

**PORTSMOUTH SHOPPING STUDY: UPDATE
PORTSMOUTH CITY COUNCIL**

APPENDIX 1

**PORTSMOUTH SHOPPING STUDY: UPDATE
PORTSMOUTH CITY COUNCIL**

APPENDIX 1A

Appendix 1A

Data on Average Consumer Retail Expenditure per Head by Zone (for 2005 at 2005 Prices)

Average Consumer Retail Expenditure per Head by Zone in 2005				
Zone	2005 Per Person Expenditure (£) Convenience Goods	2005 Per Person Expenditure (£) Comparison Goods	2005 Per Person Expenditure	
			Non-Bulky Comparison Goods (£)	Bulky Comparison Goods (£)
1	1,666	2,987	2,004	983
2	1,640	3,013	2,058	955
3	1,622	2,812	1,916	896
4	1,647	2,994	2,031	963
5	1,675	3,089	2,109	980
6	1,589	2,980	2,024	956
7	1,551	2,719	1,865	854
8	1,647	3,041	2,046	995
9	1,565	2,971	2,082	889
10	1,438	2,600	1,786	814
11	1,523	2,880	1,964	916
12	1,512	2,669	1,826	843
13	1,618	3,033	2,055	978
14	1,672	3,190	2,180	1,010
15	1,629	3,189	2,172	1,017
16	1,505	2,783	1,894	889
17	1,516	2,889	1,972	917
UK Average	1,589	2,932	1,999	933

Source: Experian Business Strategies. All figures at 2005 prices.

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APPENDIX 1B

3. Projections and forecasts

3.1 CONCEPTS

Future spending levels have an important bearing on the need and capacity of future retail space. Consequently, stakeholders in the planning process, such as the local authority, retailers, consultants and surveyors, need an appreciation of how the amount spent on goods and services is likely to change in the future.

Traditionally, planners have used a mixture of methods to calculate future spending levels. Indeed, there is no single right answer, reflecting the unique considerations of each planning application. Consequently, it is up to the planning expert to decide which approach is best suited to the particular circumstance.

This version of Retail Planner presents the two principle methods of looking at future trends in spending on retail (and leisure) goods:

- 1 **Projections** – estimates of future spending based on the extrapolation of past trends, with alternative projections being based on trends estimated over different periods of the past.
- 2 **Forecasts** – estimates of future spending based on an econometric model of disaggregated consumer spending. Different scenarios can be produced using alternative assumptions about the key macroeconomic drivers (the key one being total consumer spending).

The following sections describe the methodology used to calculate projections and forecasts of retail spending, and the results achieved. We do not, however, make a value judgment about which method to use.

3.2 CHAIN LINKING

Before we can estimate past trends in convenience and comparison goods spending, we need to create historical time series. Traditionally this has been done by simply aggregating the ONS' constant price estimates of spending by detailed category. This is problematic because:

“Comparisons of aggregates of volume series over time are complicated by changes in the relative prices of different goods and services and by qualitative changes in the goods and services themselves. As time passes some goods escalate in price more rapidly than others. Others change so much that they become, in effect, different goods and services from those produced previously under the same name.”⁸

Because of these changes the relative prices of goods and services in the base year become less and less representative of the relative values put on them for other periods. As a result, the changes in measured volume will not be representative of the actual growth in periods distant from the base year. This is particularly problematic for goods or services such as audio-visual equipment that have seen big changes in their relative price over time. In other words, valuing audio-visual equipment at 2005 prices does not make much sense when estimating aggregate retail spending growth rates from 1965.

⁸ National Statistics (1999), *United Kingdom National Accounts, the Blue Book*, p.25.

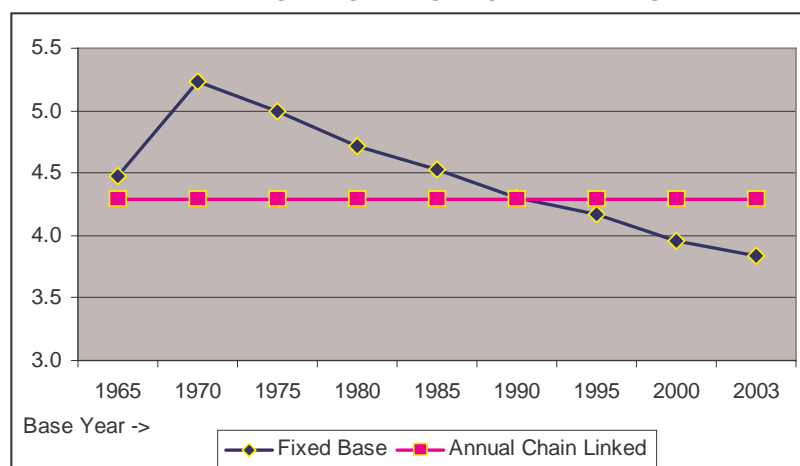
Until 2003, the ONS' approach to this problem was to use a method called fixed-base chain linking whereby estimates generated using different price bases were spliced together approximately every five years. Note that this was not the method used in earlier versions of Retail Planner or in the generation of similar estimates of convenience and comparison spend, where the detailed categories at a given price base were simply aggregated to give convenience and comparison totals (known as the fixed-base method). Fixed-base chain linking was, however, the method used by the ONS to create estimates of total household spending and various published aggregates (such as alcohol and tobacco; and clothing and footwear).

In 2003, the ONS moved to a method known as annual chain linking for producing constant price economic aggregates. This is similar to fixed-base chain linking except that the weights change every year and estimated growth over a series of years is estimated by linking together a set of year-to-year growth estimates. This is in line with the recommendations of the *System for National Accounts 1993 (SNA93)*, which is incorporated into the *European System of Accounts 1995 (ESA95)* and has been widely adopted on an international basis. The main drawback of annual chain linking is a loss of additivity – the components of comparison goods spending, for example, no longer add up to total comparison goods spending except in the base year.

Since the 2004 version of Retail Planner, we have fully adopted the annual chain-linking methodology. There is an additional advantage for Retail Planner in that the new methodology brings greater stability to the estimated growth of retail spending, particularly for comparison goods (where there have been the biggest changes in relative prices). This is because the volume of spending on audio-visual equipment has been rising particularly rapidly in recent years, accompanied by sharp falls in its relative price. This has meant that the estimated growth of comparison spending tends to fall (relative to the last estimate, as audio-visual equipment has a lower weight for the new base year) every time that the data is re-based and this revision affects all years and not just recent estimates. This problem disappears with the annual chain-linking methodology.

Figure 3.1 shows how the estimated ultra long-term trend (25 years, calculated to 2003 in this example) would have varied if different base years had been used and compares it with the stability in the annual chain-linked estimate. Using 1990 prices, for example, the fixed-base method gives an estimated growth rate of around 4.3 per cent per annum, which is similar to the annual chain-linked estimate. At one extreme, however, the fixed-based estimate gives an estimate of 5.2 per cent per annum when estimated at 1970 prices and a rate of 3.9 per cent per annum when estimated at 2003 prices.

**FIGURE 3.1: COMPARISON GOODS ULTRA LONG-TERM TREND:
FIXED BASED VS. ANNUAL CHAIN LINKING**



Note that the *National Accounts* currently use annual chain linking to 2003 and a fixed-base methodology for 2004 onwards, with volumes being presented in '2003 prices'. Retail Planner has adopted a slightly different convention, with annual chain linking being used for every year down to 2005 and volumes being presented in '2005 prices'. We have done this as we believe it is useful to have spending data presented in prices that are as close as possible to those currently prevailing.

The annual chain linked data has been used to estimate past trends for the broad aggregates and to create the projections shown below. The forecasts have been prepared at a more detailed level and aggregated up to the broad aggregates using annual chain linking.

Note that a disadvantage of chain linking is loss of additivity. This means that spending on retail goods no longer equals the sum of convenience and comparison spend except in the base year, although the discrepancies tend to be small (nor does comparison spend equal bulky goods and non-bulky comparison goods except in the base year).

3.3 PROJECTIONS

We have estimated trends in spending per head on retail goods using the following equation:

$$\Delta \ln(\text{Spend}_t) = \beta + u_t$$

where:

$\Delta \ln(\text{Spend}_t)$ is the annual change in the log of spending per head.
 β is the estimated annual growth rate.

This method has been used to estimate trends over the following time periods:

1. **1966-2005 – ultra long-term trend**
2. **1976-2005 – long-term trend**
3. **1986-2005 – medium-term trend**

Tables 3.1 and 3.2 show projections for the broad headings of convenience goods, comparison goods, total spending on retail goods, core DIY goods, core DIY goods excluding gardening, and bulky goods, together with the equivalent forecasts described below.

Results summary:

- Projections for future spending based on the medium-term trend have the highest growth in total retail spend, reflecting the surge in retail expenditure during the 1980s and 1990s.
- Total spending growth is projected to be between 2.8 per cent and 4.0 per cent per annum.
- Spending on comparison goods is projected to be between 4.6 per cent and 6.2 per cent over the next 5-10 years.

TABLE 3.1
FORECASTS & PROJECTIONS OF UK SPENDING PER HEAD VOLUMES 2006-2010 (2005 PRICES)

	EBS forecast	Consensus forecast	Ultra long-term trend	Long-term trend	Medium-term trend
Convenience	0.5	0.5	0.6	0.7	1.0
Comparison	4.3	4.1	4.6	5.2	6.2
Total retail	2.9	2.8	2.8	3.3	4.0
Core DIY	2.6	2.5	3.2	3.7	3.7
Core DIY exc. gardening	2.6	2.5	3.1	3.8	3.6
Bulky goods ⁹	4.9	4.7	5.4	6.0	6.8
Non-bulky goods*	4.1	4.0	4.3	4.9	5.8
Leisure services	1.6	1.4	2.5	1.9	2.1
Total consumer spending	2.1	1.9	2.4	2.6	2.9

TABLE 3.2
FORECASTS & PROJECTIONS OF UK SPENDING PER HEAD VOLUMES 2006-2015 (2005 PRICES)

	EBS forecast	Consensus forecast	Ultra long-term trend	Long-term trend	Medium-term trend
Convenience	0.7	0.7	0.6	0.7	1.0
Comparison	3.8	3.6	4.6	5.2	6.2
Total retail	2.7	2.6	2.8	3.3	4.0
Core DIY	2.6	2.5	3.2	3.7	3.7
Core DIY exc. gardening	2.7	2.6	3.1	3.8	3.6
Bulky goods	4.2	4.0	5.4	6.0	6.8
Non-bulky* goods	3.6	3.5	4.3	4.9	5.8
Leisure services	1.4	1.2	2.5	1.9	2.1
Total consumer spending	2.0	1.8	2.4	2.6	2.9

* non-bulky comparison goods

3.4 FORECASTS

3.4.1 Experian Business Strategies

The forecasts presented in this paper are produced using Experian Business Strategies' model of disaggregated consumer spending. This takes a number of macro-economic forecasts (chiefly consumer spending, incomes and inflation) and uses them to produce forecasts of disaggregated consumer spending volumes, prices and value.¹⁰ The model incorporates assumptions about income and price elasticities. Consequently, the shares of the individual components of consumer spending, not just the levels, will be sensitive to the macro-economic forecast. Forecast growth rates are also sensitive to the position of the base year in the economic cycle. If the base year is considered to be near a cyclical peak, forecast future growth rates will be lower than if the base year is considered to be close to a cyclical trough.

⁹ there has been a substantial upwards revision in the Ultra-long and long-term trends for Bulky Goods since the February 2006 edition. These is due to all constant price aggregates, including Bulky Goods, now being calculated on a chained-linked bases rather than simply being the sum of the parts.

¹⁰ Experian Business Strategies' August 2006 forecasts of the UK economy.

3.4.2 Consensus forecasts

Consensus forecasts for GDP growth are taken from a mixture of the forecasts compiled by the Treasury and published in *Forecasts for the UK Economy* in August 2006 and the Treasury's projections that underlay the Medium-Term Fiscal Projections in the 2006 *Budget Report*. Forecasts for household spending for 2006 and 2007 are taken from the Treasury compilation of forecasts. The differences between household spending and GDP growth for 2008 to 2015 are taken from *Consensus Economics (2006)*, *Consensus Forecasts, A Digest of International Economic Forecasts, April & August 2006*. We have not used the Consensus Economics household spending or GDP forecasts directly as they can be erratic (from one forecast comparison to another) which, we believe, is the result of the polling of a small and unrepresentative sample of forecasters.

Results summary:

- Experian Business Strategies' forecasts for total retail spending over the next 5-10 years are stronger than the Consensus Forecasts.
- Experian Business Strategies forecasts total retail goods spending per growth per head of 2.7 per cent per annum over the next 10 years.
- The econometric model-based forecasts for the growth of comparison and convenience goods spend are both less than the trend projections for the 2006-2015 period. This reflects a view among economic forecasters that the growth in aggregate household spending is likely to slow down in the future as spending levels are now close to a cyclical peak. Household savings rates have already been driven down to very low levels and households' debt-income is at an all-time high. These trends are not sustainable in the long term.
- The Ultra-long and long-term trend-based projections are little changed from the last set of projections issued (February 2006). There has, however, been a downwards revision in the medium-term trend for comparison goods (6.5 per cent to 6.2%) because of particularly weak spending growth in 2005.
- Current estimates show that spend per head volumes grew by -0.1, 2.3 and 1.4 per cent for convenience, comparison and total respectively in 2005. The current forecasts for 2006 are for a pick up to 1.3, 3.7 and 2.8 per cent for convenience, comparison and total respectively.
- Note that the growth rates given are in volume terms. Trends in relative prices vary considerably between different types of goods and between goods and services so the relative trends in volumes are not necessarily a guide to trend in values. Annex 1 gives our view of future trends in values, volumes and prices.

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APPENDIX 1C

Appendix 1C

Consumer Expenditure Forecasts and Projections of UK Spending Per Head Volumes (constant prices) (% per annum)

Convenience Goods

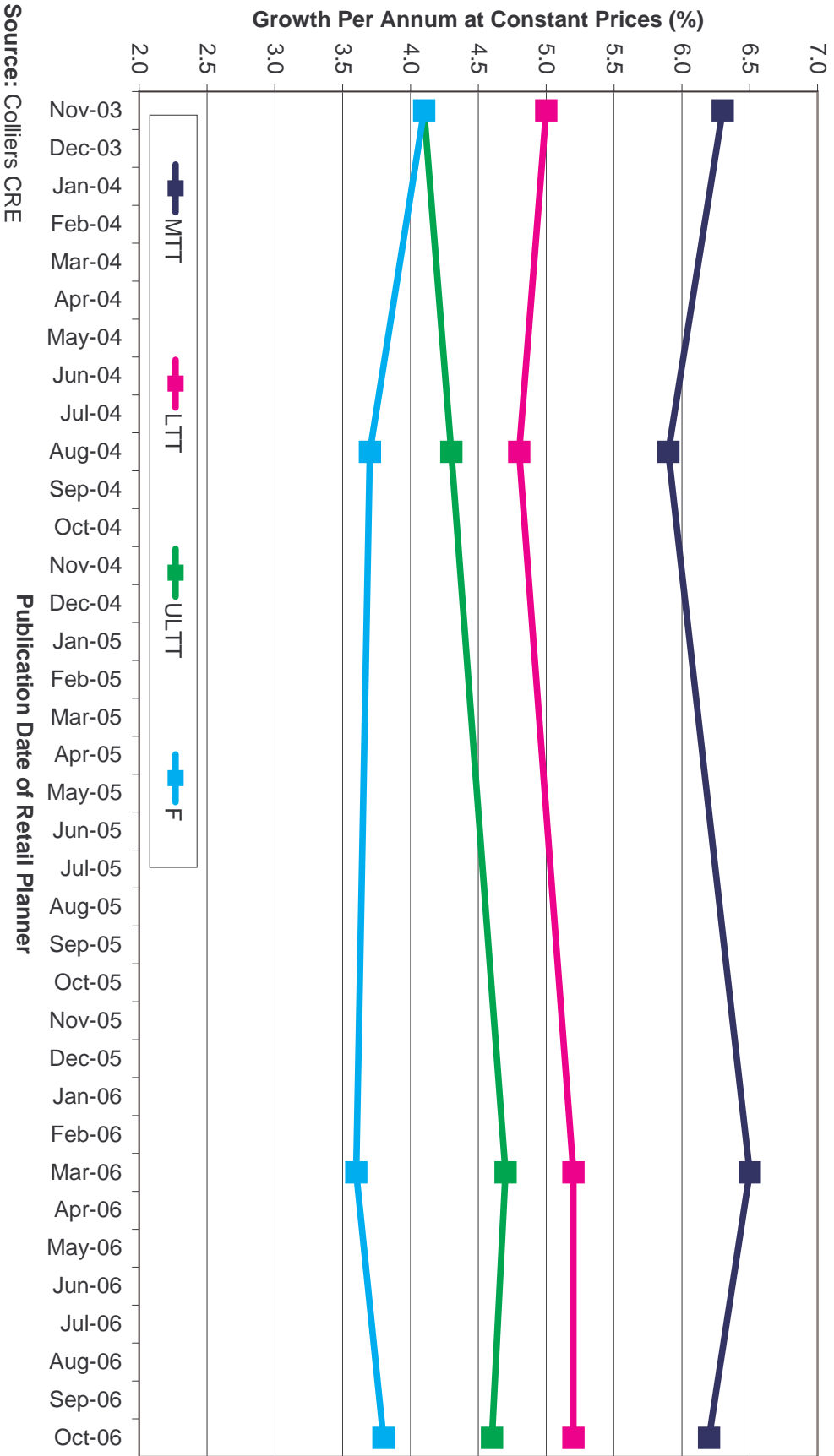
Edition of Retail Planner and Time- Period	EBS Forecast	Consensus Forecast	Ultra Long- Term Trend	Long - Term Trend	Medium – Term Trend
Briefing Note 1.2 (November 2003) (2003-07)	1.1	1.0	0.4	0.6	1.0
Briefing Note 2.0 (August 2004) (2003-08)	0.6	0.5	0.7	0.7	1.1
Briefing Note 3.0 (March 2006) (2005-09)	0.3	0.3	0.6	0.7	1.0
Briefing Note 4.0 (October 2006) (2006-10)	0.5	0.5	0.6	0.7	1.0
Briefing Note 1.2 (November 2003) (2003-12)	1.0	1.0	0.4	0.6	1.0
Briefing Note 2.0 (August 2004) (2003-13)	0.9	0.8	0.7	0.7	1.1
Briefing Note 3.0 (March 2006) (2005-14)	0.6	0.5	0.6	0.7	1.0
Briefing Note 4.0 (October 2006) (2006-15)	0.7	0.7	0.6	0.7	1.0

Comparison Goods

Edition of retail Planner and Time-Period	EBS Forecast	Consensus Forecast	Ultra Long-Term Trend	Long - Term Trend	Medium Term-Trend
Briefing Note 1.2 (November 2003) (2003-07)	4.8	4.3	4.1	5.0	6.3
Briefing Note 2.0 (August 2004) (2003-08)	4.4	4.0	4.3	4.8	5.9
Briefing Note 3.0 (March 2006) (2003-09)	3.9	3.9	4.7	5.2	6.5
Briefing Note 4.0 (October 2006) (2006-10)	4.3	4.1	4.6	5.2	6.2
Briefing Note 1.2 (November 2003) (2003-12)	4.1	3.9	4.1	5.0	6.3
Briefing Note 2.0 (August 2004) (2003-13)	3.7	3.5	4.3	4.8	5.9
Briefing Note 3.0 (March 2006) (2005-14)	3.6	3.5	4.7	5.2	6.5
Briefing Note 4.0 (October 2006) (2006-15)	3.8	3.6	4.6	5.2	6.2

Source: Experian Business Strategies

EBS Expenditure Projections and Long Term Forecasts
Published in November 2003, August 2004, March 2006 and October 2006 Editions of Retail Planner



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APPENDIX 1D

Retail Planner Briefing Note 2.3D

Estimates & Projections of the Share of E-tailing in UK Retail Spending

December 2005

Retail Planner Briefing Note 2.3D

Estimates & Projections of the Share of E-tailing in UK Retail Spending

December 2005

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Introduction

The current scale and scope for the expansion of the selling of retail goods over the internet (e-tailing) has increasingly become an issue in retail planning. The ONS estimates of Non-Store retail sales only include the sales by wholly internet-based businesses and exclude sales over the internet of stores with a conventional retail presence. This is inadequate for judging either the scale or the growth of e-tailing.

Estimates based on the new E-commerce Survey of Business from ONS give a market share for e-tailing of 2.6 per cent in 2004. The market share of the broad definition of Non-Store Retail Sales (which includes, amongst other things, mail order and market stalls), is estimated to have been 4.6 per cent in 2004.

These are projected to increase to 9.7 and 10.5 per cent respectively by 2014.

Considerable uncertainty surrounds these estimates. With the exception of the estimates of the all retail value of e-tailing for 2002-4, all the estimates and projections contain numerous heroic assumptions. Nonetheless, we believe that the assumptions are consistent with the available information. A major uncertainty, however, concerns projected growth rates. As a result, we have also produced a second, lower case scenario for the projected market shares.

Note that goods sold over the internet may still come from conventional retail outlets (i.e. sales made over the internet may still be taken from the shelves of normal shops), so there is an additional uncertainty over e-tailing's precise impact on current and future retail space requirements.

1. DATA SOURCES AND DATA LIMITATIONS

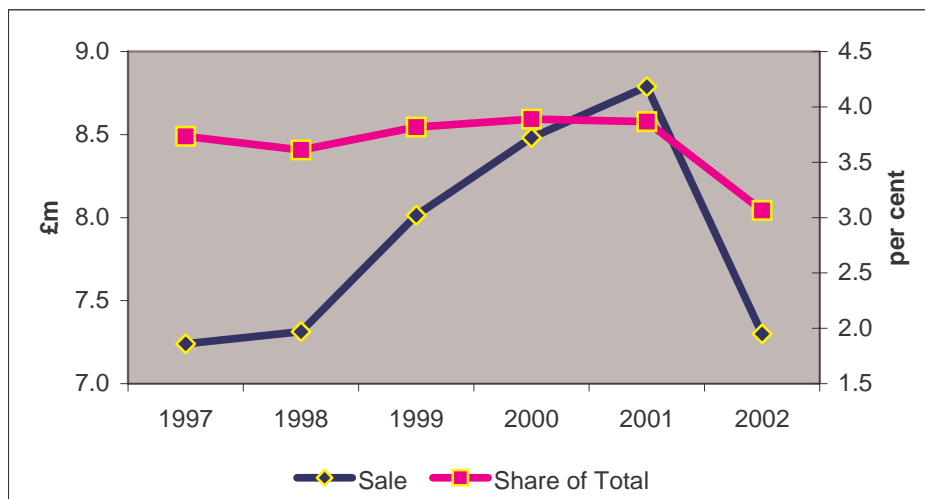
Retail Sales and ABI data

Previous versions of Retail Planner have identified the share of retail spending in “Non-Store Retail Sales”(ONS terminology). The breakdown is based on data from the ONS’s Annual Business Inquiry (ABI) and is similar to that which appears in the monthly retail sales data. This category contains a variety of outlook types including mail order, market stalls and door-to-door selling. Wholly internet-based companies (such as Amazon) are included within Mail Order. Internet sales by retailers who also have traditional outlets are not identified separately. This causes problems for two reasons:

1. It potentially severely understates the extent of internet-based trading (e-tailing).
2. The growth of wholly internet-based trading in the data is masked by the decline of traditional mail order sales.

In addition, there is a suspicion that the ONS data on Mail Order sales (that includes sales by wholly internet-based companies) understates recent growth.

Figure 1.1: Sales by Mail Order (including wholly internet-based companies)



Source: ONS Annual Business Inquiry

As Figure 1.1 clearly illustrates, the ABI actually shows little increase in the share of Mail Order to 2001 and then has an abrupt fall in both the share and the value of sales in 2002. More up-to-date data based on the Retail Sales Index illustrates further declines in Non-Store Retail Sales as a whole since 2002¹.

Alternative Data Sources

As a result of the limitations and issues with the ABI and Retail Sales data, we have had to look elsewhere for a better estimate of the value of e-tailing in the UK. The two sources considered are those collected frequently by IMRG² and the results of the ONS’s E-commerce Survey of Business (sales to households). These are summarised in Table 1.1 and in Figure 1.2.

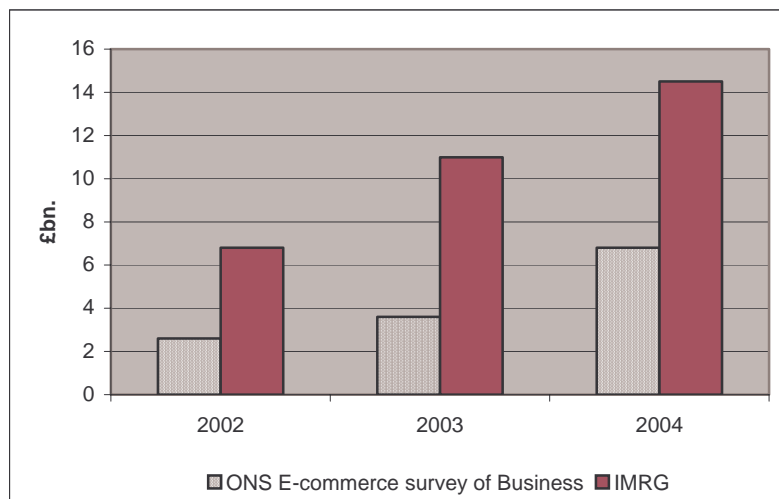
¹ The November 2005 Retail Sales First Release showed a fall in the value of Non-Store Retail Sales of 3.3 per cent between 2002 and 2004 and sales in October 2005 which were a further five per cent down on the 2004 average.

² Interactive Media Research Group.

Table 1.1: Alternative Estimates of the Value of E-tailing in the UK

	2002	2003	2004
ONS e-commerce Survey of Business			
Value of Orders Received (£bn)			
Total from Households	6.2	10.8	18.1
of which Retail/W'sale, car repair	2.6	3.6	6.8
IMRG	6.8	11.0	14.5
Share (%) of Total Retail Spending			
ONS Retail/W'sale, car repair	1.1	1.4	2.6
IMRG	2.9	4.4	5.5

Source: IMRG, IMRG Index Fifth Anniversary Report and Five-year Forecast, May 2005
 ONS, Information and Communications Technology (ICT): Activity of UK Businesses 2004, Table 7.

Figure 1.2: Alternative Estimates of the Value of E-tailing in the UK

Two features immediately stand out from in Table 1.1 and in Figure 1.2:

1. The IMRG estimates are substantially higher than those from the ONS.
2. Both series show a rapid increase and more than double between 2002 and 2004.

There are two possible reasons why the IMRG estimates could be out of line with those from the ONS. Firstly, the IMRG sample is not representative of e-tailers as a whole and, secondly, the IMRG sample contains companies who are not actually retailers. Given that the IMRG Index is based on a sample of around 80 companies whereas the ONS sample size is 12,000, the first is likely to be true and, as the IMRG report includes companies such as lastminute.com and Co-operative Travel³, it appears that the latter is also true. As a consequence, we feel justified in recommending the ONS's estimate, based on the E-commerce Survey of Business, of a base year (i.e. 2004) estimate of the value of e-tailing in the UK of £6.8 billion. This is the equivalent of 2.6 per cent of total retail spending in the UK.

³ Note that the ONS estimate also shows purchases from wholesalers and for car repair companies but we believe that the non-retail element of this spending will be trivial.

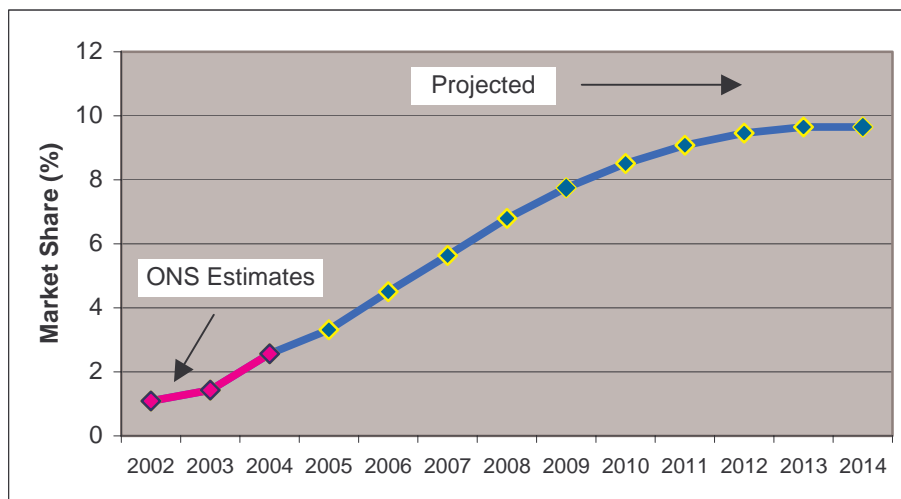
2. PROJECTIONS TO 2014

Projections to 2010

We appear to be in the take-off phase of the spread of e-tailing in the UK. This means that e-tailing's market share is following the classic S-curve profile of a slow start, rapid take off and an eventual plateau. The problem with the S-curve as a model for projecting future market share is that we have no real way of knowing where exactly we are on the curve. Is there more rapid growth to come or are we getting close to the levelling off of e-tailing's share? IMRG also release projections of e-tailing spend to April 2010 based on work by Forrester Research. This work postulates that growth (in both sales and market share) will accelerate in 2006 as the impact of the spread of broadband technology impacts. There are other considerations that should be taken into account in addition to the speed of access to the internet. For instance, problems with the delivery and receipt of goods are probably as significant a reason – if not more significant a reason – for many people's resistance to internet shopping, as access speeds are. Nevertheless, in the absence of plausible alternative projections, we have taken the IMRG/Forrester Research projections as the basis of our projections to 2010 (that is for growth rates; the 2004 estimate is based on ONS data, see above). Note also that although the levels are very different, the ONS's estimates of growth between 2002 and 2004 are actually higher than IMRG's (Table 1.1).

On an annualised basis and spliced on to the 2004 ONS estimate, the IMRG/Forrester Research projection imply that the value of e-tailing in the UK will increase from £6.8 billion in 2004 to £24.0 billion in 2009. This represents a 27.8 per cent compound growth rate and an increase in market share from 2.6 to 7.7%⁴. This is illustrated in Figure 2.3.

Figure 2.1: E-tailing Sales as a Percentage of Total Retail Expenditure 2002-14



Projections Beyond 2010

The IMRG/Forrester Research projections only extend to April 2010 and are in value terms, not market share terms. We have made an annual extrapolation beyond 2009 based on the gradual slowdown of the absolute change in e-tailing's market share (at a rate of 20 per cent of the 2008-9 change a year until the market share stabilises). The results of this exercise are also illustrated in Figure 2.1.

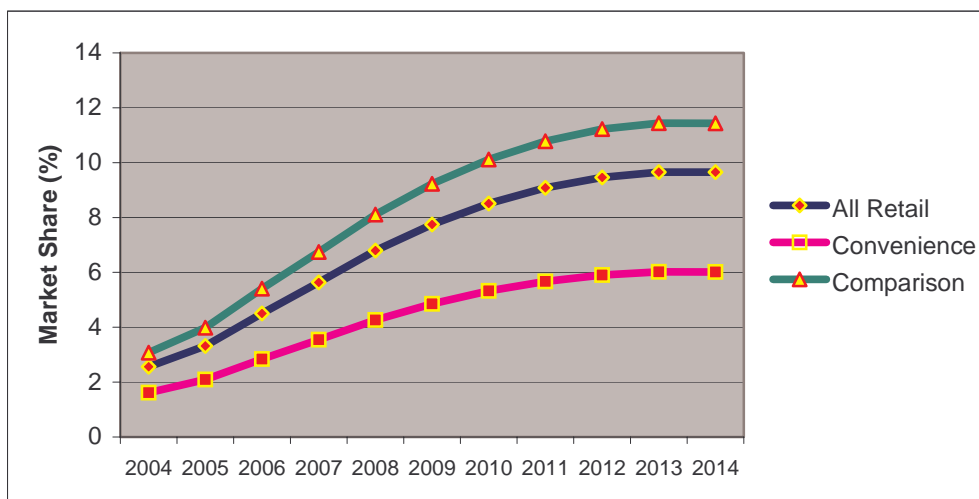
⁴ Based on the 11/05 Experian Retail Sales forecasts.

3. THE CONVENIENCE-COMPARISON BREAKDOWN

The ONS E-commerce Survey of Business gives no breakdown below retail, wholesale and car repair and, to the extent of our knowledge, there are no reliable alternative sources of information on the breakdown. However, we do have some data based on the results of major e-tailers, for instance, Tesco.com's £718 million sales in the year ending February 2005. (The majority of these sales are convenience goods and Tesco are believed to be the UK's biggest convenience e-tailer by a significant margin). In addition, there is an estimate from the Institute of Grocery Distribution that puts e-tailing's share of total convenience spend at "no more than 0.8 per cent"⁵. The estimates assume that convenience goods' e-tail sales in 2004 were £1.5 billion – in other words, Tesco.com has an approximate 50 per cent share of the market. This assumption implies that e-tailing's share of total spending on convenience goods in 2004 was 1.6 per cent and the equivalent figure for comparison goods 3.1 per cent, compared to a figure of 2.6 per cent for all retail.

Projections by convenience/comparison have been produced in two stages. Stage 1 produced a first cut projection by splicing on the forecast growth rates for all convenience and comparison spend. Stage 2 constrains these estimates to the projected total for all retail goods derived above. The results are shown in Figure 3.1.

Figure 3.1: Projected Market Share by Type of Retail Good



These projections illustrate the market share of e-tailing in convenience and comparison goods spending levelling off at around 6 and 11.4 per cent, respectively, in 2014.

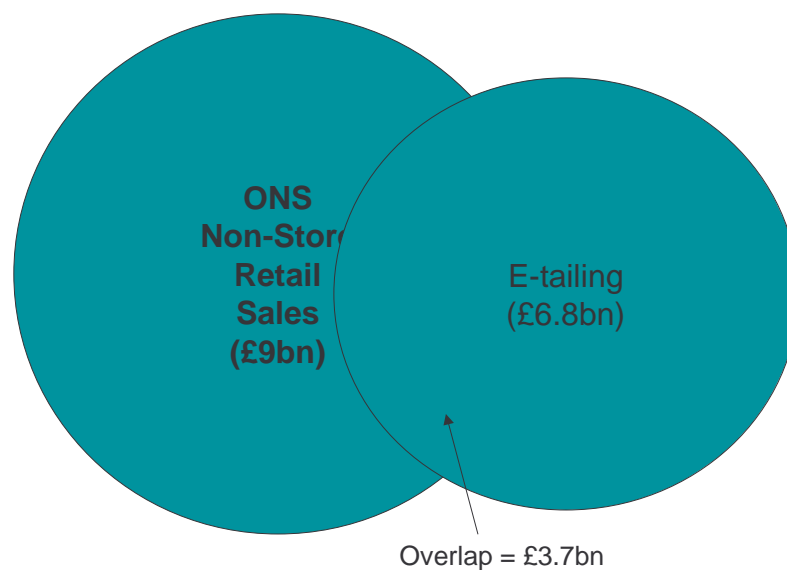
⁵ Quoted in Robinson, H., Rettie, R., Dall 'Olmo Riley, F., Rolls-Willson G., (2005), Drivers and barriers to purchasing groceries online in the UK, *EMAC 2005*, Milan.

4. ESTIMATES OF THE TOTAL MARKET SHARE OF NON-STORE RETAIL SALES

As mentioned in Section 1, the definition of Non-Store Retail Sales used by the ONS in the ABI and the monthly Retail Sales estimates includes an element of e-tailing (i.e. sales by wholly internet-based businesses) but not the entirety. As a result, we cannot simply add our new estimates of e-tailing spend to the ABI data to get an adjusted wider data.

To do this, we need an idea of the share of the ONS's definition of Non-Store Retail Sales that is also part of our wider definition of e-tailing. As usual, we have little to guide us with this estimate. However, we have made an assumption that 15 per cent of sales recorded as being Non-Store Retail Sales in 2002 are also in our broader e-tailing definition, for both convenience and comparison goods. As the Mail Order category in the ABI, which includes sales by wholly internet-based businesses, accounted for 82 per cent of total retail sales in 2002, this is the equivalent of assuming that just over 18 per cent of the ABI Mail Order category in 2002 was e-tailing. The relationship between the ONS Non-Store Retail Sales definition and e-tailing (for 2004) is described in Figure 4.1:

Figure 4.1: The Relationship Between ONS Non-Store Retail Sales and e-tailing in 2004



Since 2002, ONS data illustrates a fall in sales in their Non-Store Retail Sales category. Assuming that the convenience/comparison split remained the same between 2002 and 2004 (as in the 2002 ABI) and assuming that the e-tailing component grew at the same rate as all e-tail sales, we can derive the estimates given in Table 4.2. This highlights, for example, that in 2004 we estimate that 4.4 per cent of comparison goods sales were Non-Store Retail Sales⁶. We estimate that of this 4.4 per cent, 1.8 per cent is also included in our e-tailing definition. The remaining 2.6 per cent are of comparison goods sales, which is the estimate of Non-Store Retail Sales excluding all e-tailing. By adding the estimated 3.1 per cent of comparison goods, sold through e-tailing, to the 2.6 per cent sold through Non-Store Retail Sales excluding all e-tailing, we get the estimate of 5.7 per cent which we term the “Broad” estimate of the market share of Non-Store Retail Sales.

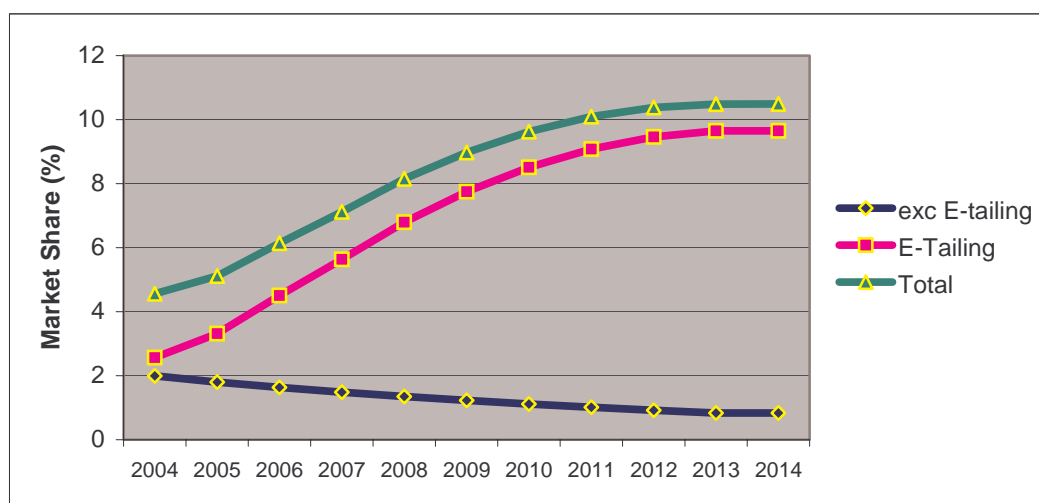
⁶ Utilising the standard ONS definition

Table 4.2 : Broad Estimates of Non-Store Retail Sales in 2002 & 2004 (% of Total sales)

	2002 – Based on the ABI	2004 Estimate
Convenience		
ONS Non-Store Retail Sales	1.5	1.4
of which e-tailing	0.2	0.5
ONS Non-Store Retail Sales exc e-tailing	1.3	0.9
E-tailing	0.7	1.6
Broad Measure of Non-Store Retail Sales	2.0	2.5
Comparison		
ONS Non-Store Retail Sales	5.3	4.4
of which e-tailing	0.8	1.8
ONS Non-Store Retail Sales exc e-tailing	4.5	2.6
E-tailing	1.3	3.1
Broad Measure of Non-Store Retail Sales	5.8	5.7
All Retail Sales		
ONS Non-Store Retail Sales	3.9	3.4
of which e-tailing	0.6	1.4
ONS Non-Store Retail Sales exc e-tailing	3.3	2.0
E-tailing	1.1	2.6
Broad Measure of Non-Store Retail Sales	4.4	4.6

Source: see text.

However, projecting Non-Store Retail Sales is not straight forward because there appears to be a relationship between the decline of Non-Store Retail Sales (ONS definition) and the growth of e-tailing. Given the projected continuation of the growth of e-tailing, there is an offsetting decline in the market share of Non-Store Retail Sales excluding e-tailing. We have assumed that the market share of Non-Store Retail Sales excluding e-tailing gradually falls until it reaches 0.5 per cent for convenience goods and 1.0 per cent for comparison goods by 2013.

Figure 4.2: - Non-Store Retail Sales – Broad Definition

5. A WEAKER-CASE SCENARIO

The projections described above are based on the projections for total e-tailing produced by IMRG/Forrester Research rescaled to the 2004 ONS estimate from the e-commerce Survey of Businesses. They present a distinct increase in both the growth rate and the absolute change in the market share in 2006 to allow for the impact of the further dissemination of broadband internet connections. This section asks what might happen if this acceleration does not occur – in other words what if we are further along the S-curve than IMRG/Forrester Research assume?

Specifically, we assume that the absolute increase in market share after 2005 falls by 100 basis points a year until the share levels off in 2013. The “Lower Case” projection is compared with the “Main Case” below.

Figure 5.1: The Market Share of E-Tailing – Alternative Projections

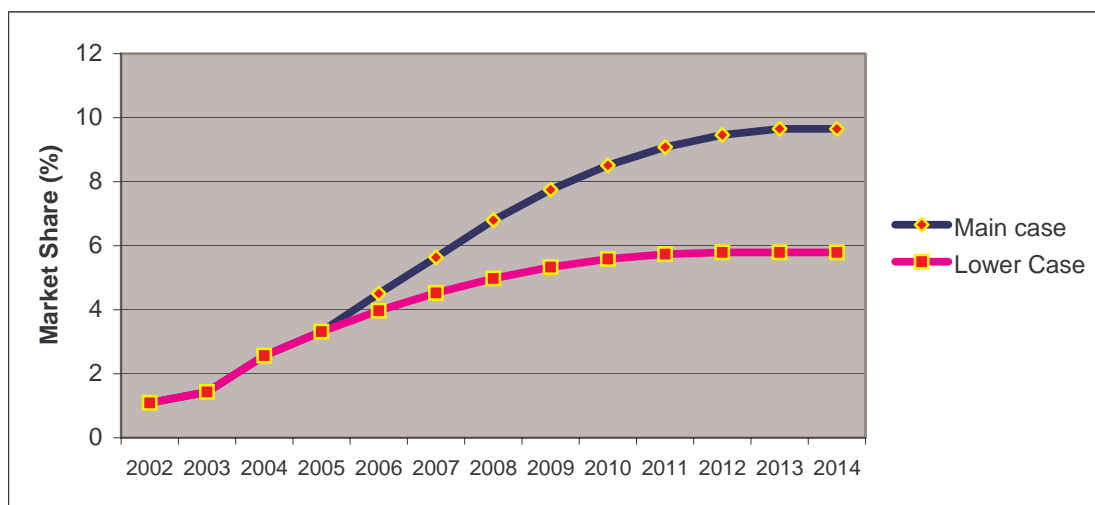


Figure 5.1 illustrates the share of e-tailing in the “Lower Case” levelling off at just below 6 per cent compared to the 10 per cent in the “Main Case”. The implications of this for convenience and comparison separately, and for the Broad Definition of Non-Store Retail Sales are presented in the Data Appendix.

DATA APPENDIX

Table 6.1: Main Case Market Shares

	ONS Definition of Non-store Retail					
	Sales exc E-tailing			E-tailing		
	Convenience	Comparison	Total	Convenience	Comparison	Total
2004	0.9	2.6	2.0	1.6	3.1	2.6
2005	0.8	2.3	1.8	2.1	4.0	3.3
2006	0.8	2.1	1.6	2.8	5.4	4.5
2007	0.7	1.9	1.5	3.5	6.7	5.6
2008	0.7	1.7	1.4	4.3	8.1	6.8
2009	0.6	1.5	1.2	4.9	9.2	7.7
2010	0.6	1.4	1.1	5.3	10.1	8.5
2011	0.6	1.2	1.0	5.7	10.8	9.1
2012	0.5	1.1	0.9	5.9	11.2	9.5
2013	0.5	1.0	0.8	6.0	11.4	9.7
2014	0.5	1.0	0.8	6.0	11.4	9.7

Table 6.2: Main Case - Broad Definition of Non-Store Retail Sales

	Market Share			£bn.		
	Convenience	Comparison	Total	Convenience	Comparison	Total
2004	2.5	5.7	4.6	2.3	9.8	12.1
2005	2.9	6.3	5.1	2.8	11.0	13.8
2006	3.6	7.5	6.1	3.5	13.5	17.1
2007	4.3	8.6	7.1	4.3	16.3	20.5
2008	4.9	9.8	8.1	5.1	19.3	24.4
2009	5.5	10.8	9.0	5.7	22.0	27.8
2010	5.9	11.5	9.6	6.3	24.3	30.6
2011	6.2	12.0	10.1	6.8	26.2	32.9
2012	6.4	12.3	10.4	7.1	27.7	34.8
2013	6.5	12.4	10.5	7.4	28.8	36.2
2014	6.5	12.4	10.5	7.6	29.7	37.3

Table 6.3: Lower Case Market Shares

	ONS Definition of Non-store Retail Sales exc E-tailing					
	Sales exc E-tailing			E-tailing		
	Convenience	Comparison	Total	Convenience	Comparison	Total
2004	0.9	2.6	2.0	1.6	3.1	2.6
2005	0.8	2.3	1.8	2.1	4.0	3.3
2006	0.8	2.3	1.7	2.5	4.8	4.0
2007	0.8	2.2	1.7	2.8	5.4	4.5
2008	0.8	2.1	1.6	3.1	5.9	5.0
2009	0.7	2.0	1.6	3.3	6.3	5.3
2010	0.7	1.9	1.5	3.5	6.6	5.6
2011	0.7	1.8	1.5	3.6	6.8	5.7
2012	0.7	1.8	1.4	3.6	6.9	5.8
2013	0.7	1.8	1.5	3.6	6.9	5.8
2014	0.7	1.8	1.5	3.6	6.9	5.8

Table 6.4: Lower Case - Broad Definition of Non-Store Retail Sales

	Market Share			£bn.		
	Convenience	Comparison	Total	Convenience	Comparison	Total
2004	2.5	5.7	4.6	2.3	9.8	12.1
2005	2.9	6.3	5.1	2.8	11.0	13.8
2006	3.3	7.0	5.7	3.2	12.7	15.9
2007	3.6	7.6	6.2	3.6	14.3	17.9
2008	3.9	8.0	6.6	4.0	15.8	19.8
2009	4.1	8.3	6.9	4.3	17.1	21.3
2010	4.2	8.6	7.1	4.5	18.1	22.6
2011	4.3	8.7	7.2	4.6	18.8	23.5
2012	4.3	8.6	7.2	4.8	19.4	24.1
2013	4.3	8.7	7.2	4.9	20.1	25.0
2014	4.3	8.7	7.2	5.0	20.7	25.7

**PORTSMOUTH SHOPPING STUDY: UPDATE
PORTSMOUTH CITY COUNCIL**

APPENDIX 1E

Retail Planner Briefing Note 2.2

Estimating and projecting sales densities

April 2005



Retail Planner Briefing Note 2.2

Estimating & projecting sales densities

April 2005

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Introduction

The extent to which sales densities for existing retail space are expected to increase in the future is a key element in assessing the adequacy or otherwise of retail capacity. We refer to this as productivity growth (for short, or more properly as retail space productivity growth).

The potential relationship between productivity growth, retail demand growth and the vitality of retail centres is another reason for being interested in productivity growth. If productivity grows by, for example, 2.5 per cent per annum but retail spending grows by only 2.0 per cent per annum, there will be an increasing excess of capacity over sales. This will inevitably manifest itself in increased shop closures and vacant units and is also a concern of this Briefing Note, alongside the adequacy of future retail space provision.

Projecting potential sales densities and, hence, capacity is not straightforward. On the one hand, considerable uncertainty surrounds the accuracy of data on past trends. On the other, it is not clear if past trends are a good guide to future changes. This is partly because past trends may not be sustainable and partly because past trends were themselves a response to earlier planning regimes or, equally, to market changes (the growth of superstores and retail warehouses and the increasing concentration of comparison spend in higher order centres and multiple retailers at the expense of more local centres and independents) that may not be relevant to the future.

The estimates in this Briefing Note are consistent with the current version of Retail Planner (October 2004), which is described in Retail Planner Briefing Note 2.0 (August 2004). As the estimates of historical sales densities contained in this note are sensitive to estimated historical levels and rates of change of expenditure, they should not be used in conjunction with other briefing notes (other than 2.0) or other historical expenditure estimates from any source.

1. Defining capacity – what is retail space productivity/efficiency growth?

We define retail space productivity growth, or the rate of change of the efficiency of retail floorspace, as the rate of change of sales densities in real terms (i.e. after allowing for inflation) over time.

Aggregate sales densities can change for a number of reasons. One is the usual economists' definition of productivity change, whereby retailers become better at using floorspace and manage to sell more goods for a given amount of space. They achieve this through a combination of better management of stock, more efficient floor layout, getting more customers through the door and converting more of the footfall into sales. This process will be accelerated as new floorspace, which may have a more modern and more efficient design, replaces old. Some of this will effect the net-to-gross floorspace ratio and, hence, will not be relevant to net sales densities, but there can still be scope for higher sales densities through the more efficient use of net floorspace.

Retailers have also been able to increase sales densities by making existing sales floorspace available for more time, either through Sunday opening or through longer opening hours on other days of the week.

Changing the use of space offers another way of increasing efficiency. Electrical stores, for example, have high sales densities relative to furniture stores. Consequently, a shift in the mix of the use of retail floorspace from furniture stores to electrical stores would increase aggregate efficiency and would show up as productivity growth.¹ A variation on this is a change in the mix of goods sold within stores: if a store can sell higher-value (rather than just higher-price) goods, it will increase its real sales density. Alternatively, if items become smaller (as with many electronic goods), more can be sold from a given amount of space and this will also increase sales densities and add to productivity growth.

Any productivity growth that we observe will be a combination of the above three effects.

Note that a change of product mix can alter sales densities for convenience as well as comparison goods and stores. Increased sales of ready-to-eat meals and organic produce are examples of changes to the product mix that have pushed up measured sales volumes and sales densities in recent years.

It is important not to confuse floorspace productivity with labour productivity, which refers to the changing amount of labour required to support a given amount of retail sales. Not only are they measures of different things, they may move in the opposite direction: greater sales densities (i.e. greater floorspace productivity) can involve a greater labour input and, hence, lower labour productivity (in the terminology of economics, labour and floorspace may be substitutes in the production process). Floorspace productivity is the focus of our attention here because of its crucial importance in the planning context to the determination of future floorspace requirements.

¹ In this context, we estimate that the increase in the share of spending on audio-visual equipment, major and small appliances in total comparison goods spend between 1998 and 2000 increased aggregate productivity growth by approximately 0.4 per cent per annum.

2. Estimates of productivity growth using official data²

There are no official estimates of sales densities split by type of goods sold. Estimates have been made based on the Census of Distribution, but the last one of these took place in 1971. Based on the old Census of Distribution, URPI³ produced estimates for the annual rate of increase of comparison and convenience floorspace of 1.7 per cent and -1.3 per cent per annum respectively and no overall change for all retail floorspace. In the same note, URPI also estimated, based on a mixture of Valuation Office and company data, that sales densities had increased by 1.5 per cent and -1.3 per cent for comparison and convenience goods respectively and nil overall between 1971 and 1977. In 1986, URPI recommended that planners use forecasts of sales density growth of 2.0 per cent for comparison goods stores (falling eventually to 1.5 per cent), 0.15 per cent for convenience goods stores and 1 per cent for all stores. Many practitioners still use the 1.5 per cent recommendation for comparison goods to this day.

In the absence of official estimates on the breakdown of the retail stock of space and only patchy data on its total size, and given the considerable vintage of the URPI estimates and recommendation, we need to look elsewhere for more up-to-date information. The Department of the Environment produced data on the total stock of retail space for England and Wales to 1986, with a single observation also available for 1994. Data on the total stock of retail space for 2000, 2002, 2003 and 2004 is also available from the Valuation Office on a broadly comparable basis,⁴ so we do have an up-to-date series for the total stock of retail space, albeit with gaps.

One drawback with the DoE/Valuations Office data is that it includes pubs, restaurants and banks (and other services) as well as retail space. In the absence of any other information, however, we have to make the assumption that the ratio of pure retail to total space as measured by the DoE/Valuation Office remained roughly constant over time. This is plausible, as the reduction in space taken up by banks has been roughly made up for by an increase in the space taken up by restaurants, but it does add another element of uncertainty to the historical estimates. (Note, however, that if the share of service space has increased, the estimates presented below will overstate the growth in retail space and, hence, will under-estimate past retail space productivity growth.)

We have produced a time series estimate of total retail floorspace for the UK by multiplying the England and Wales data by 1.12⁵, to allow for Scotland and Northern Ireland, and by interpolating the data for the missing years using data on the new construction of retail space.

² For an alternative discussion of retail productivity, see the DTI reports *Driving Change*, The Retail Strategy Group, April 2004 and *Assessing the Productivity of the UK Retail Sector*, Oxford Institute of Retail Management, Templeton College, April 2004.

³ Information Brief 84/8, December 1984.

⁴ 'Comparison of the current Floorspace Statistics with those published in 1986 should be reasonably reliable, though the methods of data collection and classifications differ in various ways. Though this comparability has not been investigated, nevertheless it is believed that reasonably useful conclusions may be drawn from comparisons so long as the above considerations are born in mind.' ODPM, (2001), *Floorspace and Rateable Value for Commercial and Industrial Properties 2000*. The definition of retail space used by the Valuation Office falls somewhere between the definitions of gross and net space.

⁵ This assumption is based on spending in Northern Ireland and Scotland relative to that in England and Wales. The 1.12 multiplier itself is not important but big changes in Scotland and Northern Ireland's share of spending and/or productivity in Scotland and Northern Ireland relative to England and Wales could bias the calculations.

We have used this estimate, together with the estimates of total retail spend described in Stage 1, to derive the sales densities shown in Figure 1.

Figure 1: Constant price sales densities – all retail sales

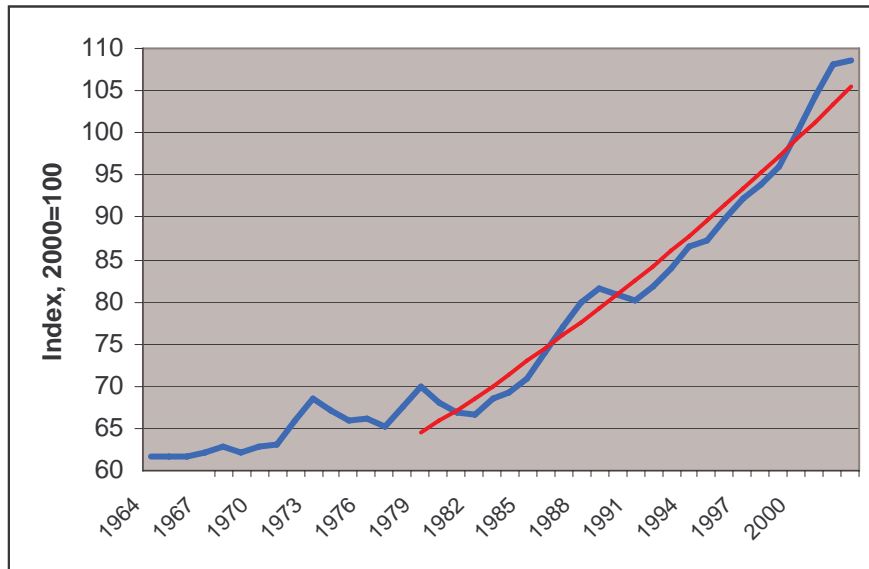


Figure 1 shows a more or less continuous increase in aggregate sales densities since 1984 except for during the recession period of 1989-1991. The increase in sales densities has been particularly strong since 1999, reflecting the strength of retail sales in recent years. The levelling off in 2003 was due to a substantial increase in available space (up 4.1 per cent over the year) rather than a major slowdown in spending.

Note that retail spending tends to fluctuate considerably from year-to-year while the change in the stock of retail space tends to be relatively stable (2003 was an exceptional year in this context). Hence, short-term fluctuations in retail expenditure have a big influence on short-term changes in productivity. This is not the same as saying that the long-run rate of productivity growth is driven by retail spending growth, as in the long run the amount of space will have time to catch up with changes in spending, and productivity growth will be independent of aggregate spending growth. This is not to say that some third factor, such as changes in the mix of spending, will not influence both spending and productivity growth. This is explored further in the 'Future Changes' section in Chapter 3 of this Briefing Note.

A trend line fitted between 1979 and 2003 is also shown in Figure 1. This shows that sales densities since 1999 are running 'above trend' (as defined by the fitted line) and that in order to avoid the impact of cyclical variation, it is safer to measure the trend growth between 1986 and 1999 rather than over the full period shown. Estimated aggregate densities increased at an average annual rate of 2.4 per cent per annum between 1984 and 2003 and at an annual average rate of 2.2 per cent per annum between the cyclically comparable points of 1986 and 1999.

Taking a longer view, the long-term trend (as defined for the 1975-2003 expenditure trend) is 1.7 per cent. This lower figure is still considerably higher than the 1.0 per cent per annum that URPI recommended in 1986.

3. Estimating sales densities for convenience and comparison goods

We still have a problem with deriving separate estimates of sales density growth for convenience and comparison goods space. However, if we have a starting estimate of sales densities for convenience goods space relative to comparison, and an assumption for the growth rate of sales densities for convenience goods, we can derive an estimate of sales densities for comparison goods as a residual.

Business-based estimates for large retailers indicate that sales densities for convenience goods stores were 50 per cent higher than for comparison goods stores in 1986 (current prices). This is reflected in the ratio of the estimated sales densities for 1986 in the third row of numbers in Table 1. Estimates of sales density growth for convenience stores, also based on the published reports of large retailers, show average annual increases in sales densities over the period of 1.1 per cent per annum in constant prices or 4.5 per cent per annum in current prices. These estimates, together with our estimates of retail spending, enable us to derive estimates of convenience floorspace and, hence, comparison floorspace as a residual.

Table 1: Estimated sales densities for convenience and comparison goods

	1986		1999		Average annual percentage change 1986-1999	
	Conv- enience	Comp- arison	Conv- enience	Comp- arison	Conv- enience	Comp- arison
Floorspace (000 m ²)	35928	56152	36695	78614	0.2	2.6
Retail spending (£m, current prices)*	44808	46687	81103	116684	4.7	7.3
Sales densities (current prices)*	1.247	0.831	2.210	1.484	4.5	4.6
Retail spending (£m, 2003 prices)	72800	51144	85855	105958	1.3	5.8
Sales densities (constant prices)	2.026	0.911	2.340	1.348	1.1	3.1

* After allowing for special forms of trading.

These calculations give an estimate of the average annual percentage increase in comparison sales densities in constant prices of 3.1 per cent between 1986 and 1999. This is over double the figure of 1.5 per cent per annum suggested by URPI.

Underlying productivity growth rates for comparison good space

Estimating the underlying trend by fitting a time trend to the data for 1986-1999, rather than by using spot estimates as in Table 1, gives an underlying growth rate of 2.9 per cent per annum. We lack sufficient company data to reproduce the exercise exactly over a longer period, but if we assume that the old URPI figure of 1.5 per cent per annum applied before 1986, we get a long-term growth rate (calculated on a similar basis to the expenditure projection between 1975 and 2003) of 2.5 per cent per annum. This is still considerably higher than the old URPI recommendation.

Sensitivity to the estimates of convenience sales densities

The estimates of convenience sales densities and sales density growth used for the calculation behind Table 1 are based on the published reports of large retailers. These could be a biased representation of sales densities for all convenience goods space. Many large convenience goods retailers sell comparison goods as well as convenience and this will bias both the 1986 ratio (downwards) and the estimated growth in convenience sales densities since 1986 (upwards). Both of these actually bias down the estimated growth rates of sales densities for pure comparison goods space.

Sensitivity to estimated sales growth

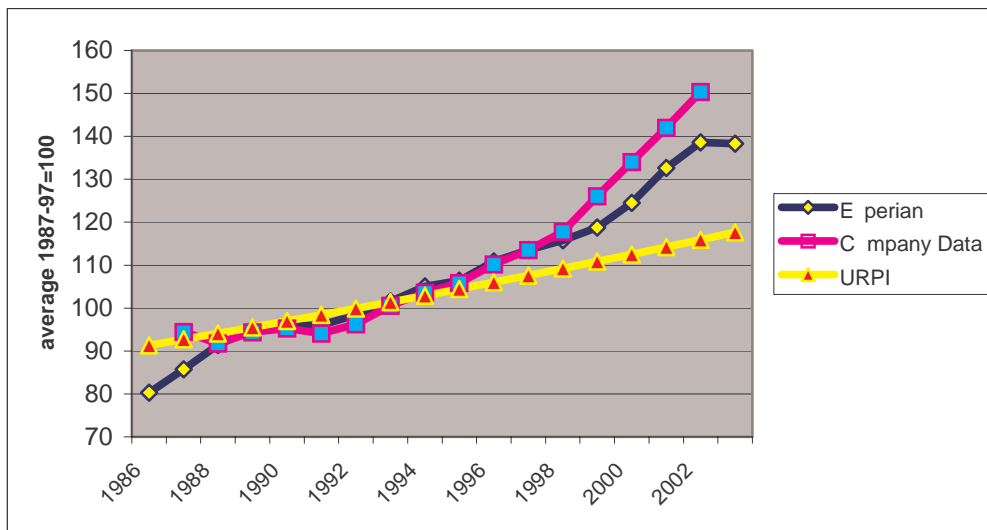
All of the estimates are obviously sensitive to the accuracy of the expenditure data. The period 1986-1999 saw the discrepancy between official estimates of retail sales and official estimates of expenditure on retail goods widen considerably.⁶ If we assume that total sales grew in line with retail sales values between 1986 and 1999 and that all of the discrepancy is in the comparison rather than the convenience goods estimates, then the estimated growth of constant prices sales densities for comparison goods is 2.2 per cent per annum rather than the 3.1 per cent estimated using expenditure data. The difference between the two estimates is substantial, though the lower one is still much higher than the URPI recommendation.

Note also that the projections based on different estimates should not be mixed and matched. For example, the lower sales density growth based on retail sales/business base data should not be used in conjunction with a higher spending growth projection based on past changes in expenditure data.

A comparison with company data

As Figure 2 shows, estimates based on company data show a very similar profile to the estimates summarised in Table 1. This is the case even though the company data is based on the Reports and Accounts of large publicly quoted companies and relates to net floorspace sales densities, while our estimates relate to all comparison goods floorspace and the DoE/Valuation Office definition of floorspace. Figure 2 also plots the old 1.5 per cent URPI recommendation and shows just how far away actual sales densities have been since the mid-1990s.

⁶ See Retail Planner Briefing Note 2.1.

Figure 2: Alternative estimates of constant price sales densities for comparison goods

Future changes

Estimates of past rates of change are not necessarily a guide to likely or desirable future rates of change:

1. Past growth may have been due to a number of one-off events that may not be easily repeatable. As outlined in Chapter 1 of this Briefing Note, such one-off events include Sunday opening, longer opening hours on other days and the boom in the sales of audio-visual equipment, especially mobile phones (which pushed up sales volumes without requiring much additional space).
2. Past sales density growth may have resulted in over-shopping. This is the cramming in of customers and sales into a level of retail floorspace which may not be optimal from either a customer or company profitability viewpoint. Note, however, that extra sales do not necessarily equate to extra footfall. Past rapid sales growth may lead some commentators to overstate this problem as a general issue, though it may well occur in specific cases.
3. Past sales density growth may have been influenced by changes in the mix of goods sold. In particular, we think that the big increase in the share of audio-visual equipment in the volume of comparison goods spending may have been a major factor in driving up productivity growth rates. If this is correct, future productivity growth rates will depend on the extent to which the increase in the share of audio-visual equipment continues.

These considerations should lead to caution in making future projections. The long-term (1975-2003) trend for comparison goods space is 2.5 per cent, although Figure 1 and Figure 2 suggest that there may have been a recent increase in the trend. Given the uncertainties outlined above, an assumption that sales densities are likely to increase at somewhere in the range of 2.0 per cent (the 'moderate' assumption) to 2.5 per cent (the 'historical' trend) appears appropriate. The 'moderate' assumption makes some allowance for the – possibly one-off – impact that changes in opening hours and the big increase in the share of audio-visual equipment have had on measured productivity in recent years.

Similarly, we would expect a slowdown in the observed 1.1 per cent per annum increase in convenience sales densities between 1986 and 1999⁷. Nonetheless, we still expect future increases to be well above the old URPI figure of 0.15 per cent – we suggest that 0.75 per cent might be more suitable.

Note that these are projections of potential densities, based on past trends, rather than a forecast of actual densities. Actual sales densities will depend not only on potential change but also on such things as unexpectedly strong or weak sales growth (which can result in underinvestment or overinvestment in new space) and the impact of the planning system itself (which can delay investment in new space). Changes in the profitability of floorspace could also have an influence (see ‘Other Considerations’ below).

Hence, for the purpose of planning for retail floorspace needs, we argue that the 2.0-2.5 per cent range for comparison floorspace and the 0.75 per cent figure for convenience can be used, within reason,⁸ with any projection or forecast of sales growth.

In the context of the projected and forecast spending growth published in Retail Planner Briefing Note 2.0, this has the following implications for the demand for new retail floorspace at the UK level over the period 2003-2013:

Table 2: Spending growth, productivity growth and floorspace needs

	Comparison	Convenience
Spending per head growth		
EBS forecast	3.7	0.9
Consensus forecast	3.5	0.8
Ultra long-term trend	4.3	0.7
Total spending head growth		
EBS Forecast	4.1	1.3
Consensus Forecast	3.9	1.2
Ultra Long-Term Trend	4.7	1.1
Productivity growth	2.0-2.5	0.75
Floorspace needs		
EBS forecast	1.6-2.1	0.55
Consensus forecast	1.4-1.9	0.45
Ultra long-term trend	2.2-2.7	0.35

Source: See text and Retail Planner Briefing Note 2.0, Experian August 2004; future population growth has been assumed to be 0.4 per cent per annum for the purposes of these calculations. When the Retail Planner Briefing Note 2.0 was prepared, the official projection was 0.34 per cent. It has since been revised up to 0.38 per cent.

⁷ Note that the increasing share of comparison goods sold in convenience stores has not necessarily increased the growth of sales densities in convenience stores even though comparison productivity growth has been much higher than convenience. This is because comparison densities are lower than convenience and a switch from convenience to comparison space can actually depress aggregate densities for convenience stores.

⁸ Judgementally, we would define ‘within reason’ as comparison goods spend being within plus or minus 1.5 percentage points of the long-run trend for spend per head growth (3.3-6.3 per cent) and within plus or minus 0.5 percentage points for convenience goods (0.2-1.2 per cent).

Impact of the mix of goods

These figures are valid for a representative range of either comparison or convenience goods. Although there is little firm statistical evidence, anecdotal evidence suggests that the potential for productivity growth varies with the type of goods. This is recognised explicitly by having different assumptions for comparison and convenience goods but, in reality, it may also apply to goods within the comparison and, to a lesser extent, convenience goods headings.

As with the discussion of the potential impact of the increased share of audio-visual equipment on aggregate productivity growth, the best example of this is the comparison between audio-visual equipment and other comparison goods. There is strong anecdotal evidence for higher than average productivity growth for floorspace used for audio-visual equipment and, by implication, for lower than average productivity growth for floorspace used for other comparison goods. Consequently, although we are unable to quantify by how much, there is scope for arguing that different mixes of goods will give rise to different levels of productivity growth.

Local considerations

All the calculations presented above are based on national estimates where we assume that any over-trading in some localities is roughly cancelled out by under-trading elsewhere. This argument does not hold at the local level: if there is evidence of over-trading, then the potential for increases in sales densities is likely to be much less than the national averages reported above, and vice-versa. This needs to be taken into account in projecting floorspace needs. It is likely to be of particular importance for convenience floorspace, where projected spending growth in the range of 1.0-1.2 per cent per annum⁹ is only marginally higher than the projected potential growth of convenience densities.

The extent of under-trading or over-trading can be assessed only by a detailed study of local circumstances and is not informed by this Briefing Note. Similarly, there may be regeneration or underserved markets or sustainability arguments for new floorspace, which also need to be taken into account.

Other considerations

A further consideration is the impact of retailers' unit profits or margins (not prices) on sales densities. The demand for any factor of production (of which floorspace is one) usually varies with the margin received by the producer/retailer relative to the cost of that factor (the rent per square metre in this case). If the change in the ratio of margins to rents in the future is likely to be very different to that experienced in the past, a simple extrapolation of sales densities will not be valid. The extent of the error will depend partly on the difference in the change in the margins to rent ratio in the future compared with the past, and partly on the sensitivity (elasticity) of densities to the margins to rents ratio.

This is not considered further here, but will be the subject of a forthcoming Briefing Note.

⁹ This range is for 2003-2013 and runs from the 0.7 per cent per annum ultra long-term trend plus 0.3 per cent per annum population growth, to the 0.9 per cent per annum Experian forecast plus 0.3 per cent per annum population growth.

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PORTSMOUTH CITY COUNCIL**

APPENDIX 2

**PORTSMOUTH SHOPPING STUDY: UPDATE
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APPENDIX 2A

PORTSMOUTH SHOPPING STUDY: UPDATE, 2007 - EXISTING RETAIL FLOORSPACE BY CENTRE/LOCATION

Centre	Goods Category	Net Floorspace in May 2004 SQ M¹	Additional Net Floorspace, 2004-07 SQ M²	Total Existing Net Floorspace as at May 2007 SQ M
Portsmouth City Centre	Convenience	6,406	0	6,406
	Non-Bulky Comparison	43,000	2,104	45,104
	Bulky Comparison	4,000	0	4,000
	Total	53,406	2,104	55,510
Cosham	Convenience	3,210	0	3,210
	Non-Bulky Comparison	4,636	98	4,734
	Bulky Comparison	949	0	949
	Total	8,795	98	8,893
Fratton	Convenience	3,645	0	3,645
	Non-Bulky Comparison	3,302	82	3,384
	Bulky Comparison	826	0	826
	Total	7,773	82	7,855
Gunwharf	Convenience	262	71	333
	Non-Bulky Comparison	9,771	573	10,344
	Bulky Comparison	404	0	404
	Total	10,437	644	11,081
North End/London Road	Convenience	4,366	0	4,366
	Non Bulky Comparison	8,068	0	8,068
	Bulky Comparison	4,539	0	4,539
	Total	16,973	0	16,973
Southsea	Convenience	2,665	0	2,665
	Non-bulky Comparison	17,190	67	17,257
	Bulky Comparison	4,298	0	4,298
	Total	24,153	67	24,220

¹ Source: Portsmouth Shopping Study, Update, Colliers CRE, December 2004

² Source: Portsmouth City Council Planning Department, May 2007. Floorspace estimates are for retail developments/shops opening for trading between May 2004 and May 2007.

Out of Centre Food Stores	Convenience	8,287	291	8,578
	Non-Bulky Comparison	0	0	0
	Bulky Comparison	0	0	0
	Total	8,287	291	8,578
Out of Centre Retail Parks	Convenience	0	0	0
	Non-Bulky Comparison	0	0	0
	Bulky Comparison	36,481	237	36,718
	Total	36,481	237	36,718

Note: Table excludes small additions to retail floorspace stock in local centres. No information is available on the total retail floorspace of these centres.

**PORTSMOUTH SHOPPING STUDY: UPDATE
PORTSMOUTH CITY COUNCIL**

APPENDIX 2B

COSHAM SUBURBAN CENTRE: RECENTLY COMPLETED RETAIL DEVELOPMENTS

Location	Description of Development	Assumed Goods Category	Current Status	Gross Floorspace (Sq M)	Assumed Net Floorspace (Sq M)
Cosham	New Build	Non-bulky comparison	Complete	92	60
Cosham	New Build	Non-bulky Comparison	Complete	59	38
Total				151	98

Note: The floorspace of these schemes forms part of the existing (May 2007) retail floorspace of Cosham Suburban Centre as set out in Appendix 2A

Source: Portsmouth City Council, Planning Department/Colliers CRE

FRATTON SUBURBAN CENTRE: RECENTLY COMPLETED RETAIL DEVELOPMENTS

Location	Description of Development	Assumed Goods Category	Current Status	Gross Floorspace (Sq M)	Assumed Net Floorspace (Sq M)
Fratton	New Build	Non-bulky comparison	Complete	126	82
Total				126	82

Note: The floorspace of these schemes forms part of the existing (May 2007) retail floorspace of Fratton Suburban Centre as set out in Appendix 2A

Source: Portsmouth City Council, Planning Department/Colliers CRE

GUNWHARF: RECENTLY COMPLETED RETAIL DEVELOPMENTS

Location	Description of Development	Assumed Goods Category	Current Status	Gross Floorspace (Sq M)	Assumed Net Floorspace (Sq M)
Gunwharf	Retention of Retail Use	Non-bulky comparison	Complete	148	118
Gunwharf	Change of Use to Retail	Non-bulky Comparison	Complete	40	32
Gunwharf	New Build	Non-bulky Comparison	Complete	528	423
Gunwharf	New Build	Convenience	Complete	89	71
Total				805	644

Note: The floorspace of these schemes forms part of the existing (May 2007) retail floorspace of Portsmouth City Centre as set out in Appendix 2A

Source: Portsmouth City Council, Planning Department/Colliers CRE

NORTH END/LONDON ROAD SUBURBAN CENTRE: RECENTLY COMPLETED RETAIL DEVELOPMENTS

Location	Description of Development	Assumed Goods Category	Current Status	Gross Floorspace (Sq M)	Assumed Net Floorspace (Sq M)
No Schemes	-	-	-	-	-
Total					

Note: The floorspace of these schemes forms part of the existing (May 2007) retail floorspace of North End/London Road Suburban Centre as set out in Appendix 2A

Source: Portsmouth City Council, Planning Department/Colliers CRE

PORTSMOUTH CITY CENTRE: RECENTLY COMPLETED RETAIL DEVELOPMENTS

Location	Description of Development	Assumed Goods Category	Current Status	Gross Floorspace (Sq M)	Assumed Net Floorspace (Sq M)
Portsmouth City Centre	New Build	Non-bulky comparison	Complete	2,728	1,773
Portsmouth City Centre	Change of Use	Non-bulky Comparison	Complete	243	158
Portsmouth City Centre	New Build	Non-bulky Comparison	Complete	266	173
Total				3,237	2,104

Note: The floorspace of these schemes forms part of the existing (May 2007) retail floorspace of Portsmouth City Centre as set out in Appendix 2A

Source: Portsmouth City Council, Planning Department/Colliers CRE

SOUTHSEA TOWN CENTRE: RECENTLY COMPLETED RETAIL DEVELOPMENTS

Location	Description of Development	Assumed Goods Category	Current Status	Gross Floorspace (Sq M)	Assumed Net Floorspace (Sq M)
Southsea	New Build	Non-bulky comparison	Complete	103	67
Total				103	67

Note: The floorspace of these schemes forms part of the existing (May 2007) retail floorspace of Southsea Town Centre as set out in Appendix 2A

Source: Portsmouth City Council, Planning Department/Colliers CRE

MAJOR OUT OF CENTRE SUPERSTORES: RECENTLY COMPLETED RETAIL DEVELOPMENTS

Location	Description of Development	Assumed Goods Category	Current Status	Gross Floorspace (Sq M)	Assumed Net Floorspace (Sq M)
Tesco, Clement Atlee Way	Extension to store	Convenience	Complete	276	166
Tesco Southampton Road	Extension to store	Convenience	Complete	209	125
Total				485	291

Note: The floorspace of these schemes forms part of the existing (May 2007) retail floorspace of major out of centre superstores as set out in Appendix 2A

Source: Portsmouth City Council, Planning Department/Colliers CRE

OUT OF CENTRE RETAIL PARKS: RECENTLY COMPLETED RETAIL DEVELOPMENTS

Location	Description of Development	Assumed Goods Category	Current Status	Gross Floorspace (Sq M)	Assumed Net Floorspace (Sq M)
Pompey Centre	Change of Use	Bulky comparison	Complete	279	237
Total				279	237

Note: The floorspace of these schemes forms part of the existing (May 2007) retail floorspace of out of centre retail parks as set out in Appendix 2A

Source: Portsmouth City Council, Planning Department/Colliers CRE

**PORTSMOUTH SHOPPING STUDY: UPDATE
PORTSMOUTH CITY COUNCIL**

APPENDIX 2C

Schedule of Retail Commitments in Cosham Suburban Centre (ie. Schemes with planning consent as at May 2007)

Location	Description of Development	Assumed Goods Category	Start Date	Gross Retail Floorspace (Sq M)	Estimated Net Retail Floorspace (Sq M)	Assumed Sales Density in 2011 (£psm net)	Estimated Turnover in 2011 (£m)
37-43 High Street	New Build	Comparison (100% Non-Bulky)	March 2007	61 ¹	40	3,250	0.1

Source: Portsmouth City Council, Planning Department

Note:¹ Net gain in gross retail floorspace, after any demolition.

Schedule of Retail Commitments in Gunwharf (ie. Schemes with planning consent as at May 2007)

Location	Description of Development	Assumed Goods Category	Start Date	Gross Retail Floorspace (Sq M)	Estimated Net Retail Floorspace (Sq M)	Assumed Sales Density in 2011 (£psm net)	Estimated Turnover in 2011 (£m)
East Side Plaza	New Build	Comparison (100% Non-Bulky)	July 2005	1,259 ¹	1,007	6,750	6.8

Source: Portsmouth City Council, Planning Department

Note:¹ Net gain in gross retail floorspace, after any demolition.

Schedule of Retail Commitments in North End/London Road Suburban Centre (ie. Schemes with planning consent as at May 2007)

Location	Description of Development	Assumed Goods Category	Start Date	Gross Retail Floorspace (Sq M)	Estimated Net Retail Floorspace (Sq M)	Assumed Sales Density in 2011 (£psm net)	Estimated Turnover in 2011 (£m)
82-85 London Road	New Build	Comparison (100% Non-Bulky)	Not Started	431 ¹	280	2,750	0.8

Source: Portsmouth City Council, Planning Department

Note:¹ Net gain in gross retail floorspace, after any demolition.

Schedule of Retail Commitments in Portsmouth City Centre (ie. Schemes with planning consent as at May 2007)

Location	Description of Development	Assumed Goods Category	Start Date	Gross Retail Floorspace (Sq M)	Estimated Net Retail Floorspace (Sq M)	Assumed Sales Density in 2011 (£psm net)	Estimated Turnover in 2011 (£m)
Cascades Shopping Centre	Internal alterations	Comparison (100% Non-Bulky)	Not Started	1,892 ¹	1,230	6,250	7.7
Land Fronting Commercial Road/Lake Road	New build	Comparison (100% Non-Bulky)	Not Started	23,760 ¹	15,444	6,250	96.5
254 Commercial Road	Change of Use	Comparison (100% Non-Bulky)	Not Started	0 ¹	0	-	-
146 Commercial Road	Change of Use	Comparison (100% Non-Bulky)	Not Started	375 ¹	244	6,250	1.5
203 Commercial Road	Change of Use	Comparison (100% Non-Bulky)	Not Started	(111) ¹	(72)	6,250	(0.4)
Unit 50 Cascades Shopping Centre	Change of Use	Comparison (100% Non-Bulky)	Not Started	(430) ¹	(280)	6,250	(1.7)
City North Development	Major Redevelopment & New Build	Comparison (90% Non-Bulky) 10% Bulky	Not Started	88,264 ¹	42,569	5,500 ³	234.1
					4,730	3,000 ³	14.2

¹ Net gain in gross retail floorspace after demolitions.

² Source: Northern Quarter, Retail Impact Assessment, DPP, July 2005 and Portsmouth City Council (Northern Quarter Redevelopment, Portsmouth), Compulsory purchase Order 2006, Proof of Evidence of Steve Arnold, February 2007.

³ Our estimated sales density for the City North Development reflects the proposed mix of the scheme, in particular the inclusion of a material amount of department store sales space, which typically trades at lower sales per sq m than unit shops.

Schedule of Retail Commitments in Southsea Town Centre (ie. Schemes with planning consent as at May 2007)

Location	Description of Development	Assumed Goods Category	Start Date	Gross Retail Floorspace (Sq M)	Estimated Net Retail Floorspace (Sq M)	Assumed Sales Density in 2011 (£psm net)	Estimated Turnover in 2011 (£m)
7-17 Palmerston Road	New Build	Comparison (100% Non-Bulky)	October 2004	222 ¹	144	3,500	0.5

Source: Portsmouth City Council, Planning Department

Note:¹ Net gain in gross retail floorspace, after any demolition.

Schedule of Convenience Goods Commitments in Out of Centre Retail Locations (ie. Schemes with planning consent as at May 2007)

Location	Description of Development	Assumed Goods Category	Start Date	Gross Retail Floorspace (Sq M)	Estimated Net Retail Floorspace (Sq M)	Assumed Sales Density in 2011 (£psm net)	Estimated Turnover in 2011 (£m)
Lidl, Goldsmith Avenue	Extension to store	Convenience	March 2007	461 ¹	277	4,500	1.2

Source: Portsmouth City Council, Planning Department

Note:¹ Net gain in gross retail floorspace, after any demolition.

Schedule of Comparison Goods Commitments in Out of Centre Retail Locations (ie. Schemes with planning consent as at May 2007)

Location	Description of Development	Assumed Goods Category	Start Date	Gross Retail Floorspace (Sq M)	Estimated Net Retail Floorspace (Sq M)	Assumed Sales Density in 2011 (£psm)	Estimated Turnover in 2011 (£m)
Ocean Retail Park	New Build	Comparison (100% Bulky)	Not Started	725 ¹	616	2,750	1.7
Land at Fitzherbert Road	Change of Use	Comparison (100% Bulky)	Not Started	3,356 ¹	2,853	2,750	7.8
Norway Road	New Build	Comparison (100% Bulky)	Not Started	2,015 ¹	1,713	2,750	4.7
Craft Market	Change of Use	Comparison (100% Non-Bulky)	April 2004	1,584 ¹	1,345	3,000	4.0
Ocean Retail Park	New Build	Comparison (100% Bulky)	March 2007	1,408 ¹	1,197	2,750	3.3
Harbourgate Business Park	Change of Use	Comparison (100% Bulky)	Not Started	3,178 ¹	2,701	2,750	7.4

Source: Portsmouth City Council, Planning Department

Note:¹ Net gain in gross retail floorspace, after any demolition.

Only includes commitments of 1,000 sq m gross or more. Smaller developments are assumed to be isolated stores and/or located in local centres.