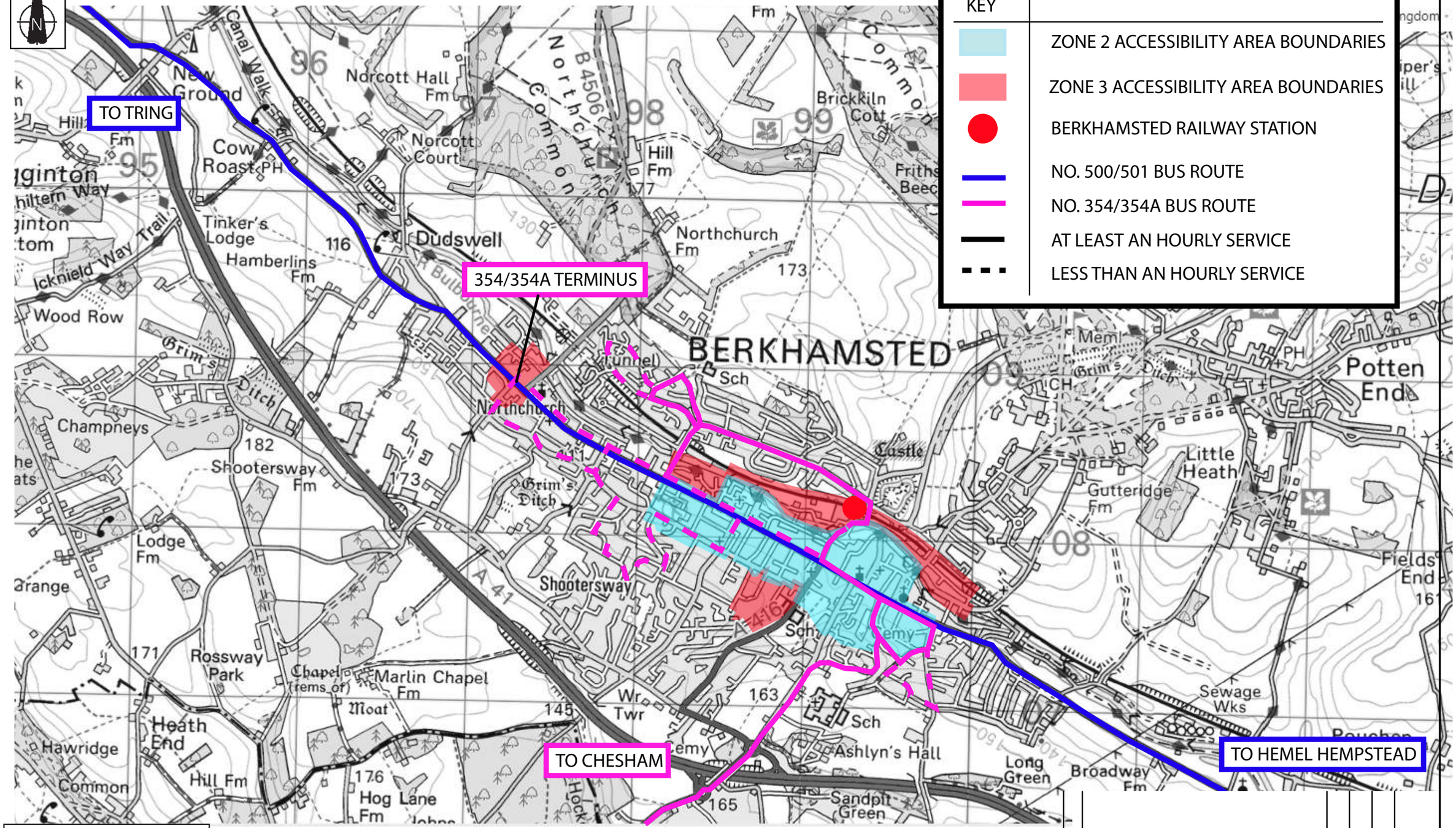
MARKIDES ASSOCIATES
9th Floor, The Tower Building,
York Road,
London,
SE1 7NX
Telephone: 0207 442 2225
E: enquiries@markidesassociates.com
W: www.markidesassociates.com

Job Title
DACORUM PARKING STANDARDS

Drawing Title
HEMEL HEMPSTEAD
ACCESSIBILITY PLAN

Client
DACORUM BOROUGH COUNCIL

Scale	Date	Designed
NTS	MAY`17	SEC
Drawn	**Checked**	**Approved**
SEC	AN	AN
Job No	**Figure No**	**Rev**
17014-01	SK-01	



KEY

- ZONE 2 ACCESSIBILITY AREA BOUNDARIES
- ZONE 3 ACCESSIBILITY AREA BOUNDARIES
- BERKHAMSTED RAILWAY STATION
- NO. 500/501 BUS ROUTE
- NO. 354/354A BUS ROUTE
- AT LEAST AN HOURLY SERVICE
- LESS THAN AN HOURLY SERVICE

Rev	Amendments	Drn	Chk	App	Date

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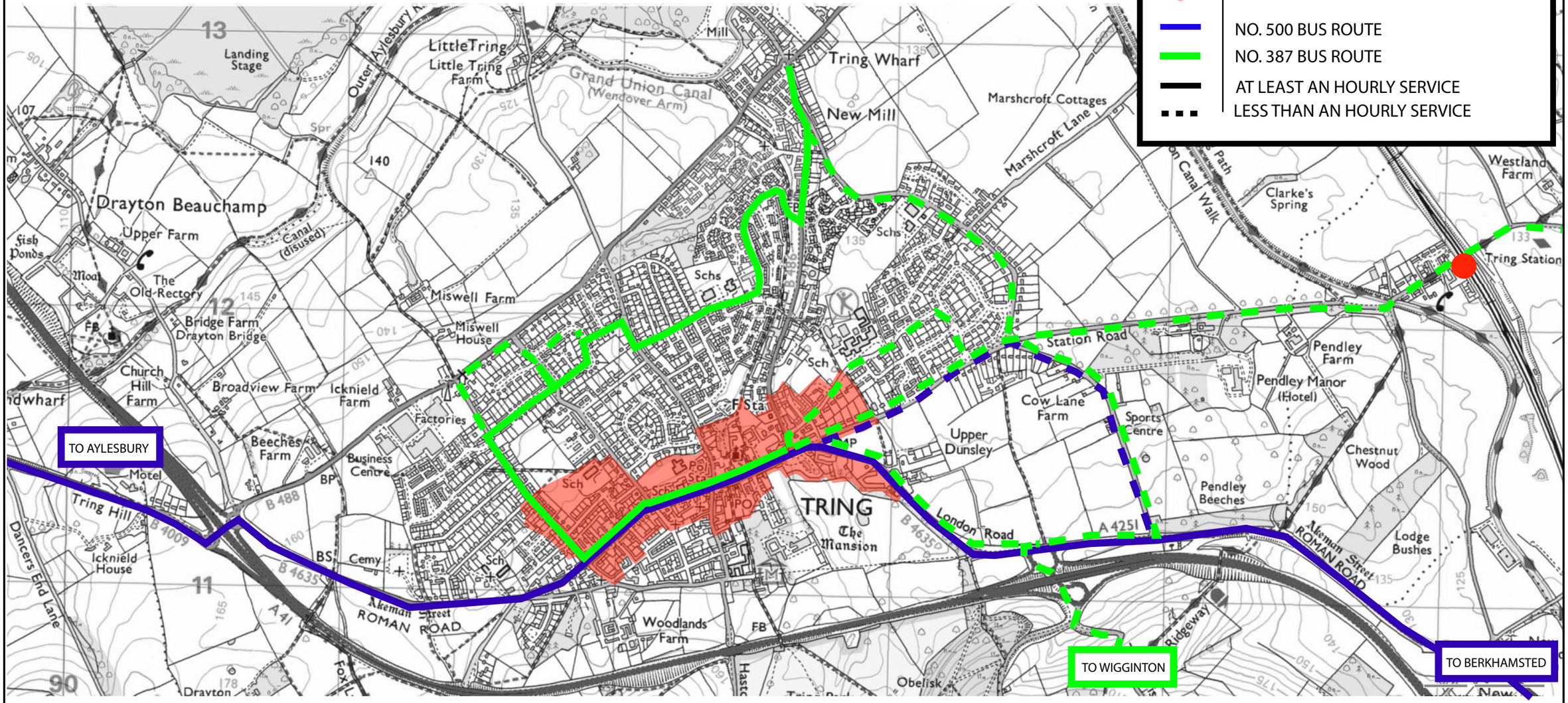
Job Title: DACORUM PARKING STANDARDS

Drawing Title: BERKHAMSTED ACCESSIBILITY PLAN

Client: DACORUM BOROUGH COUNCIL

Scale	Date	Designed
NTS	APR`17	SEC
Drawn	Checked	Approved
SEC	SC	SC
Job No	Figure No	Rev
17014-01	XXX	



Rev	Amendments	Drn	Chk	App	Date

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Job Title: DACORUM PARKING STANDARDS

Drawing Title: TRING ACCESSIBILITY

Client: DACORUM BOROUGH COUNCIL

Scale	Date	Designed
NTS	APR`17	SEC
Drawn	Checked	Approved
SEC	SC	SC
Job No	Figure No	Rev
17014-01	XXX	

APPENDIX H – TRICS ANALYSIS

SUMMARY OF TRICS ANALYSIS

Land Use	Description	Number of Sites Available	South East Only Data Available	Town Centre Difference Data Available	Calculation Factor	Result - 1 space per X sq.m.	Existing Standard	Notes
A1	Food Store	2 (SE) 7 (Wider area)	Yes	No - Out of town only	Gfa - 100sqm	29 28	1 sp per 15/18/30sqm	
A3	Pub/Restaurant	5 (Wider area, weekday, out of town) 3 (wider area, weekday, town centre) 2 (Wider area, saturday, town centre) 2 (Wider area, saturday,out of town)	No	Yes	Gfa - 100sqm	29 13 19 27	1 sp per 3-5 sqm + 3 sp per 4 employees	
A4	Hotel	8 (Town centre) 11 (Out of centre)	No	Yes	Gfa - 100sqm	38 36	1 sp per bedroom (1) + 1 sp per manager + 2 sp per 3 staff	(1) including staff rooms; (2) excluding staff rooms; (3)
B1	Office	23 (Wider area, out of town) 6 (Wider area, town centre) 10 (SE, out of town) 9 (SE, town centre)	Yes	Yes	Gfa - 100sqm	37 94 38 44	1 sp per 30 sqm	
	Light Industrial	5	No	No - Out of town only	Gfa - 100sqm	128	1 sp per 35 sqm	
B2	Industrial	4	No	No - Out of town only	Gfa - 100sqm	238	1 sp per 50 sqm	
D1	Cinema	3	No	No - Out of town only	Number of seats - 1	1 sp per 5 seats	1 sp per 3 seats	Friday Surveys Only
	Bowling Alley	3	No	No - Out of town only	Number of lanes - 1	1.5 spaces per lane	4 sp per lane	Saturday Surveys Only
	Leisure Centre	10	No	No - Out of town only	Gfa - 100sqm	56	1 sp per 15 sqm	Weekday Surveys Only

APPENDIX I – PARKING STRESS SURVEY GUIDANCE

PARKING SURVEY GUIDANCE NOTE

Note : this guidance is an abbreviated version of the guidance issued by Lambeth Council, in 2012 – see https://www.lambeth.gov.uk/sites/default/files/pl-PARKING_SURVEY_GUIDANCE_NOTE_Nov_2012_Update.pdf

1. INTRODUCTION

Most forms of development have the potential to increase the amount of on-street parking, more commonly known as parking stress. High parking stress can affect highway safety, the free-flow of traffic, amenity, access by emergency services, refuse collection and delivery of goods. Investigation of this impact forms an important part of the Council's analysis of proposed developments and therefore it is essential that enough information is submitted by a developer to allow a full analysis of the issue. An unacceptable increase in parking stress, or the submission of an insufficient level of information, can lead to a recommendation for refusal of a planning application.

2. UNDERTAKING A SURVEY

The following guidelines should be followed when undertaking a survey.

Residential Developments

The Council requires a parking survey to cover the area where residents of a proposed development may want to park. This generally covers an area of 200m (or an approximate 2 minute walk) around a site. For further detail see 'Extent of survey' below.

The survey should be undertaken when the highest number of residents are at home; generally late at night during the week. A snapshot survey between the hours of 0030-0530 should be undertaken on two separate 'neutral' weekday nights (Tuesday, Wednesday or Thursday).

Commercial Developments

Surveys for commercial developments should cover an area within 500m walking distance (or an approximate 5 minute walk) of a site. For further detail, see 'Extent of survey' below. Surveys should generally be done during proposed opening hours of the commercial development on an hourly beat basis.

Excluding the extent and time of the surveys the same principles apply as a survey for a residential development as set out below.

Survey times

For sites close to any of the following land uses, additional survey times may be necessary:

- Town centre locations: surveys should be undertaken Monday-Wednesday only.
- Regular specific evening uses close to the site (eg. church, etc): additional surveys should be undertaken when these uses are in operation.
- Commercial uses close to the site: morning and early evening surveys may also be required due to conflict with commuter parking. In these cases surveys between the hours of 0700-0830 and 1800-1900 may be required, noting the amount of parking on a 15-minute basis over this time.
- Railway stations/areas of commuter parking: additional morning and evening peak hour

surveys will be required in order to assess the impact of commuter parking. These should be done between 0700-0800 and 1730-1830.

Surveys ***should not*** be undertaken:

- in weeks that include Public Holidays and school holidays and it is advised that weeks preceding and following holidays should also be avoided;
- on or close to a date when a local event is taking place locally since this may impact the results of the survey.

In some cases, the hours of the survey may need to be extended or amended. Applicants should contact the Council prior to undertaking a survey if there is any doubt.

Extent of survey

All roads within 200 metres (or 500m for commercial uses) walking distance of the site. Note this area is **NOT** a circle with a 200/500m radius but a 200/500m walking distance as measured along all roads up to a point 200/500m from the site.

Since people are unlikely to stop half way along a road at an imaginary 200/500m line so the survey should be extended to the next junction or shortened to the previous one, or taken to a suitable location along a road.

The following areas should be *excluded* from surveys:

- If the site is in a CPZ any parking bays in an adjoining CPZ should be excluded.
- If the site lies adjacent to, but not in, a CPZ then all roads in that CPZ should be excluded.
- Areas that fall outside of Lambeth should be excluded.
- Places where drivers are unlikely to want to park, for example:
    - If there is no possibility of parking somewhere within the 200m boundary
    - If drivers would not wish to park in an area, due to perceived safety issues, or difficulty in accessing the parking for example.

Common sense should be applied in all cases and the extent of the survey area and justification for any amendments should be included in the survey. If inadequate justification is provided for a survey area then amendments may be required or a recommendation made accordingly.

Required Information

The following information should be included in the survey results, to be submitted to the Council:

- The date and time of the survey.
- A description of the area noting any significant land uses in the vicinity of the site that may affect parking within the survey area (eg. churches, restaurants, bars and clubs, train stations, hospitals, large offices, town centres etc).
- Any unusual observations, e.g. suspended parking bays, spaces out of use because of road works or presence of skips, etc.
- A drawing (preferably scaled at 1:1250) showing the site location and extent of the survey area. All other parking and waiting restrictions such as Double Yellow Lines and Double Red Lines, bus lay-bys, kerb build-outs, and crossovers (vehicular accesses) etc should also be shown on the plan.
- The number of cars parked on each road within the survey area on each night should be counted and recorded in a table as shown below. It would be helpful to note the approximate location of each car on the plan (marked with an X).

- Photographs of the parking conditions in the survey area can be provided to back-up the results. If submitted, the location of each photograph should be clearly marked.

Areas Within A Controlled Parking Zone (CPZ)

Only Resident Permit Holder (RPH) Bays and Shared Bays which allow residents parking (these may be shared with Pay-and-Display parking and/or Business Permit Holders) should be counted.

To calculate parking capacity each length of parking bay must be measured and then converted into parking spaces by dividing the length by 5 (each vehicle is assumed to measure 5m) and rounding down to the nearest whole number. For example a parking bay measuring 47m in length would provide 9 parking bays (47/5=9.4=9). The capacity of each separate parking bay must be calculated separately and then added together to give a total number of parking spaces for each road in the survey area.

The results should generally be presented in the following format (figures given as an example):

Street Name	Total Length (m) of parking spaces	No. of RPH parking spaces	No. of cars parked in RPH bays	RPH Parking Stress (%)
A Street	**350**	**70**	**70**	**100**
B Street	**250**	**50**	**40**	**80**
C Street	**150**	**30**	**10**	**33**
Total	**750**	**150**	**120**	**80**

A separate note should be made of any areas where cars can legally park overnight. These are generally Single Yellow Lines (SYL) or short term parking or Pay-and-Display bays (ST). The number of cars parked in these areas should be counted and presented separately.

Areas Not In A Controlled Parking Zone (CPZ)

All areas of unrestricted parking should be counted. To calculate parking capacity each length of road between obstructions (such as crossovers, kerb build-outs, yellow lines, etc) must be measured and then converted into parking spaces by dividing the length by 5 and rounding down to the nearest whole number. For example a length of road measuring 47m in length would provide 9 parking bays (47/5=9.4=9). The capacity of each section of road must be calculated separately and then added together to give a total number of parking spaces for each road in the survey area.

The distance between crossovers should be measured in units of 5m. For example, if the distance between 2 crossovers or a crossover and a junction is 12m then only 10m should be counted in the survey, and any space between crossovers measuring less than 5m should be discounted from the calculation. For reasons of highway safety, the first 5m from a junction should also be omitted from the calculation.

A map or plan showing the measurements used in calculating parking capacity should be supplied so that this can be verified by the Council. The parking survey may not be accepted if this is not supplied.

The results should generally be presented in the following format (figures given as an example):

Street Name	Total Length (m) of kerb space	Length of unrestricted parking (m)	No. of parking spaces	No. of cars parked on unrestricted length of road	Unrestricted Parking Stress (%)
A Street	**400**	**350**	**70**	**70**	**100**
B Street	**300**	**250**	**50**	**40**	**80**
C Street	**200**	**150**	**30**	**10**	**33**
Total	**900**	**750**	**150**	**120**	**80**

UNDERSTANDING THE RESULTS

The results of the parking survey will be analysed by the Council in accordance the Council's Local Plan, any Supplementary Planning Documents produced by the Council in relation to parking, and any other Transport policy guidance produced by the Council, Transport for London, or nationally.

The Council will also take into consideration the impact of any recently permitted schemes in determining the acceptability or not of each proposed development.

Note that stress levels of over 100% stress (or 100% occupancy level) are possible. This is because small cars may need less space than 5 metres to park, meaning that additional cars can be accommodated.

FURTHER ASSISTANCE

For further assistance or explanation please contact the Council's Planning team at the address below

APPENDIX J – SITE VISIT AND SURVEY SUMMARIES

Site audit- Aldi, London Road (Whiteleafe Road), Apsley

Date/Time: 1.30pm Friday 7th April 2017

Weather: Sunny

Uses: A1 food retail 1447sqm (Planning permission 4/01356/MFA)

	Number of existing spaces	Occupancy
Total number of existing car parking spaces	81	81
disabled spaces and occupancy	4	4
visitor parking spaces and occupancy	71	71
car sharing spaces and occupancy	0	0
electric charging spaces and occupancy	0	0
parent and child parking spaces and occupancy	6	6
permit holder spaces and occupancy	0	0
motorcycle spaces and occupancy	0	0

Parking	**Comments**
Structure of car parking e.g. underground, multi-storey, surface.	Surface
Headroom restriction	No
Is there lighting?	On Building
Is there CCTV?	Not observed
Ownership of car park	Private
Parking controls e.g. permits, secure car park, enforcement company etc.	1.5 hours maximum stay for us by customers only.
Parking costs and duration?	Free for the maximum stay
Opening times of car parking	Same as store as no barrier
How many reserved (management) parking spaces?	None observed, separate servicing and delivery area at rear of store from Whiteleaf Road
When is presumed to be the peak parking time?	It was extremely busy at time of visit but weekends could be busier
Are there controls on nearby streets?	Yes double yellow line Whiteleaf Road and London Road in vicinity of site
Does parking overspill onto nearby streets?	No due to restrictions
Is there a high demand and turnover for parking?	Yes 4 cars observed circling car park for spaces and waiting within circulation areas.
Are parking spaces marked with white lines and signed?	Yes
Highways and access	**Comments**
What road(s) serve the site	A4251 London Road to north, A414 Two Waters Road to east and Whiteleaf Road to west
Does the main entrance link with highway network?	Yes
Are there other entrances? If yes please give details	Separate servicing and delivery entrance
Is the parking shared between uses? If yes what uses.	N/A
Opening times of the use(s)	8am-10pm Monday to Saturday and 10am-4pm on Sunday
Are there specific operational issues? i.e. barrier, controls, gates.	No
Are there issues which impact on the highway network?	vehicles cause congestion at entrance as all vehicles access/egress to London Road and gradient of Whiteleafe Road. Parking spaces located directly at entrance with vehicles manoeuvring.
Public transport	**Comments**
Location of nearest stops/stations	Bus stops 160m to north on Two Waters Road servicing 500, 501, 502 and H19.
Pedestrian access	**Comments**
Is there a separate pedestrian entrance?	Bus stops on London Road 320m to the east of the site servicing 500, 501 and H19.
Are there conflicts between pedestrians & vehicles on the approach to the site and within the site?	No footway along access connects to Whiteleafe Road. Within site vehicles are circulating and waiting which

	impacts pedestrians. Vehicles also follow pedestrians to their vehicles.
Cycle Parking and Access	
How many cycle parking spaces are there? In separate areas?	5 stands for 10 cycle spaces external to building entrance. Only 1 bike observed parked.
Sheltered cycle parking?	No
Secure cycle parking?	Visible from entrance but not in a secure store only Sheffield stands

-	

- Three occupancy surveys carried out
  - 1.30pm Friday 7th April
  - 11.00am Saturday 20th May
  - 14:00pm Saturday 20th May
- Aldi is essentially fully occupied on all surveys,
- No overspill on street parking due to existing parking restrictions on London Road and Whiteleaf Road
- There were 3-5 vehicles observed circulating outside of bays on all surveys
- High turnover of vehicles
- Limited cycle parking use with only 1 bike observed on the Friday and Saturday within the cycle stands.
- The car parking meets with the parking standards of 1 space per 18sqm for A1 retail between 500-2500sqm.
- Disabled parking is provided at 5%
- The location of Aldi within accessibility zone 4 is not considered 'accessible'
- Bus route 500 is every 20 minutes but the nature of food retailing makes vehicle use more favourable.
- Although vehicles are circulating there does not appear to be any highway safety issues
- There would appear to be a shortfall of 2-4 spaces from the surveys

Survey Data

Aldi - Whiteleaf Road - Saturday 20th of May 2017							
Inventory		**Survey Time**					
		11:00			**14:00**		
Parking Type	Total Spaces	Occupancy	Free Spaces	Parking Stress	Occupancy	Free Spaces	Parking Stress
Cycle	-	0	-	-	1	-	-
Motorcycle	-	0	-	-	0	-	-
Disabled	4	4	0	100%	3	1	75%
Out of Bay	-	5	-	-	3	-	-
Parent & Child	6	6	0	100%	6	0	100%
Standard	71	70	1	99%	71	0	100%
Totals	**81**	**85**	**-4**	**105%**	**83**	**-2**	**102%**

Summary

Site audit

Site: Apsley Lock, Stationers Place, Apsley (off London Road)

Date/Time: 1.30pm Thursday 25th May 2017

Weather: Sunny

Uses: Mixed use – Holiday Inn (116 rooms), The Papermill Restaurant 560sqm, 54 flats. (Site B from planning permission 04/01731/99/OUT)
Accessibility area – 3

	Number of existing spaces	Occupancy
Total number of existing car parking spaces	Total = 296 64 spaces for The Papermill restaurant 43 spaces for Hotel (hotel users can use shared use overspill spaces) 124 residential spaces 65 shared use spaces (PSP spaces)	Total = 178 vehicles parked 54 vehicles at The Papermill restaurant 23 vehicles parked for Hotel 59 vehicles parked in shared use spaces 42 vehicles parked in Residential spaces
disabled spaces and occupancy	6 disabled spaces at Hotel 2 disabled spaces shared use	3 vehicles parked hotel 1 vehicle parked shared use
car sharing spaces and occupancy	0	0
electric charging spaces and occupancy	0	0
parent and child parking spaces and occupancy	0	0
motorcycle spaces and occupancy	0	0

Parking	**Comments**
Structure of car parking e.g. underground, multi-storey, surface.	Surface
Headroom restriction	Yes for residential in the undercroft 42 car parking spaces. Headroom 2.0m. No headroom restriction for remaining parking spaces within development.
Is there lighting?	Yes
Is there CCTV?	Yes
Ownership of car park	Private
Parking controls e.g. permits, secure car park, enforcement company etc.	Barrier into Hotel/residential car parking area and into The Papermill car parking area. There are 12 shared use spaces fronting the Grand Union Canal which are outside of the barrier control. Manager at The Holiday Inn informed that new barriers were being installed to prevent unauthorised parking outside of the shared use times. Vehicles need to be registered with The Holiday Inn.
Parking costs and duration?	Free. Controls on The Papermill Car park customers allowed to park for up to 4 hours and visitors 1 hour.
Opening times of car parking	Residential and hotel 24/7. The Papermill car park open 10am-11am Monday to Sunday (up to midnight on Sat).
How many reserved (management) parking spaces?	None
When is presumed to be the peak parking time?	Evening and overnight
Are there controls on nearby streets?	Yes double yellow lines on Stationers Place and London Road.
Does parking overspill onto nearby streets?	No
Is there a high demand and turnover for parking?	Yes at The Papermill
Are parking spaces marked with white lines and signed?	Yes
Highways and access	**Comments**
What road(s) serve the site	Stationers Place and London Road
Does the main entrance link with highway network?	Yes at a signal controlled junction onto London Road with crossing facilities.
Are there other entrances? If yes please give details	No
Is the parking shared between uses? If yes what uses.	Yes
Public transport	**Comments**
Location of nearest stops/stations	London Road opposite Stationers Place servicing routes 500, 501 and H19.
Pedestrian access	**Comments**
Is there a separate pedestrian entrance?	No footways on both sides of Stationers Place.

Are there conflicts between pedestrians & vehicles on the approach to the site and within the site?	Not observed although no separate pedestrian marked footways within car parking areas.
Cycle Parking and Access	
How many cycle parking spaces are there? In separate areas?	18 cycle parking spaces (9 sheffield stands) for visitors at the marina. None observed parked. No provision observed for restaurant, hotel or residential but could be internal.
Sheltered cycle parking?	For restaurant, hotel and residential it would be internal if they have provision. Not for visitors.
Secure cycle parking?	For restaurant, hotel and residential it would be internal if they have provision. Not for visitors.

SUMMARY

Holiday Inn (116 rooms) - standard 117 spaces + - provided 43 spaces
Restaurant 560sqm, 56 spaces provided – standard approx. 56+ staff spaces
54 flats – 124 spaces provided – standard approx. 81 spaces assuming all 2-beds
65 shared spaces .
Total = 296 spaces provided

Surveys indicate:

- Hotel spaces at capacity overnight
- Restaurant peaks at approx. 50% capacity
- Shared spaces at capacity overnight, residential 76%
- Total spaces provided appear to be some 30-35 spaces higher than the standard
- Overall hotel, residential and shared space s within capacity

Apsley Lock																	
Inventory			**Tuesday 6th of June 2017**			**Wednesday 7th of June 2017**			**Saturday 10th of June 2017**								
			00:30 - 05:30			**00:30 - 05:30**			**00:30 - 05:30**			**11:00**			**19:00**		
Parking Area	Parking Type	Total Spaces	Occupancy	Free Spaces	Parking Stress	Occupancy	Free Spaces	Parking Stress	Occupancy	Free Spaces	Parking Stress	Occupancy	Free Spaces	Parking Stress	Occupancy	Free Spaces	Parking Stress
Paper Mill	Disabled	3	0	3	0%	1	2	33%	1	2	33%	1	2	33%	1	2	33%
	Standard	61	9	52	15%	9	52	15%	10	51	16%	14	47	23%	32	29	52%
Hotel Only	Disabled	6	3	3	50%	5	1	83%	5	1	83%	3	3	50%	4	2	67%
	Keep Clear	-	0	-	-	0	-	-	0	-	-	1	-	-	0	-	-
	Standard	41	40	1	98%	39	2	95%	41	0	100%	17	24	41%	35	6	85%
Residential & Shared	Disabled (PSP)	2	2	0	100%	2	0	100%	1	1	50%	2	0	100%	1	1	50%
	PSP (Shared)	63	60	3	95%	60	3	95%	57	6	90%	33	30	52%	41	22	65%
	Residential	123	94	29	76%	88	35	72%	72	51	59%	57	66	46%	51	72	41%
Access Road	Double Yellow		0	-	-	7	-	-	2	-	-	0	-	-	0	-	-
	Total	**299**	**208**	**91**	**70%**	**204**	**95**	**68%**	**187**	**112**	**63%**	**128**	**171**	**43%**	**165**	**134**	**55%**

Site audit

Site: Apsley Marina, Belswains Lane, Apsley

Date/Time: 11.48am Thursday 25th May 2017

Weather: Sunny

Uses: 417 residential dwellings (14 x 1, 175 x 2, 101 x 3, 61 x 4). 118 private houses, 233 private flats. Affordable element 16%- 54 housing association houses and 12 shared equity units. 675sqm commercial/retail/restaurant use ancillary to canal basin use which has 35 canal boat moorings maintained by Canal and River Trust. (Site A from planning permission 04/01731/99/OUT)

	Number of existing spaces	Occupancy
Total number of existing car parking spaces	558 formal spaces in on street bays, car parking areas and garages.	Total= 253 vehicles. 192 vehicles formal spaces 61 parking informally
disabled spaces and occupancy	7	0
visitor parking spaces and occupancy (berth parking spaces)	225 spaces allowing shared use resi and visitor parking 9am-5pm 7 days a week of which 31 are specific berth parking spaces	Total = 112 7 in berth parking spaces 105 in shared use spaces
car sharing spaces and occupancy	0	0
electric charging spaces and occupancy	0	0
parent and child parking spaces and occupancy	0	0
Resident only spaces and occupancy	Residential only spaces 333	141 parked in residential only spaces
motorcycle spaces and occupancy	20	2

Parking	**Comments**
Structure of car parking e.g. underground, multi-storey, surface.	Surface – driveways, on street bays, parking bays and garages
Headroom restriction	5.5m headroom into main marina area
Is there lighting?	Yes along roads
Is there CCTV?	None visible
Ownership of car park	Internal roads adopted so on street bays managed by DBC. Private car parks maintained by UKPC parking management company in private ownership.
Parking controls e.g. permits, secure car park, enforcement company etc.	UKPC parking management company manages the shared use parking areas around the marina. Visitor parking is allowed 9am-5pm.
Parking costs and duration?	Free
Opening times of car parking	24/7
When is presumed to be the peak parking time?	Evening and overnight.
Are there controls on nearby streets?	Not on the roads within the development.
Does parking overspill onto nearby streets?	Yes internally. Informal parking observed with 61 vehicles parked on street and not within marked bays.
Is there a high demand and turnover for parking?	Not observed.
Are parking spaces marked with white lines and signed?	In car parking areas, yes not within the on street bays.

Highways and access	**Comments**
What road(s) serve the site	Internal roads Dickensons Quay, Stephenson Wharf, Evam Wharf, Mulready Walk, Imperial Way all accessed from Belswains Lane.
Does the main entrance link with highway network?	Dickensons Quay at a mini roundabout junction links to Belswains Lane and is the main entrance. The internal roads are adopted highway.
Are there other entrances? If yes please give details	Mulready Walk also links onto Belswains Lane at priority junction.
Is the parking shared between uses? If yes what uses.	Yes 225 parking spaces are shared use with visitors allowed to park 9am-5pm 7 days a week.
Opening times of the use(s)	Marina Spice Lounge opens 5.30pm-10.30pm. 7 days a week Head to Toe Hair and Beauty 9.30-5pm. Tues- Sat Woodys café bar 10am-9pm (10-4pm Mon & Sun) Calzone Essential Pizza 11am-10.30pm 7 days a week Premier Newsagents 8am-8pm 7 days a week
Are there issues which impact on the highway network?	On street, informal parking around development

Public transport	**Comments**
Location of nearest stops/stations	Belswains Lane opposite Mulready Walk junction serves buses 2, 318, 501 and 824.

Pedestrian access	Comments
Is there a separate pedestrian entrance?	Yes separate segregated pedestrian accesses onto Belswains Lane from Imperial Way, Evans Wharf and Stephensons Wharf. Segregated pedestrian access from Belswains Lane to Nash Mills Wharf along south-west boundary. Segregated cycle/footway along the main internal road network.
Are there conflicts between pedestrians & vehicles on the approach to the site and within the site?	No
Cycle Parking and Access	
How many cycle parking spaces are there? In separate areas?	12 visitor cycle parking spaces to south-east of site on Stephensons Wharf. 12 visitor car parking spaces on Dickensons Wharf opposite the Premier Newsagents. Motorcycles observed parked in this area. Only 1 bicycle observed parked in the visitor cycle parking.
Sheltered cycle parking?	Not for visitors. Residential cycle parking is internal.
Secure cycle parking?	For residential yes but not for visitors.

SUMMARY
417 residential dwellings
14 1-bed – 17.5 spaces max
175 2-bed – 262.5 spaces
101 3-bed – 227.25 spaces
61 4-bed – 183 spaces
Total max provision – 690.25
Actual provision – 558 spaces
Various other uses provided within total eg. marina parking, some shared spaces

Surveys indicate approx.. 100% occupancy overnight, 70-86% during day

Some obstructive/unsafe parking – indications are that parking provision was too low.

Apsley Marina																
Inventory			**Tuesday 6th of June 2017**			**Wednesday 7th of June 2017**			**Saturday 10th of June 2017**							
			00:30 - 05:30			**00:30 - 05:30**			**00:30 - 05:30**			**11:00**			**19:00**	
Parking Area	Parking Type	Total Spaces	Occupancy	Free Spaces	Parking Stress	Occupancy	Free Spaces	Parking Stress	Occupancy	Free Spaces	Parking Stress	Occupancy	Free Spaces	Parking Stress	Occupancy	Free Space
Crown Walk	Double Yellow	-	0	-	-	0	-	-	0	-	-	0	-	-	0	
	Driveway/Garage	14	7	7	50%	8	6	57%	9	5	64%	8	6	57%	9	
	On-Street	10	8	2	80%	7	3	70%	10	0	100%	6	4	60%	10	
	Unmarked Bay	16	13	3	81%	14	2	88%	12	4	75%	6	10	38%	10	
Dickinson Quay	BWML Bay	20	15	5	75%	17	3	85%	15	5	75%	12	8	60%	12	
	Double Yellow	-	0	-	-	0	-	-	0	-	-	0	-	-	1	
	Out-of-Bay/Pavement/Other	-	2	-	-	0	-	-	0	-	-	0	-	-	1	
	Permit (Marked)	111	110	1	99%	110	1	99%	106	5	95%	90	21	81%	92	
	Unmarked Bay	10	10	0	100%	10	0	100%	9	1	90%	8	2	80%	9	
	Visitor	3	3	0	100%	3	0	100%	2	1	67%	2	1	67%	3	
Evans Wharf	Double Yellow	-	0	-	-	0	-	-	0	-	-	0	-	-	0	
	Driveway/Garage	3	3	0	100%	4	-1	133%	5	-2	167%	4	-1	133%	4	
	Permit (Marked)	87	75	12	86%	77	10	89%	73	14	84%	51	36	59%	62	
	On-Street	17	15	2	88%	15	2	88%	16	1	94%	12	5	71%	16	
	Out-of-Bay/Pavement/Other	-	7	-	-	7	-	-	7	-	-	1	-	-	7	
	Unmarked Bay	10	10	0	100%	8	2	80%	10	0	100%	9	1	90%	10	
Imperial Wharf	Double Yellow	-	0	-	-	0	-	-	0	-	-	0	-	-	0	
	Disabled	5	1	4	20%	3	2	60%	2	3	40%	2	3	40%	0	
	Driveway/Garage	15	18	-3	120%	17	-2	113%	20	-5	133%	11	4	73%	13	
	On-Street	9	13	-4	144%	10	-1	111%	13	-4	144%	13	-4	144%	13	
	Out-of-Bay/Pavement/Other	-	14	-	-	12	-	-	14	-	-	10	-	-	15	
	Permit (Marked)	47	43	4	91%	43	4	91%	36	11	77%	25	22	53%	31	
Minoan Drive	Double Yellow	-	0	-	-	0	-	-	0	-	-	0	-	-	0	
	Disabled	2	0	2	0%	0	2	0%	0	2	0%	0	2	0%	0	
	Driveway/Garage	8	7	1	88%	7	1	88%	6	2	75%	6	2	75%	7	
	Out-of-Bay/Pavement/Other	-	11	-	-	12	-	-	12	-	-	6	-	-	8	
	Permit (Marked)	12	7	5	58%	7	5	58%	6	6	50%	7	5	58%	6	
	Visitor	9	0	9	0%	0	9	0%	0	9	0%	1	8	11%	2	
Mulready Walk	Driveway/Garage	4	3	1	75%	3	1	75%	3	1	75%	2	2	50%	3	
	Double Yellow	-	0	-	-	0	-	-	0	-	-	0	-	-	0	
	Permit (Marked)	14	9	5	64%	9	5	64%	9	5	64%	5	9	36%	9	
	On-Street	18	19	-1	106%	20	-2	111%	20	-2	111%	13	5	72%	19	
	Unmarked Bay	21	12	9	57%	11	10	52%	8	13	38%	9	12	43%	9	
Stephenson Wharf	Double Yellow	-	0	-	-	0	-	-	0	-	-	0	-	-	1	
	Disabled	3	1	2	33%	2	1	67%	2	1	67%	1	2	33%	2	
	On-Street	14	13	1	93%	13	1	93%	12	2	86%	8	6	57%	13	
	Out-of-Bay/Pavement/Other	-	15	-	-	15	-	-	13	-	-	8	-	-	13	
	Permit (Marked)	78	76	2	97%	75	3	96%	63	15	81%	49	29	63%	62	
	Unmarked Bay	13	13	0	100%	13	0	100%	13	0	100%	10	3	77%	13	
Totals	**BWML Bay**	**20**	**15**	**5**	**75%**	**17**	**3**	**85%**	**15**	**5**	**75%**	**12**	**8**	**60%**	**12**	
	Disabled	**10**	**2**	**8**	**20%**	**5**	**5**	**50%**	**4**	**6**	**40%**	**3**	**7**	**30%**	**2**	
	Double Yellow	**-**	**0**	**-**	**-**	**0**	**-**	**-**	**0**	**-**	**-**	**0**	**-**	**-**	**2**	
	Driveway/Garage	**30**	**31**	**-1**	**103%**	**31**	**-1**	**103%**	**34**	**-4**	**113%**	**23**	**7**	**77%**	**27**	
	On-Street	**58**	**60**	**-2**	**103%**	**58**	**0**	**100%**	**61**	**-3**	**105%**	**46**	**12**	**79%**	**61**	
	Out-of-Bay/Pavement/Other	**-**	**49**	**-**	**-**	**46**	**-**	**-**	**46**	**-**	**-**	**25**	**-**	**-**	**44**	
	Permit (Marked)	**349**	**320**	**29**	**92%**	**321**	**28**	**92%**	**293**	**56**	**84%**	**227**	**122**	**65%**	**262**	
	Unmarked Bay	**54**	**45**	**9**	**83%**	**42**	**12**	**78%**	**40**	**14**	**74%**	**36**	**18**	**67%**	**41**	
	Visitor	**12**	**3**	**9**	**25%**	**3**	**9**	**25%**	**2**	**10**	**17%**	**3**	**9**	**25%**	**5**	
	Total	**533**	**525**	**8**	**98%**	**523**	**10**	**98%**	**495**	**38**	**93%**	**375**	**158**	**70%**	**456**	

Site audit

Site: Castlemill, Lower Kings Road, Berkhamsted

Date/Time: 2.00pm Thursday 25th May 2017

Weather: Sunny

Uses: C3 Residential 15 x 2 bedroom apartments, 112sqm B1 Office (PP 4/00272/05/FUL)
Accessibility zone: 3

	Number of existing spaces	Occupancy
Total number of existing car parking spaces	20	10
disabled spaces and occupancy	0	0
visitor parking spaces and occupancy	0	0
car sharing spaces and occupancy	0	0
electric charging spaces and occupancy	0	0
permit holder spaces and occupancy	0	0
motorcycle spaces and occupancy	0	0

Parking	**Comments**
Structure of car parking e.g. underground, multi-storey, surface.	Lower ground floor surface
Headroom restriction	Yes 2.4m height in undercroft
Is there lighting?	Yes
Is there CCTV?	No
Ownership of car park	Private
Parking controls e.g. permits, secure car park, enforcement company etc.	Barrier access
When is presumed to be the peak parking time?	Overnight and evening
Are there controls on nearby streets?	Yes single yellow line Lower Kings Road Monday to Saturday 8.30-6.30pm.
Does parking overspill onto nearby streets?	None observed
Is there a high demand and turnover for parking?	No
Are parking spaces marked with white lines and signed?	Yes
Highways and access	**Comments**
What road(s) serve the site	Lower Kings Road
Does the main entrance link with highway network?	Yes ramp access but visibility onto Lower Kings Road is poor and does not meet standards.
Are there other entrances? If yes please give details	Main residential entrance into building
Public transport	**Comments**
Location of nearest stops/stations	100m to the north-east of the site with bus stop servicing routes 354, 354a and 532. Berkhamsted railway station is 100m to north east.
Pedestrian access	**Comments**
Is there a separate pedestrian entrance?	Yes main residential entrance into building directly from Lower Kings Road
Are there conflicts between pedestrians & vehicles on the approach to the site and within the site?	Ramp to car park would be steep for cyclists and pedestrians.
Cycle Parking and Access	
How many cycle parking spaces are there? In separate areas?	15 cycle parking spaces in store so the occupancy was not visible
Sheltered cycle parking?	Yes
Secure cycle parking?	Yes

S

Summary

Accessibility zone 3
Max standard 1.5* 15 2 -beds = 22.5
Office use 112 sq.m. 4 spaces max, 50-75% permitted zone 3 ie 2-3 spaces
Total maximum 26.5 spaces, range 24.5-25.5 – 20 spaces provided
No surveyed capacity issues

Castlemill, Lower Kings Road, Berkhamsted							
Inventory		**Tuesday 6th of June 2017**			**Wednesday 7th June 2017**		
		00:30 - 05:30			**00:30 - 05:30**		
Parking Type	Total Spaces	Occupancy	Free Spaces	Parking Stress	Occupancy	Free Spaces	Parking Stress
Standard	20	13	7	65%	13	7	65%

Site audit

Site: Dixons Wharf, Wilstone

Date/Time: 3.00pm Thursday 25th May 2017

Weather: Sunny

Uses: C3 Residential 21 dwellings (7 affordable 4 x 3 and 3 x 2 and 14 6 x 3 and 8 x 4 private) 3 x 2 bed apartments, 10 x 3 bed houses and 8 x 4 bed houses. (PP 4/01533/12/MFA)
Accessibility zone 4

	Number of existing spaces	Occupancy
Total number of existing car parking spaces	47 in addition a minibus space to take residents places as per travel plan.	12 vehicles parked in formal spaces 2 vehicles parked informally 1 caravan parked within a formal space 1 delivery lorry parked along internal road Minibus not observed on site.
disabled spaces and occupancy	0	
visitor parking spaces and occupancy	0	
car sharing spaces and occupancy	0	
electric charging spaces and occupancy	0	
motorcycle spaces and occupancy	0	

Parking	**Comments**
Structure of car parking e.g. underground, multi-storey, surface.	Surface
Headroom restriction	No
Is there lighting?	On houses
Is there CCTV?	No
Ownership of car park	Private
Parking controls e.g. permits, secure car park, enforcement company etc.	Gated development but gates open on access and egress and no intercom or security system
When is presumed to be the peak parking time?	Overnight and evening
Are there controls on nearby streets?	No as rural location and nearby Wingrave Road is a country lane
Does parking overspill onto nearby streets?	2 vehicles parked informally within development.
Is there a high demand and turnover for parking?	Not observed during site audit
Are parking spaces marked with white lines and signed?	Yes
Highways and access	**Comments**
What road(s) serve the site	Wingrave Road
Does the main entrance link with highway network?	Yes but internal road network not adopted
Are there other entrances? If yes please give details	No
Public transport	**Comments**
Location of nearest stops/stations	Nearest bus stop in Wilstone Village approximately 1000m to south of site following the existing public footpath 29 to Wilstone Village. Bus stop serves routes 167 and 207.
Pedestrian access	**Comments**
Is there a separate pedestrian entrance?	No
Are there conflicts between pedestrians & vehicles on the approach to the site and within the site?	No separate footway shard surface development
Cycle Parking and Access	
How many cycle parking spaces are there? In separate areas?	In garages and sheds of dwellings so not visible
Sheltered cycle parking?	Yes
Secure cycle parking?	Yes




Summary

C3 Residential 21 dwellings (7 affordable 4 x 3 and 3 x 2 and 14 6 x 3 and 8 x 4 private)
3 x 2 bed apartments – 4.5 spaces
10 x 3 bed houses- 22.5 spaces
8 x 4 bed houses. – 24 spaces
Total maximum 51 spaces – 40 provided
90% occupied overnight, approx. 88% occupied daytime
Provision appears appropriate, although few spare spaces, slightly higher provision probably desirable.

Dixon's Wharf, Wilstone							
Inventory		**Tuesday 6th of June 2017**			**Wednesday 7th June 2017**		
		00:30 - 05:30			**00:30 - 05:30**		
Parking Type	Total Spaces	Occupancy	Free Spaces	Parking Stress	Occupancy	Free Spaces	Parking Stress
Standard[1] Bays	40	31	9	78%	31	9	78%
Out-of-Bay	-	5	-	-	4	-	-
Totals	**40**	**36**	**4**	**90%**	**35**	**5**	**88%**

Site audit

Site: EBB Depot, Whiteleaf Road, Hemel

Date/Time: 1.50pm Thursday 25th May 2017

Weather: Sunny

Uses: 10,381sqm mixed B2/B8 uses (pp 4/01367/06/FUL)

Accessibility zone 4

	Number of existing spaces	Occupancy
Total number of existing car parking spaces	190	73 vehicles parked formally in northern part of site and 10 parked informally 53 parked formally in southern part of site and 13 parked informally.
disabled spaces and occupancy	Including 36	4
electric charging spaces and occupancy	0	0
motorcycle spaces and occupancy	0	0

Parking	**Comments**
Structure of car parking e.g. underground, multi-storey, surface.	Surface
Headroom restriction	No
Is there lighting?	On building units
Is there CCTV?	None visible
Ownership of car park	Private
Parking controls e.g. permits, secure car park, enforcement company etc.	None visible – parking for individual units
Parking costs and duration?	Free
Opening times of car parking	Opening times of units but sites are not secured
When is presumed to be the peak parking time?	During the weekday daytime
Are there controls on nearby streets?	Yes double yellow lines on Whiteleaf Road
Does parking overspill onto nearby streets?	None observed
Is there a high demand and turnover for parking?	None observed
Are parking spaces marked with white lines and signed?	Yes
Highways and access	**Comments**
What road(s) serve the site	Whiteleaf Road
Does the main entrance link with highway network?	Yes
Are there other entrances? If yes please give details	No
Is the parking shared between uses? If yes what uses.	Individual units have their own separate parking marked areas
Opening times of the use(s)	Most units 9.00am-5.30pm
Public transport	**Comments**
Location of nearest stops/stations	Bus stops 200m to north on Two Waters Road servicing 500, 501, 502 and H19.
Pedestrian access	**Comments**
Is there a separate pedestrian entrance?	No
Are there conflicts between pedestrians & vehicles on the approach to the site and within the site?	No separate footways but unlikely to be significant pedestrians visiting the site due to the nature of the uses.
Cycle Parking and Access	

SUMMARY

126 vehicles parked formally during day, 23 parked informally – total 149 cars
Max standards - 1 space per 50 sq,m B2, 1 spaced per 75 sq.m. B8 for 10381 sq.m. range is 138 to 208.
Actual demand appears closer to B8 standard, just higher if all assumed to be B8, but not enough marked spaces.

Site audit

Site: Image, Leighton Buzzard Road, Hemel

Date/Time: 10:45am Thursday 25th May 2017

Weather: Sunny

Uses: 6983sqm Office B1, 1631sqm retail and 434 residential units (including 82 affordable) 208 x 1 bed and 240 x 2 bed.

	Number of existing spaces	Occupancy
Total number of existing car parking spaces	341 residential 22 office spaces 5 retail spaces 2 car club spaces	See survey results later
disabled spaces and occupancy	26	
car sharing spaces and occupancy	0	
electric charging spaces and occupancy	0	
permit holder spaces and occupancy	61	
motorcycle spaces and occupancy	54	

Parking	**Comments**
Structure of car parking e.g. underground, multi-storey, surface.	Lower and Upper ground internal car park
Headroom restriction	Yes approx. 2.4m
Is there lighting?	Yes
Is there CCTV?	No
Ownership of car park	Private
Parking controls e.g. permits, secure car park, enforcement company etc.	Gated secure car park and parking management company enforces permit controls
How many reserved (management) parking spaces?	1
When is presumed to be the peak parking time?	Overnight and evening (potentially daytime for office peak)
Are there controls on nearby streets?	Yes double yellow lines
Does parking overspill onto nearby streets?	None observed
Is there a high demand and turnover for parking?	None observed from use of vehicular access
Are parking spaces marked with white lines and signed?	Yes
Highways and access	**Comments**
What road(s) serve the site	Leighton Buzzard Road
Does the main entrance link with highway network?	Yes at a signal controlled junction
Are there other entrances? If yes please give details	Separate pedestrian entrance
Is the parking shared between uses? If yes what uses.	An additional 41 office permits on top of the 22 dedicated spaces are issued so 41 office worker vehicles can park within the 341 resi spaces between 9am-5pm.
Opening times of the use(s)	24/7
Public transport	**Comments**
Location of nearest stops/stations	Riverside Stop opposite development serves bus routes 3, 4, 46, 51, 207, 320, 352, 500, 501, 730, 502, H10 and H11
Pedestrian access	**Comments**
Is there a separate pedestrian entrance?	Yes and footbridge from development over Leighton Buzzard Road to Riverside
Are there conflicts between pedestrians & vehicles on the approach to the site and within the site?	None observed
Cycle Parking and Access	
How many cycle parking spaces are there? In separate areas?	361 cycle parking spaces
Sheltered cycle parking?	Yes
Secure cycle parking?	Yes

Summary
Zone 1
6983sqm Office B1- standard 0-58 spaces
1631sqm retail standard not available
208 x 1 bed – 208 spaces
240 x 2 bed – 360 spaces

Total provision 380 – far lower than max standard.
However parking surveys do not indicate excess of demand over supply – circa 70% full overnight, 40% daytime
Owner applied for planning permission for more spaces on a adjacent site, to offset alleged shortfalls in the original development and concerns being expressed by residents, in particular AH residents. The scheme is still less than 1 to 1 ratio but it indicates the pressure to provide parking even in accessible locations.

Inventory			Tuesday 6th of June 2017						Wednesday 7th of June 2017					
			00:30 - 05:30			11:00			00:30 - 05:30			11:00		
Parking Area	Parking Type	Total Spaces	Occupancy	Free Spaces	Parking Stress	Occupancy	Free Spaces	Parking Stress	Occupancy	Free Spaces	Parking Stress	Occupancy	Free Spaces	Parking Stress
Lower Level	Disabled	9	8	1	89%	4	5	44%	7	2	78%	5	4	56%
	Permit	200	149	51	75%	66	134	33%	144	56	72%	73	127	37%
Upper Level	Disabled	13	8	5	62%	6	7	46%	11	2	85%	5	8	38%
	Permit	132	78	54	59%	55	77	42%	77	55	58%	55	77	42%
External Parking	Disabled	1	0	1	0%	0	1	0%	0	1	0%	0	1	0%
	Out-of-Bay	-	2	-	-	5	-	-	3	-	-	6	-	-
	Permit	19	7	12	37%	7	12	37%	8	11	42%	7	12	37%
	Reserved	6	1	5	17%	6	0	100%	1	5	17%	6	0	100%
	Service Area	-	2	-	-	7	-	-	2	-	-	7	-	-
Totals	**Disabled**	**23**	**16**	**7**	**70%**	**10**	**13**	**43%**	**18**	**5**	**78%**	**10**	**13**	**43%**
	Out-of-Bay	**-**	**2**	**-**	**-**	**5**	**-**	**-**	**3**	**-**	**-**	**6**	**-**	**-**
	Permit	**351**	**234**	**117**	**67%**	**128**	**223**	**36%**	**229**	**122**	**65%**	**135**	**216**	**38%**
	Reserved	**6**	**1**	**5**	**17%**	**6**	**0**	**100%**	**1**	**5**	**17%**	**6**	**0**	**100%**
	Service Area	**-**	**2**	**-**	**-**	**7**	**-**	**-**	**2**	**-**	**-**	**7**	**-**	**-**

Site audit

Site: Jarman Park Leisure Uses

Date/Time: 11.40am Friday 5th April 2017

Weather: Cloudy

Uses: Mixed use leisure and restaurants
Empire 17 screens (1788 seats), 3320sqm A3/A5 uses, 5345sqm of D2 leisure
XC Sports 4/01533/09/MFA
Jarman Square 4/02252/11/MFA

Jarman Park Leisure uses (and XP Leisure facility)	Number of existing spaces	Occupancy
Total number of existing car parking spaces	975	119
disabled spaces and occupancy (included)	47	5
visitor parking spaces and occupancy (included)	12 drop off area (45 proposed to be used by XC Sports under their PP but not signed spaces)	119
car sharing spaces and occupancy	0	0
electric charging spaces and occupancy	0	0
parent and child parking spaces and occupancy	0	0
permit holder spaces and occupancy	0	0
motorcycle spaces and occupancy	0	0

Parking	**Comments**
Structure of car parking e.g. underground, multi-storey, surface.	Surface
Headroom restriction	No
Is there lighting?	Yes
Is there CCTV?	None visible
Ownership of car park	Private
Parking controls e.g. permits, secure car park, enforcement company etc.	Leisure no restrictions visible although barrier at entrance and exit with one way system operation around car parking
Parking costs and duration?	Free no charges or minimum/maximum stay
Opening times of car parking	Presumed to be opening times of leisure uses/restaurants
When is presumed to be the peak parking time?	Weekends and evenings
Are there controls on nearby streets?	Double yellow lines around Jarman Way one way system
Does parking overspill onto nearby streets?	None visible
Is there a high demand and turnover for parking?	Not at time of site visit
Are parking spaces marked with white lines and signed?	Yes
Highways and access	**Comments**
What road(s) serve the site	Jarman Way and the A414
Does the main entrance link with highway network?	Yes
Are there other entrances? If yes please give details	No just from main roundabout entrance with A414
Is the parking shared between uses? If yes what uses. Opening Times and size	Yes Cineworld 9am unit 12 (17 screens) 1788 seats- 10pm Mon-Thurs and 9am-midnight Fri and Sat Planet Ice (Ice Skating) unit 11 1541sqm– 10am-9pm Subway unit 1a – 117sqm – 7am-10pm Hungry Horse- unit 2 – 651sqm -10am-11pm The Gym unit 3 – 1379sqm – 24 hours Chiquito's unit 4- 373sqm - 9am-11pm Bella Italia unit 5- 506sqm - 11.30am-11pm XP Leisure facility (2425sqm) 10am-10pm Coast to Coast unit 6/7- 518sqm – 7am-11pm Nandos unit 8 -351sqm- 11am-11pm Frankie and Benny's unit 9 – 373sqm - 9am-11pm Prezzo 354 sqm 12pm-11.30pm Starbucks unit 10- 77sqm -7am-7.30pm

Are there specific operational issues? i.e. barrier, controls, gates.	Yes barriers into and out of car park and melba blocks.
Public transport	**Comments**
Location of nearest stops/stations	Jarman Way bus stops 50m from leisure uses Bus route 101 (every 20 mins)
Pedestrian access	**Comments**
Is there a separate pedestrian entrance?	Crossings and pedestrian entrances and routes through Jarman Park are provided and around car parking areas
Are there conflicts between pedestrians & vehicles on the approach to the site and within the site?	None visible although vehicles do travel around Jarman Way at speed
Cycle Parking and Access	
How many cycle parking spaces are there? In separate areas?	18 cycle parking spaces leisure uses- 3 used 32 cycle parking spaces XC Sports – 2 used
Sheltered cycle parking?	Under overhang of building sheffield stands
Secure cycle parking?	No

Site Survey

Leisure Uses - Jarman Park - Saturday 20th of May 2017							
Inventory		**Survey Time**					
		13:00			**19:30**		
Parking Type	Total Spaces	Occupancy	Free Spaces	Parking Stress	Occupancy	Free Spaces	Parking Stress
Disabled	47	13	34	28%	17	30	36%
Drop-Off/Pick-Up	12	8	4	67%	5	7	42%
Out of Bay	-	0	-	-	0	-	-
Standard (Available)	900	251	649	28%	572	328	64%
Unavailable (Works)	12	12	0	100%	12	0	100%
Yellow Hatching	4	0	4	0%	0	4	0%
Totals	**975**	**263**	**712**	**27%**	**584**	**391**	**60%**

Summary

- Three occupancy surveys have been carried out;
  - 11:40am Friday 5th April 12% occupancy
  - 13:00pm Saturday 20th May 27%
  - 19:30pm Saturday 20th May 60%

- The site has shared uses D2 leisure/A3 restaurants.
- The parking standards allow for A1 - 1 space per 15sqm (more than 2500sqm), A3 1 space per 5sqm plus 3 spaces per 4 staff, leisure parks to be decided on merits. Cinema 1 space per 3 seats. Leisure parks where uses unknown 1 space per 15sqm. Based on the uses the site could have 596 spaces for the cinema and 357 spaces for A3 with leisure being assessed on its merits. The parking is therefore below the maximum standards.
- The site is within accessibility zone 4.
- At peak trading for all uses in the evenings the site is only 60% occupied.
- The site has bus stops internally with buses every 20 minutes.
- The number of parking spaces could be considered excessive for the uses given the shared parking for such a large site with potentially many customers using more than one use.
- An internalisation factor could therefore be applied to large mixed-use leisure schemes.
- The parking was originally proposed with a swimming pool (leisure uses) at Jarman Park whereas now the uses are mainly A3 focused. The change in nature of the uses at the site would have an impact on the historical agreement of the parking from the original 1995 planning permission.

Site audit- Jarman Park McDonalds

Date/Time: 12.00pm Friday 5th May 2017

Weather: Cloudy

Uses: A3 Food restaurant and drive thru 328sqm

Jarman Park McDonalds	Number of existing spaces	Occupancy
Total number of existing car parking spaces (+ 2 grill bays)	36	29
disabled spaces and occupancy (included)	2	2
visitor parking spaces and occupancy	34	27
car sharing spaces and occupancy	0	0
electric charging spaces and occupancy	0	0
parent and child parking spaces and occupancy	0	0
permit holder spaces and occupancy	0	0
motorcycle spaces and occupancy	0	0

Parking	**Comments**
Structure of car parking e.g. underground, multi-storey, surface.	Surface
Headroom restriction	No
Is there lighting?	Yes
Is there CCTV?	Yes
Ownership of car park	Private
Parking controls e.g. permits, secure car park, enforcement company etc.	90 Mins maximum stay
Parking costs and duration?	Free
Opening times of car parking	24 hours
How many reserved (management) parking spaces?	None visible for staff
When is presumed to be the peak parking time?	Evenings
Are there controls on nearby streets?	Yes double yellow lines on Jarman Way
Does parking overspill onto nearby streets?	No
Is there a high demand and turnover for parking?	Yes very high turnover. No internal spaces for HGVs or vans and 3 vans were witnessed parked on site which created internal congestion and manoeuvring issues.
Are parking spaces marked with white lines and signed?	Yes
Highways and access	**Comments**
What road(s) serve the site	Jarman Way and A414
Does the main entrance link with highway network?	Yes
Are there other entrances? If yes please give details	No just from main roundabout entrance with A414
Is the parking shared between uses? If yes what uses. Opening hours	Just McDonalds as time restrictions and McDonalds open 24 hours
Are there specific operational issues? i.e. barrier, controls, gates.	No controls or barriers on entrance and exit. No parking on site for larger vehicles.
Are there issues which impact on the highway network?	No
Public transport	**Comments**
Location of nearest stops/stations	Jarman Way bus stops 20m from McDonalds Bus route 101 (every 20 mins)
Pedestrian access	**Comments**
Is there a separate pedestrian entrance?	Pedestrian entrance route from Jarman Way and through car park provided
Are there conflicts between pedestrians & vehicles on the approach to the site and within the site?	None visible but vehicles do travel around Jarman Way at speed
Cycle Parking and Access	
How many cycle parking spaces are there? In separate areas?	None visible or provided under planning permission 04/00647/11/FUL

Site Survey

McDonalds - Jarman Park - Saturday 20th of May 2017							
Inventory		**Survey Time**					
		12:00			**20:00**		
Parking Type	Total Spaces	Occupancy	Free Spaces	Parking Stress	Occupancy	Free Spaces	Parking Stress
Disabled	2	2	0	100%	1	1	50%
Grill Bay	2	1	1	50%	2	0	100%
Standard	32	28	4	88%	21	11	66%
Totals	**36**	**31**	**5**	**86%**	**24**	**12**	**67%**

Summary

- Three occupancy surveys have been carried out;
  - 12:00pm Friday 5th May 81% occupancy
  - 12:00pm Saturday 20th May 86% occupancy
  - 20:00pm Saturday 20th May 67% occupancy
- Based on the parking standards McDonalds could have a maximum parking level of 66 spaces or 50 spaces with a 75% reduction being in zone 4, however only 36 provided
- The site is never fully occupied, although close to occupation at peak trading at the weekend.
- There is high turnover of vehicles.
- Vehicles could potentially park in Tesco's or the leisure uses as Jarman Park has shared parking.
- The standards for A3 allows 1 space per 5sqm plus 3 spaces per 4 staff
- It would appear that the standards are acceptable.

Site audit - Tesco Extra, Jarman Way, Hemel

Date/Time: 10:00am Thursday 25th May 2017

Weather: Sunny

Uses: A1 Food retail 8854sqm Tesco Extra

	Number of existing spaces	Occupancy
Total number of existing car parking spaces	539	203 vehicles parked
disabled spaces and occupancy	26	10 parked
car sharing spaces and occupancy	0	0
electric charging spaces and occupancy	0	0
parent and child parking spaces and occupancy	26	14 parked
motorcycle spaces and occupancy	8	1 parked

Parking	**Comments**
Structure of car parking e.g. underground, multi-storey, surface.	Surface
Headroom restriction	No
Is there lighting?	Yes
Is there CCTV?	Yes
Ownership of car park	Private
Parking controls e.g. permits, secure car park, enforcement company etc.	3 hours free parking – Highview parking enforces car park
When is presumed to be the peak parking time?	Weekends during the day
Are there controls on nearby streets?	Double yellow lines Jarman Way
Does parking overspill onto nearby streets?	None observed
Is there a high demand and turnover for parking?	Yes
Are parking spaces marked with white lines and signed?	Yes
Highways and access	**Comments**
What road(s) serve the site	Jarman Way and the A414
Does the main entrance link with highway network?	Yes Jarman Way is adopted public highway
Are there other entrances? If yes please give details	No
Floor area of the use(s)	8854sqm
Opening times of the use(s)	24/7 apart from Sunday 10am-4pm
Are there specific operational issues? i.e. barrier, controls, gates.	High turnover of vehicles and vehicles circulating internally
Public transport	**Comments**
Location of nearest stops/stations	Jarman Way bus stops 50m from leisure uses Bus route 101 (every 20 mins)
Pedestrian access	**Comments**
Is there a separate pedestrian entrance?	Crossings and pedestrian entrances and routes through Jarman Park are provided and around car parking areas
Are there conflicts between pedestrians & vehicles on the approach to the site and within the site?	A significant number of pedestrians walking around the Tesco car park with and without trolleys.
Cycle Parking and Access	
How many cycle parking spaces are there? In separate areas?	38 sheffield stands for customers and 18 sheffield stands for staff use – observed 5 bicycles parked for customers. Staff cycle parking not visible.
Sheltered cycle parking?	No
Secure cycle parking?	No

Site Survey

Tesco Extra - Jarman Park - Saturday 20th of May 2017							
Inventory		**Survey Time**					
		13:00			**19:30**		
Parking Type	Total Spaces	Occupancy	Free Spaces	Parking Stress	Occupancy	Free Spaces	Parking Stress
Car Wash	11	11	0	100%	11	0	100%
Cycle	-	1			2	-	-
Disabled	26	19	7	73%	8	18	31%
Mobile Health Unit	5	5	0	100%	5	0	100%
Out of Bay	-	0	-	-	2	-	-
Parent & Child	26	22	4	85%	9	17	35%
Set Down Point	3	1	2	33%	3	0	100%
Standard (Available)	487	329	158	68%	158	329	32%
Totals	**558**	**357**	**201**	**64%**	**177**	**381**	**32%**

Summary

- Accessibility zone 4
- Retail standard maximum 1 space per 15 sq.m. i.e. 590 spaces . Range permitted 442 to 590, actual provision 558
- Three occupancy surveys have been carried out;
  - 10:00am Thursday 25th May 38% occupancy
  - 13:00pm Saturday 20th May 75% occupancy
  - 19:30pm Saturday 20th May 33% occupancy

  Only standard, disabled and parent and child spaces have been included in the occupancy levels. Based on surveys, overprovision, but within maximum range – some allowance probably needed for seasonal peak parking

Site audit

Site: Rose and Crown, Beechcroft, Tring

Date/Time:2.00pm Friday 5th May 2017

Weather: cloudy

Uses: C2 Residential 35 units (6 x 1 bed and 29 x 2 bed), 337sqm commercial use at front of site although vacant during site audit.

	Number of existing spaces	Occupancy
Total number of existing car parking spaces	35 residential spaces no commercial spaces.	13
disabled spaces and occupancy	0	0
visitor parking spaces and occupancy	0	0
car sharing spaces and occupancy	0	0
electric charging spaces and occupancy	0	0
parent and child parking spaces and occupancy	0	0
permit holder spaces and occupancy	0	0
motorcycle spaces and occupancy	0	0

Parking	**Comments**
Structure of car parking e.g. underground, multi-storey, surface.	Surface car park
Headroom restriction	No
Is there lighting?	On buildings
Is there CCTV?	None visible
Ownership of car park	Private
Parking controls e.g. permits, secure car park, enforcement company etc.	No barrier only signage but doesn't appear to be a parking management company.
Parking costs and duration?	Free for residents
Opening times of car parking	24/7
How many reserved (management) parking spaces?	None visible all 35 spaces are for residents
When is presumed to be the peak parking time?	Overnight and weekends
Are there controls on nearby streets?	Yes as Tring High Street double yellow lines
Does parking overspill onto nearby streets?	No as controls along High Street and public car parks nearby. Access road and internal layout too narrow to facilitate overspill parking.
Is there a high demand and turnover for parking?	Not at time of site visit
Are parking spaces marked with white lines and signed?	Yes and surfaced differently
Highways and access	**Comments**
What road(s) serve the site	Rothschild Place leading to Crown Rose Court. Single flow private access road and Tring High Street
Does the main entrance link with highway network?	The main entrance into site leads to Rothschild Place which is private and then Tring High Street which is public highway.
Are there other entrances? If yes please give details	No
Floor area of the use(s)/Quantum of development	35 residential units
Is the parking shared between uses? If yes what uses.	Dedicated spaces per units
Are there specific operational issues? i.e. barrier, controls, gates.	Single access road (Rothschild Place). Access from Tring High Street allows two vehicles to pass.
Are there issues which impact on the highway network?	Narrow access and access road and Tring High Street is a busy thoroughfare.
Public transport	**Comments**
Location of nearest stops/stations	Bus stops on Church Square on Tring High Street adjacent and opposite Rothschild Place. Tring Station 1.7 miles to the east of site.
Pedestrian access	**Comments**
Is there a separate pedestrian entrance?	No pedestrians have to walk along Rothschild Place approximately 3.0m in width

Are there conflicts between pedestrians & vehicles on the approach to the site and within the site?	Yes
Cycle Parking and Access	
How many cycle parking spaces are there? In separate areas?	A cycle/wheelchair store is visible but closed and no information on the planning application as to quantum of cycle/buggy parking available.

Summary

6 x 1 bed – 7.5 spaces maximum
29 x 2 bed – 43.5 spaces maximum
Total 51 spaces, provided 35
Surveys indicate well within capacity overnight

Rothschild Place - Tring							
Inventory		**Tuesday 16th May 2017**			**Wednesday 17th May 2017**		
		00:30 - 05:30			**00:30 - 05:30**		
Parking Type	Total Spaces	Occupancy	Free Spaces	Parking Stress	Occupancy	Free Spaces	Parking Stress
Standard	35	22	13	63%	22	13	63%

Site audit

Site: Smiths Detections

Date/Time: 12:20pm Friday 5th May 2017

Weather: cloudy

Uses: B1 Office 9065sqm. (PP 4/02107/15/MFA Extensions to existing B1/B2/B8 building)

	Number of existing spaces	Occupancy
Total number of existing car parking spaces	123	115
disabled spaces and occupancy	5	5
visitor parking spaces and occupancy	0	0
car sharing spaces and occupancy	0	0
electric charging spaces and occupancy	0	0
parent and child parking spaces and occupancy	0	0
permit holder spaces and occupancy	0	0
motorcycle spaces and occupancy	20	2

Parking	**Comments**
Structure of car parking e.g. underground, multi-storey, surface.	Surface
Headroom restriction	No
Is there lighting?	Yes
Is there CCTV?	Yes
Ownership of car park	Private
Parking controls e.g. permits, secure car park, enforcement company etc.	Barrier controls on both car parks
Opening times of car parking	Office hours
How many reserved (management) parking spaces?	None visible with specific signage for management
When is presumed to be the peak parking time?	Morning approx. 10am during the week
Are there controls on nearby streets?	Yes but not adhered to as vehicles park along single and double yellow lines
Does parking overspill onto nearby streets?	Yes but not observed from the office. Parking on footway along Maxted Close and Centro
Is there a high demand and turnover for parking?	Nearby within Maylands estate yes but and high demand for parking within office but there were a few spare spaces and no vehicles were observed arriving or departing during site visit.
Are parking spaces marked with white lines and signed?	Yes
Highways and access	**Comments**
What road(s) serve the site	Maxted Close for both car park accesses
Does the main entrance link with highway network?	Yes
Are there other entrances? If yes please give details	Two car parks east and west of the building
Floor area of the use(s)	6200sqm existing and 2865sqm proposed
Are there issues which impact on the highway network?	Not Maxted Road but vehicles park informally around Maylands Business Park reducing width of carriageway and blocking footways.
Public transport	**Comments**
Location of nearest stops/stations	200m south on Maylands Avenue and 100m north on Maylands Avenue. Routes 320 (half hourly to Berry Lane Estate) and 758 (twice a day to Victoria). Hemel train station is 4 miles to east of site.
Pedestrian access	**Comments**
Is there a separate pedestrian entrance?	Yes from Maylands Avenue and footways at the western vehicular access entrance.
Are there conflicts between pedestrians & vehicles on the approach to the site and within the site?	Not observed at site but on surrounding streets vehicles park on footway
Cycle Parking and Access	
How many cycle parking spaces are there? In separate areas?	20 cycle parking spaces

Sheltered cycle parking?	Yes internally in store
Secure cycle parking?	Yes site is secure and in store

Summary
B1 office in accessibility zone 3 – 50-75% of max standard permitted
Max standard 302 spaces, range permitted 151-226, 123 provided
Surveys indicate parking is close to capacity

Site audit

Site: Stag Lane, Berkhamsted

Date/Time: 1.35pm Friday 5th May 2017

Weather: Cloudy

Uses: C3 Residential 150 residential units including 50 affordable units. (19 x 1 bed, 72 x 2 bed, 36 x 3 bed, 18 x 4 bed, 2 x 5 bed)

	Number of existing spaces	Occupancy
Total number of existing car parking spaces	222 spaces	50 vehicles in formal spaces on driveways or car ports and 21 along roads or parked informally.
disabled spaces and occupancy	0	
visitor parking spaces and occupancy	0	
car sharing spaces and occupancy	0	
electric charging spaces and occupancy	0	
parent and child parking spaces and occupancy	0	
permit holder spaces and occupancy	0	
motorcycle spaces and occupancy	0	

Parking	**Comments**
Structure of car parking e.g. underground, multi-storey, surface.	Surface, car ports and garages
Headroom restriction	Only car port and garage restrictions
Is there lighting?	No
Is there CCTV?	No
Ownership of car park	Private ownership for dwellings or public highway
Parking controls e.g. permits, secure car park, enforcement company etc.	No parking controls on public highway around development and private car parking individually managed
When is presumed to be the peak parking time?	Overnight
Are there controls on nearby streets?	No
Does parking overspill onto nearby streets?	Yes 21 spaces parked informally on public highway
Is there a high demand and turnover for parking?	Not at time of site visit
Are parking spaces marked with white lines and signed?	No
Highways and access	**Comments**
What road(s) serve the site	Sheldon Way and Stag Lane to Gossoms End/Berkhamsted High Street
Does the main entrance link with highway network?	Yes- internal roads adopted apart from Nash Close.
Are there other entrances? If yes please give details	Eddy Street with bollards as emergency access and footpath along River Bulbourne to west, pedestrian link to Grand Union Canal to north.
Floor area of the use(s)/Quantum of development	150 residential dwellings in the form of flats and houses
Is the parking shared between uses? If yes what uses.	No dedicated car parking
Are there specific operational issues? i.e. barrier, controls, gates.	Informal parking on street
Are there issues which impact on the highway network?	None visible
Public transport	**Comments**
Location of nearest stops/stations	200m along High Street Berkhamstead from Sheldon Way/Stag Lane Junction and 200m along Gossoms End from Eddy Street/Sheldon Way junction.
Pedestrian access	**Comments**
Is there a separate pedestrian entrance?	Yes Eddy Street, River Bulbourne and by Grand Union Canal. Sheldon Way and Stag Lane have footways leading into site.
Are there conflicts between pedestrians & vehicles on the approach to the site and within the site?	No
Cycle Parking and Access	
How many cycle parking spaces are there? In separate areas?	150 cycle parking spaces.

Sheltered cycle parking?	Individual provision for dwellings
Secure cycle parking?	Yes individual provision for dwellings.

Summary
Zone 2
19 x 1 bed – 19 spaces maximum
72 x 2 bed – 72 spaces
36 x 3 bed – 54 spaces
18 x 4 bed – 36 spaces
2 x 5 bed 10 spaces
Total 191 maximum
197 provided (including on-street parking)
Surveys indicate overall within capacity (72-75%) but signs of inappropriate parking on footways etc.
So overall parking not adequate or too many spaces allocated?

Stag Lane							
Inventory		**Tuesday 16th May 2017**			**Wednesday 17th May 2017**		
		00:30 - 05:30			**00:30 - 05:30**		
Parking Type	Total Spaces	Occupancy	Free Spaces	Parking Stress	Occupancy	Free Spaces	Parking Stress
Driveway/Car Port	57	43	14	75%	50	7	88%
Informal Off-Street	-	3	-	-	2	-	-
Marked Bays	115	74	41	64%	78	37	68%
On-Street Parking	25	22	3	88%	18	7	72%
Totals	**197**	**142**	**55**	**72%**	**148**	**49**	**75%**

Site audit

Site: Tesco Express, 207 Fletcher Way, Hemel Hempstead

Date/Time: 12.57pm Friday 7th April 2017

Weather: Sunny

Uses: A1 Food Convenience retail 267sqm

	Number of existing spaces	Occupancy
Total number of existing car parking spaces	26 spaces	7 vehicles 12.57pm 12 vehicles 1:13pm
disabled spaces and occupancy	2	0
visitor parking spaces and occupancy	26	7 vehicles 12.57pm 12 vehicles 1:13pm
car sharing spaces and occupancy	0	0
electric charging spaces and occupancy	0	0
parent and child parking spaces and occupancy	0	0
permit holder spaces and occupancy	0	0
motorcycle spaces and occupancy	0	0

Parking	**Comments**
Structure of car parking e.g. underground, multi-storey, surface.	Surface car park
Headroom restriction	No
Is there lighting?	Only on building
Is there CCTV?	Yes
Ownership of car park	Private – Tesco Limited
Parking controls e.g. permits, secure car park, enforcement company etc.	Free - no restrictions
Parking costs and duration?	Free
Opening times of car parking	No barrier on car park but store opening times 7am-10pm Monday to Sunday
How many reserved (management) parking spaces?	None but large separate delivery area with separate vehicular access
When is presumed to be the peak parking time?	Sunday evening
Are there controls on nearby streets?	No
Does parking overspill onto nearby streets?	None visible from the Tesco Express as car park not full
Is there a high demand and turnover for parking?	High turnover but not high demand at time of visit
Are parking spaces marked with white lines and signed?	Yes
Highways and access	**Comments**
What road(s) serve the site	Fletcher Way to north, Allandale to west and Cattsdell to east.
Does the main entrance link with highway network?	Yes
Are there other entrances? If yes please give details	Two vehicular accesses the car park access from Allandale and the service vehicle access from Fletcher Way
Floor area of the use(s)	267sqm
Opening times of the use(s)	7am-10pm Monday to Sunday
Are there specific operational issues? i.e. barrier, controls, gates.	No but skip located on site due to wall damage being fixed at time of visit taking up 2 parking spaces
Are there issues which impact on the highway network?	Parade of shops opposite- uncontrolled parking and parade was full with 29 vehicles parked but car parking spaces unmarked. Residential uses on top of Bellgate Parade. 3 separate disabled parking spaces. Parade includes 9 stores takeaway, convenience, pharmacy, charity shop etc.
Public transport	**Comments**
Location of nearest stops/stations	Fletcher Way has bus stops opposite site which serve bus route 4 and Cattersdell to east of site has bus stops adjacent to site which serve routes 2, 748, 759 and 824.
Pedestrian access	**Comments**
Is there a separate pedestrian entrance?	Yes from Fletcher Way

Are there conflicts between pedestrians & vehicles on the approach to the site and within the site?	None observed. There is a separate pedestrian route with bollards to protect pedestrians within the car park.
Cycle Parking and Access	
How many cycle parking spaces are there? In separate areas?	3 sheffield stands (6 spaces) located adjacent to building entrance.
Sheltered cycle parking?	No
Secure cycle parking?	No and spaces are not directly overlooked from the store.

Survey

Tesco Express - Fletcher Way - Sunday 21st of May 2017							
Inventory		**Survey Time**					
		15:00			**18:00**		
Parking Type	Total Spaces	Occupancy	Free Spaces	Parking Stress	Occupancy	Free Spaces	Parking Stress
Cycle	-	1	-	-	0	-	-
Disabled	2	1	1	50%	0	2	0%
Out of Bay	-	0	-	-	0	-	-
Standard	24	9	15	38%	11	13	46%
Totals	**26**	**10**	**16**	**38%**	**11**	**15**	**42%**

Summary

- Three occupancy surveys undertaken
  - 12:57pm Friday 7th April 30%
  - 15:00pm Sunday 21st May 38%
  - 18:00pm Sunday 21st May 42%
- Parking standards allow 1 space per 30sqm for A1 uses below 500sqm
- The 276sqm GFA allows 9 parking spaces and there is a parking overprovision of 15 car parking spaces.
- There have been 7-12 vehicles recorded parking within the site through the occupancy surveys with 11 at peak time on a Sunday when the larger retail stores are closed.
- The parking standards therefore appear to be broadly appropriate in this instance for retail units less than 500sqm, albeit this site has an overprovision.

Site audit

Site: The Snow Centre,

Date/Time: 1.10pm Friday 5th May 2017

Weather: Cloudy

Uses: Leisure use 8000sqm D2 use

	Number of existing spaces	Occupancy
Total number of existing car parking spaces	283 Coach parking occurs within empty spaces on event days.	90
disabled spaces and occupancy (included)	8	8
visitor parking spaces and occupancy	275	82
car sharing spaces and occupancy	0	0
electric charging spaces and occupancy	0	0
parent and child parking spaces and occupancy	0	0
permit holder spaces and occupancy	0	0
motorcycle spaces and occupancy	0	0

Parking	**Comments**
Structure of car parking e.g. underground, multi-storey, surface.	Surface
Headroom restriction	No
Is there lighting?	Yes
Is there CCTV?	Yes
Ownership of car park	Private
Parking controls e.g. permits, secure car park, enforcement company etc.	Barrier at entrance
Parking costs and duration?	Free
Opening times of car parking and use	Mondays: 10am – 6pm Tuesdays: 7am – 10pm Wed & Thur: 10am – 10pm Fridays: 10am – 10:30pm Saturdays: 8am – 8.00pm Sundays: 8am – 8.00pm
How many reserved (management) parking spaces?	None visible
When is presumed to be the peak parking time?	Weekends
Are there controls on nearby streets?	No controls on Wheelers Lane
Does parking overspill onto nearby streets?	None visible
Is there a high demand and turnover for parking?	Not at time of site visit
Are parking spaces marked with white lines and signed?	Yes
Highways and access	**Comments**
What road(s) serve the site	Wheelers Lane
Does the main entrance link with highway network?	Yes
Are there other entrances? If yes please give details	No
Floor area of the use(s)	8000sqm
Is the parking shared between uses? If yes what uses.	Site includes a bar and restaurant. Yes shared parking.
Are there specific operational issues? i.e. barrier, controls, gates.	Car wash taking up 8 car parking spaces. Car park is sloped.
Are there issues which impact on the highway network?	None visible
Public transport	**Comments**
Location of nearest stops/stations	50m to west along Wheelers Lane serving routes H10 and H11 both hourly services. Hemel Hempstead train station is 40 min walk or 10 minutes in car.
Pedestrian access	**Comments**

Is there a separate pedestrian entrance?	Yes footway into site diverts from main entrance.
Are there conflicts between pedestrians & vehicles on the approach to the site and within the site?	None visible and lined pedestrian walkway around car parking.
Cycle Parking and Access	
How many cycle parking spaces are there? In separate areas?	None visible but an area 2.4m by 4.8m has been set aside for bicycles.
Sheltered cycle parking?	No
Secure cycle parking?	No

Survey

The Snow Centre - St Albans Hill - Saturday 20th of May 2017				
Inventory		**Survey Time**		
		15:00		
Parking Type	Total Spaces	Occupancy	Free Spaces	Parking Stress
Car Wash	6	0	6	0%
Disabled	8	5	3	63%
Drop- Off	1	1	0	100%
Out of Bay	6	4	2	67%
Standard	268	189	79	71%
Yellow Hatching	-	1	-	-
Totals	**283**	**200**	**83**	**71%**

Summary

- Two occupancy surveys have been carried out
  - 1.10pm Friday 5th May 32% (standard and disabled bays)
  - 3.00pm Saturday 20th May 2017 72% (standard and disabled bays)
- Parking standards allow for 1 space per 15sqm
- Site is within Zone 4 and could have between 400 and 533 spaces so the site (283 spaces) has significantly below the maximum parking standard and 75% reduction allowed under the accessibility areas.
- There are vehicles parked outside of bays but parking is not at full occupancy at peak time weekends.
- The number of existing parking spaces are in line with 1 space per 28sqm and the highest occupancy recorded at the weekend is in line with 1 space per 41sqm.
- The D2 standards for places of entertainment where individual land uses are known appear to be acceptable based on this particular leisure use and the sqm standard could even be increased to reduce the maximum parking standard.
- It needs to be considered that leisure uses are quite specific on the needs of the particular use.

Site audit

Site: Travelodge, Hemel Hempstead Gateway Hotel

Date/Time: 1.00pm Friday 5th May 2017

Weather: Cloudy

Uses: 108 bed Hotel, 93sqm Subway, 371sqm Toby Carvery and 93sqm Domino's Pizza.

	Number of existing spaces	Occupancy
Total number of existing car parking spaces	129	43
disabled spaces and occupancy (included)	7	2
visitor parking spaces and occupancy (included)	122	43
car sharing spaces and occupancy	0	0
electric charging spaces and occupancy	0	0
parent and child parking spaces and occupancy	0	0
permit holder spaces and occupancy	0	0
motorcycle spaces and occupancy	0	0

Parking	**Comments**
Structure of car parking e.g. underground, multi-storey, surface.	Surface
Headroom restriction	No
Is there lighting?	Yes
Is there CCTV?	None visible
Ownership of car park	Private
Parking controls e.g. permits, secure car park, enforcement company etc.	No barriers or parking controls visible, car park not secure
Parking costs and duration?	Free
Opening times of car parking	24/7
When is presumed to be the peak parking time?	Evenings and Overnight
Are there controls on nearby streets?	Maylands Avenue single yellow line
Does parking overspill onto nearby streets?	No
Is there a high demand and turnover for parking?	Not at time of site visit
Are parking spaces marked with white lines and signed?	Yes
Highways and access	**Comments**
What road(s) serve the site	Maylands Avenue
Does the main entrance link with highway network?	Yes
Are there other entrances? If yes please give details	Yes from Maylands Avenue/St Albans Road
Floor area of the use(s)	108 bed hotel, 93sqm Subway and 93sqm Dominos Pizza and 371sqm Toby Carvery
Is the parking shared between uses? If yes what uses.	Yes
Opening times of the use(s)	Hotel 24/7 Subway- 7am-10pm Domino's Pizza 10am-1am Toby Carvery 8-11am and 12-10pm
Are there specific operational issues? i.e. barrier, controls, gates.	No
Are there issues which impact on the highway network?	No
Public transport	**Comments**
Location of nearest stops/stations	200m north on Maylands Avenue bus routes 301, 320, 758 and ML1. 350m to the southwest on St Albans Road A414 serving 300, 301, 748, 757, 758, H10 and ML1.
Pedestrian access	**Comments**
Is there a separate pedestrian entrance?	Yes from St Albans Road

Are there conflicts between pedestrians & vehicles on the approach to the site and within the site?	No
Cycle Parking and Access	
How many cycle parking spaces are there? In separate areas?	9 Sheffield stands fronting the site
Sheltered cycle parking?	No
Secure cycle parking?	No

Summary

- Three occupancy surveys carried out;
  - 13:00pm Friday 5th May 33% occupancy
  - 13:00pm Saturday 20th May 39% occupancy
  - 19:30pm Saturday 20th May 57% occupancy
- Site has shared car parking between C1 hotel, A3 restaurant and A5 takeaway use.
- Site is within accessibility zone 3
- Taking individual land uses means the car parking could have more than 295 spaces for C1/A3/A5 uses (148-221 spaces at 75% being in accessibility zone 3. The actual car parking is 44% of the maximum standards.
- The car park is only 57% occupied at peak occupancy on a weekend evening.
- How to assess and calculate shared use parking needs to be reviewed within the standards. The uses are all potentially at peak trading levels and hotel occupancy levels in the evening and the site is clearly not fully occupied.

Survey

Travelodge - Hemel Hempstead Gateway - Saturday 20th of May 2017							
Inventory		**Survey Time**					
		13:00			**19:30**		
Parking Type	Total Spaces	Occupancy	Free Spaces	Parking Stress	Occupancy	Free Spaces	Parking Stress
Cycle	-	1	-	-	1	-	-
Disabled	7	2	5	29%	2	5	29%
Out of Bay	-	3	-	-	7	-	-
Standard	122	44	78	36%	64		
Yellow Hatching	-	1	-	-	1	-	-
Totals	**129**	**50**	**79**	**39%**	**74**	**55**	**57%**

Site audit

Site: Tudor Primary School, Redwood Drive, Hemel

Date/Time: 11:00am Thursday 25th May 2017

Weather: Sunny

Uses: Primary School 401 pupils age 3-11

Approx. 31 full-time staff plus 10 teaching assistants

	Number of existing spaces	Occupancy
Total number of existing car parking spaces	29	23
disabled spaces and occupancy	Including 1 disabled	0
car sharing spaces and occupancy	0	0
electric charging spaces and occupancy	0	0
motorcycle spaces and occupancy	0	0

Parking	**Comments**
Structure of car parking e.g. underground, multi-storey, surface.	Surface
Headroom restriction	No
Is there lighting?	Yes
Is there CCTV?	No
Ownership of car park	Private
Parking controls e.g. permits, secure car park, enforcement company etc.	Secure gated site
When is presumed to be the peak parking time?	During daytime weekday in school term
Are there controls on nearby streets?	No and vehicles park on street
Does parking overspill onto nearby streets?	Not from the school from surrounding residential properties
Is there a high demand and turnover for parking?	Not observed
Are parking spaces marked with white lines and signed?	Yes
Highways and access	**Comments**
What road(s) serve the site	Redwood Drive
Does the main entrance link with highway network?	Yes two separate gated entrances
Are there other entrances? If yes please give details	Separate pedestrian entrances onto Redwood Drive
Public transport	**Comments**
Location of nearest stops/stations	Approximately 180m to the south of the school on Runham Road. Bus stop serves routes H10 and H11.
Cycle Parking and Access	
How many cycle parking spaces are there? In separate areas?	Cycle shelter for approximately 20 bicycles – none observed
Sheltered cycle parking?	Yes
Secure cycle parking?	Yes

Summary – max standard is 1 per full-time staff + 1 per 100 pupils, approx. 35 spaces permitted. 29 provided. Survey indicates within capacity.

APPENDIX K – CONSULTEES

Organisations contacted for feedback on current parking standards

Housebuilders

Belway Homes
Brixton Properties Ltd
CALA Group Ltd
Calderwood Property Investment Ltd
City & Provincial Properties Plc
Gallagher Estates
Harrow Estates
Home Builders Federation
Persimmon Homes
Whiteacre
Ancer Spa Ltd
Arcus
Ashill Developments
Countryside Properties
Lanes New Homes
Taylor Wimpey
St William Homes LLP
Gleeson Strategic Land
Homes and Communities Agency
Barratts
Danadara
Crest Nicholson
Hightown Housing Association
Watford Community Housing Trust
Paradigm Housing
Hastoe Housing Association

Local Businesses

Bourne Leisure
FFEI
Frasers
Furnell Transport
Hightown HA
Satellite Creative
Sopra Steria
Abode Bed and Continental
Regency Homes Ltd
Kings Langley School
Indigo Tree
Barclays
Eurotech Services
Synergy
MRK Associates
Hemel Gazette
Hopespare
Gyron Internet Ltd
Henkel
Brasier Freeth
JE2
Aubrey Park Hotel
Lumiere Developments
Martin Brower
Machins Solicitors
Lumina Technologies Ltd
EIC Insurance
Mediation Hertfordshire
Hertfordshire Chamber of Commerce
West Herts College
Ashridge Business School
Hospice of St Francis
Cobham Consulting
Marlowes Shopping Centre
Underwoods Solicitors
McDonald's
One Stop Doctors
Hemel Hempstead Football Club
Tring Park School for Performing Arts
Royal Bank of Scotland
Adam Hollier Photography
AP Marketing
Prologis
Amazon
Astley Cooper School
I D Integrated Security Limited
Ten2Two
DPD Distribution Ltd
Novo UK Recruitment Ltd
BSI Group Ltd

APPENDIX L – GARAGES OPTIONS

There are a few options for treating garages in standards.

Option	Advantages	Disadvantages
Permit all garages to be counted as spaces	Acknowledges provision	If not used (and significant numbers are not) then pressure for on-street space Conversion to other uses generally under permitted development rights, will further increase pressure on-street
Permit only garages of a certain size (containing storage space) to be counted as spaces	Acknowledges provision; likely to be more used than smaller garages	Still likely to have significant proportion not used As above re conversion
Permit a proportion of garages to be counted as spaces	Acknowledges provision; overall effect should be more in line with use, but no way of ensuring particular garage is used	Still likely to have significant proportion not used, but more balanced parking overall. As above re conversion
Do not count garages as provision	Likely to ensure more off-street parking provision, less on-street parking problems	Does not acknowledge provision, may lead to over-provision of parking, less development

In many cases certain dimensions are required, for example in Reading's parking standards:

'*Single Garage*

It is recommended that the internal dimensions are 7000 mm long x 3000 mm wide to allow easy access to/from the vehicle and sufficient storage to the rear to accommodate a bicycle.

Double Garage

It is recommended that the internal dimensions are 7000 mm long x 5500 mm wide to allow easy access to/from each vehicle and sufficient storage to the rear to accommodate a bicycle.

Where a garage driveway is provided for the parking of cars and to prevent obstruction to the highway when accessing a garage, the distance from the face of the garage to:

- *the highway boundary - shall be at least 6000 mm.*
- *the carriageway edge on access ways - shall be at least 7000 mm.*

This is to allow garage doors to be opened/ closed with a vehicle positioned in the driveway.

However, in very quiet residential streets shorter driveways may be acceptable in accordance with the requirements of Manual for Streets'