

Aggregates

The OFT's reason for making a market investigation reference to the Competition Commission

January 2012

OFT1358ref

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1 EXECUTIVE SUMMARY

- 1.1 In August 2011 the OFT consulted on the findings from our market study into the supply of aggregates, cement and ready-mix concrete in the United Kingdom.
- 1.2 As we explained, our study had revealed a range of concerns among stakeholders about how competition operates in these markets. While we heard views on planning and other issues, most concerns about competition related to the structure of these markets. In particular, concerns were expressed relating to the links between aggregates, cement and ready-mix concrete, and to the market strength and conduct of the five vertically-integrated 'majors'.
- 1.3 We suggested that there appeared to be grounds for suspecting that competition was not working well in these markets and that there were features of these markets that were preventing, restricting or distorting competition for the supply and/or acquisition of these products. We therefore proposed to make a Market Investigation Reference (MIR) to the Competition Commission (CC) under section 131 of the Enterprise Act 2002. Such a reference would require the CC to carry out a detailed investigation into competition in relation to the supply of these products, and to decide whether or not any remedies were required and, if so, what those remedies should be.
- 1.4 As to the appropriateness of making such a reference (notwithstanding the implications for the resources of market participants and the CC), we noted that the supply of aggregates, cement and ready-mix concrete in the United Kingdom has turnovers of about £1.4bn, £0.9bn and £1.0bn respectively. Furthermore, these products are vital inputs to the construction sector, which represents some seven per cent of GDP or £110bn a year of expenditure. Thus, if competition in relation to these products is not working effectively, there could be a significant impact on the

construction industry and, indeed, on the UK economy as a whole. We also noted that the public sector accounts for around 40 per cent of construction expenditure – for schools, hospitals, roads and other physical and social infrastructure. The construction industry is therefore highly significant for the country's economic and social development.

- 1.5 We invited views and evidence in response to our proposal to make a reference, and we are grateful to everyone who took the trouble to respond to us. We have considered all the responses carefully and have met with some of those who responded to us to obtain more information or clarify the material they provided to us.
- 1.6 Having considered all the responses received, we continue to be of the view that the evidence suggests that competition may not be working well in these markets. In particular, we have concerns regarding structural features of these markets, and we have reasonable grounds for suspecting that there are features of these markets that are preventing, restricting or distorting competition. The consequence is that the threshold test for making a MIR is met.
- 1.7 The OFT is not required to make a reference in every case where the reference test is met. As noted above, we recognise that a MIR entails a significant burden on industry participants and the CC itself; for example, industry parties will be required to respond to the CC's information requests, and this can involve significant time, effort and costs. However, the proportionality of this burden has to be considered against the background of the market features which are the basis of our concerns. In our view, the adverse effects of those features may well be very significant, possibly leading to higher prices for key inputs for the construction industry. They could also be deterring new entry, meaning that the adverse effects are perpetuated.

- 1.8 In all the circumstances, we consider that there is sufficient justification for asking the CC to take a detailed look at competition in the aggregates, cement and ready-mix markets. We think it is in the public interest that the CC should do so, and furthermore, that this should happen as a matter of priority. In the context of the value and importance of the trade in these products, significant benefits could arise even from small remedial changes to address those market features. By contrast, delaying any such remedies could mean those significant benefits were forgone in the meantime.
- 1.9 The OFT therefore has decided to confirm its decision to make a MIR. As explained further below, however, our consideration of the consultation responses has led us to decide that the MIR should be limited to Great Britain (therefore excluding Northern Ireland, which we consider is likely to constitute or form part of a separate geographic market).

Findings

- 1.10 Over the last couple of decades the aggregates, cement and ready-mix concrete markets have experienced substantial consolidation, mainly through acquisition. Five major multinational companies – Lafarge, Hanson (part of HeidelbergCement), Tarmac (part of Anglo American), Aggregate Industries (part of the Holcim Group) and Cemex – account for the majority of sales in each of these markets.
- 1.11 In September 2010 the OFT launched a market study into the aggregates sector.¹ We wanted to look at conditions of competition

¹ Please see www.of.gov.uk/news-and-updates/press/2010/93-10

in the market and at whether the market delivered good value for money.

1.12 A particular source of concern was an alleged squeeze between the price of cement upstream (supplied by the majors) and the price of concrete downstream. We therefore extended the scope of the study to cover cement and ready-mix concrete.

1.13 Our report concluded that the industry displays a number of features which may adversely affect competition. These include:

- Barriers to entry: both the aggregates and the cement markets feature high barriers to entry in terms of the difficulty of obtaining planning permission and physical capital requirements. Elements of the planning system for aggregates in particular create substantial barriers to entry by favouring incumbents over new entrants. In addition, the information we have received suggests that fear of retaliation and/or predation by the major companies may be deterring entry into the cement and ready-mix concrete markets by independents looking to either self-supply or expand their operations.²
- Concentration: all three product markets are highly concentrated with five major players accounting, in Great Britain, for upwards of 90 per cent of the cement market, 75 per cent of aggregates sales and circa 70 per cent of ready-mix concrete production. There is a considerable drop in scale between the majors and the largest independent in each market – there is no comparably large independent producing any one of the three products.

² That is so, whether or not those fears are justified.

- Vertical integration: the major firms are integrated across aggregates, ready-mix concrete and cement. We have received complaints about vertically integrated firms refusing to supply or discriminating against non-integrated competitors through their pricing, particularly in relation to cement.
- Homogeneous products: aggregates, cement and ready-mix concrete are, to a large extent, homogeneous products with little differentiation by firm in terms of brand or quality.
- Transparency: there is a high degree of transparency in relation to all three products. Cross-trading between the major firms means that they receive advance warning of each others' pricing intentions; industry reports contain detailed information on market shares, sales volumes and reserves; the planning system provides significant transparency regarding capacity intentions; and there are industry associations and working parties which may involve additional sharing of information.
- Multi-market contacts: although vertically integrated, the major firms supply one another upstream and downstream (both for cement and aggregates) to serve local markets. There are also a significant number of joint-ventures and asset swaps in the three product markets.

1.14 The combination of barriers to entry, transparency, homogeneous products, vertical integration and multi-market contacts has the potential to reduce competition in settings with high levels of concentration.

1.15 We also have evidence that competition may not be working well in these markets. In particular:

- Difficulties faced by independent ready-mix concrete operators in obtaining competitive quotes for cement from alternative suppliers, and the importance independent operators place on relationships with their existing suppliers.
- A possible 'squeeze' between the price of cement (which has risen in recent years) and the price of ready-mix concrete (which has fallen, then stabilised). We also have evidence that independents may be charged higher prices for cement than the majors charge each other.
- Pricing letters from the major firms coming out at similar times and announcing similar price increases. Although these letters represent a starting point for negotiations between customers and suppliers and do not fix prices as such, these similarities may indicate that price rivalry is not as intense as it could be.

1.16 While there have been limitations in the data available to the market study (and it would plainly not be appropriate for the OFT to carry out its own CC-style inquiry before deciding whether or not to make a MIR to the CC), taken in the round the evidence gives us reasonable grounds to suspect that such features are present in these markets.

1.17 We also note the findings of the OFT's merger decision in the Anglo American/Lafarge joint venture.³ While this investigation was

³ This proposed joint venture, involving the UK aggregates, cement, ready-mix concrete and asphalt activities of Tarmac (a subsidiary of Anglo American plc) and those of Lafarge, was investigated by the OFT between May 2011 and November 2011. The OFT published its findings in relation to the JV seven weeks after it published its market study and proposed reference to the CC. See *Proposed joint venture between Anglo American Plc and Lafarge S.A*, ME/5007/11, November 2011: www.of.gov.uk/shared_of/mergers_ea02/2011/anglo-american-lafarge.pdf

narrower in scope, a number of the findings in the Merger decision support our findings, in particular the prospects for stable and effective coordination in the cement sector and a number of indicators that suggest such coordination already exists.

- 1.18 Taken in the round, we are concerned that competition is not working well in these markets, and that competition problems are rooted in underlying features of the market that could only be addressed by the kinds of remedies available to the CC. We are concerned that there may well be consumer harm through higher prices in the short term, possibly exacerbated by further erosion of independent competition in the medium to long term.

Planning

- 1.19 In the consultation on our provisional decision we highlighted a number of aspects of the planning system that the Government should consider in its forthcoming review of the Managed Aggregates Supply System ('MASS').
- 1.20 The majors in their submissions to the consultation suggested that direct engagement with the Department for Communities and Local Government ('DCLG') as part of the review of the National Planning Policy Framework ('NPPF') would be a better way to address any problems identified than including planning within the scope of the market investigation reference.
- 1.21 We accept that the current NPPF process provides an opportunity for the OFT to make recommendations, and we intend to engage with DCLG as part of the NPPF process as it relates to aggregates, if and where appropriate. However, the NPPF process is not focused on undertaking a detailed investigation of competition issues, and any recommendations that the OFT might make would be limited by the

fact that we have not carried out the kind of detailed consideration that would be open to the CC.

- 1.22 The CC can and does make recommendations on planning (for example, see Supply of Groceries in the UK Market Investigation⁴) – the CC has the same powers as the OFT to make recommendations to Government and can also engage with DCLG during the NPPF process. A market investigation by the CC might well produce valuable detailed recommendations as to how the NPPF or other aspects of planning policy or procedures could be changed in a way that would benefit competition.
- 1.23 The planning system undoubtedly has a significant effect on the way competition operates in this sector – affecting barriers to entry, capacity decisions, and the transparency of capacity intentions - and therefore we believe it needs to be considered as part of any in-depth examination of the market. We will not therefore exclude planning from the reference.

Geographic scope

- 1.24 Section 133(1) of the EA02 requires a market investigation reference to specify the description of goods or services to which the feature or combination of features concerned relates and whether this is in the UK or parts of the UK. At the time of the provisional decision we proposed that the reference cover the United Kingdom as a whole.
- 1.25 During the consultation process we received representations from one company that Northern Ireland should be excluded from the geographic scope of the reference as the features which the OFT has

⁴ www.competition-commission.org.uk/rep_pub/reports/2008/fulltext/538.pdf

identified as leading to competition concerns in the three product markets are not present in Northern Ireland. Given the significance of these representations, we noted them on our website and also contacted some relevant parties specifically to consult on the appropriateness of including or excluding Northern Ireland from the geographic scope of the reference.

- 1.26 Having considered all the comments and evidence provided to us, we consider that Great Britain and Northern Ireland are likely to be distinct geographic markets, and that the features identified above – in particular concentration and vertical integration – appear to be present to a greater extent in Great Britain than in Northern Ireland. On this basis we have decided not to include Northern Ireland in the scope of the reference. However, we have not come to a view as to whether Northern Ireland is a competitive market and may decide to look at this geographic market in more detail in the future.

Conclusions on the reference

- 1.27 Taking all the evidence in the round, we find that we have reasonable grounds to suspect that there are features of these markets that prevent, restrict or distort competition in the UK. The statutory threshold test for a reference is therefore met.
- 1.28 Furthermore, having carefully considered the responses to the consultation on our provisional decision, we have decided that it is appropriate to make a reference in this case. In that regard, we consider that:
- The industry is large and important and the three markets are critical for the national economy.
 - There is a reasonable prospect of finding appropriate remedies to the concerns outlined, for example by considering structural or

behavioural remedies to address the features which facilitate coordination or exclusionary behaviour.

- In all the circumstances, a MIR is the most appropriate tool for investigating and potentially remedying the suspected market features and competition problems which may be rooted in the underlying market features and only the CC has the investigatory and remedial scope and powers needed to analyse and address them.

1.29 The major companies have made submissions to us opposing a reference, arguing that we have not thoroughly established all the factors that might facilitate tacit collusion, and have not provided a detailed theory of harm. In our view, these submissions have tended to misunderstand the nature of the enquiries undertaken by the OFT in deciding whether or not to make a MIR. The threshold test in section 131 only requires the OFT to have **reasonable grounds to suspect** that there are features of these markets that may restrict, distort or prevent competition. While the OFT accepts that it has a discretion whether or not to make a reference in circumstances where the threshold test is satisfied, that does not mean that the OFT should first carry out its own mini-version of the kind of investigation that the CC might undertake. In this case, the OFT is satisfied that it is appropriate for there to be a detailed investigation of these markets, and the appropriate body to carry out that investigation is the CC. The making of this MIR does not imply any pre-judgement as to what the CC's findings or conclusions will be.

1.30 The OFT has therefore decided to make a reference to the CC under section 131 of the Enterprise Act 2002 for an investigation into the aggregates, cement and ready-mix concrete markets in Great Britain, that is, excluding Northern Ireland. This confirms the OFT's proposed decision, other than on this change to the scope, taking into account

the variation in geographic scope, which was published on 16 August 2011, and on which the OFT publicly consulted.

1.31 The Terms of Reference are set out at Annexe C.

Other market study findings

1.32 We found some evidence to suggest there may be room for improving efficiency in the procurement of aggregates, particularly by the public sector. Aggregates are often procured as part of a construction contract. It is not clear that rebates associated with bulk purchases of aggregates are passed directly back to buyers. Some heavy users of aggregates have made significant savings by bringing procurement of aggregates directly under their own control.

1.33 This aspect does not form part of the basis for the reference. We simply recommend that large users of aggregates – in particular public sector buyers – consider whether it may be possible to make savings by bringing procurement of aggregates directly under their own control.

2 INTRODUCTION

- 2.1 In September 2010 we announced a market study into the aggregates sector. We wanted to look at conditions of competition in the market, and at whether the market delivered good value for money. Our study of the aggregates sector revealed a range of concerns among stakeholders about how competition operates in this sector. While we heard views on planning and other issues, most concerns about competition in the market related to the extent of vertical integration between the aggregates, cement and ready-mix concrete markets, and to the conduct of the five 'majors'. For this reason, in February 2011 we extended the scope of the market study to include cement and ready-mix concrete.
- 2.2 On 16 August 2011, we set out our findings from that study and announced the OFT's proposal to refer the market for aggregates, cement and ready-mix concrete in the United Kingdom to the Competition Commission (the 'CC') for a market investigation. Our reasoning was set out in *Aggregates: Report on the market study and proposed decision to make a market investigation reference (OFT1358) ('The Provisional Decision')*.
- 2.3 The OFT invited comments on its provisional decision over a six week period ending on 30 September 2011. In total, we received responses from 33 people and organisations, consisting of:
- 19 businesses
 - two trade associations
 - seven planning bodies
 - five members of the public.

- 2.4 Of these responses, seven did not support the proposed reference, 14 were supportive of a reference and a further 12 provided comments on some of the study findings, but did not express a view on whether the market should be referred to the CC. These submissions were made on the whole by planning related bodies seeking to clarify some of our findings on the planning system.
- 2.5 We also met with four firms that requested a meeting with us.
- 2.6 We note that, separately to the market study and MIR consultation, the OFT has recently considered the proposed Anglo American /Lafarge joint venture, in the course of which a significant amount of further evidence was submitted to OFT. While OFT had sufficient evidence to reach a conclusion on the case for an MIR without the need to take into account the additional evidence examined in the Merger decision, we refer to the findings in this decision where relevant in this document.
- 2.7 This document ('the Decision') sets out the OFT's reasons for confirming its Provisional Decision to make a reference to the CC.

Background

- 2.8 The aggregates, cement and ready-mix concrete sectors, with turnover of £1.4bn, £0.9bn and £1.0bn respectively, are key contributors to the construction sector, which is itself a major part of the UK economy, representing some seven per cent of GDP or £110bn per annum of expenditure. The public sector accounts for around 40 per cent of construction expenditure – for schools, hospitals, roads and other physical and social infrastructure – with central Government being the industry's biggest customer.⁵ The

⁵ Government Construction Strategy, Cabinet Office, May 2011

construction industry is therefore highly significant for the country's economic and social development.

2.9 Over the last couple of decades the aggregates, cement and concrete sectors have experienced substantial consolidation, mainly through acquisition. Five major multinational companies – Lafarge, Hanson (part of HeidelbergCement), Tarmac (part of Anglo American), Aggregate Industries (part of the Holcim Group) and Cemex – account for the majority of sales in these markets.

2.1 This report presents the findings of the market study (as in the provisional decision) and additional views and evidence presented during the consultation period. It is structured as follows:

- Chapter 3 provides an overview of the three markets
- Chapter 4 looks at the features of the industry and the impact on competition
- Chapter 5 reports the competition concerns raised by parties that we spoke to in the course of the study
- Chapter 6 covers other issues in relation to the planning system for aggregates and procurement
- Chapter 7 provides the reasoning behind the decision to make a Market Investigation Reference in this case.

3 OVERVIEW OF THE INDUSTRY

3.1 This section provides an overview⁶ of the industry looking at each of the three products, covering what they are, how they are made, and who makes them.

Aggregates

3.2 Aggregates are the granular raw materials that are used to make construction products which are used to build our houses, roads, schools, office, hospitals, and other developments within our urban and rural environments.

3.3 Aggregates broadly come from three sources:

- **Primary aggregates**, which are newly extracted from the ground or sea bed.
- **Secondary aggregates**, which are the by-product either from the extraction of other materials or a manufacturing process, and can either be either natural (such as china clay waste) or manufactured (for example power station ash and steel slag).
- **Recycled aggregates**, which are produced from crushed demolition waste.

3.4 Secondary and recycled aggregates make up about 28 per cent of the total aggregates supply.⁷

⁶ Please note that whilst this report covers the whole of the UK, data obtained from certain sources unfortunately does not extend to Northern Ireland (though as noted the reference does not include Northern Ireland).

- 3.5 For many purposes aggregates from these different sources can be substituted for one another, for example gravel or crushed rock can be used for concrete. However some end uses, such as rail ballast and roadstone, require particular types of aggregate due to requirements on size, strength and durability. For example, aggregates used in asphalt for road surfaces must have a high Polished Stone Value (high PSV) to ensure that tyres will grip the surface, and such aggregates only come from certain types of rock. In this regard, we note that the Anglo American/Lafarge Merger Decision states that separate markets may exist for high PSV stone, rail ballast and high purity limestone.
- 3.6 Some respondents to the consultation suggested our description and subsequent analysis of the aggregates sector underplayed the importance and substitutability of secondary and recycled aggregates. Whilst we recognise that for some uses, secondary and recycled aggregates can be substitutes for primary aggregates, we do not think this applies across the board or even in the majority of cases. We note that the Anglo American/Lafarge Merger Decision finds that 'the use of secondary and recycled is weighted heavily towards lower value structural fill and sub-base applications rather than 'value-added' applications', with primary aggregates being strongly preferred in some applications, including RMX concrete production.⁸ We also note the European Commission's recent assessment in the Eurovia/Tarmac Merger Decision, which found that 'secondary aggregates are not substitutable across the whole range

⁷ Mineral Products Association, 'Summary Sustainable Development Report 2010'.

⁸ *Proposed joint venture between Anglo American Plc and Lafarge S.A*, ME/5007/11, November 2011, paragraph 58, 59 and 60:
www.offt.gov.uk/shared_offt/mergers_ea02/2011/anglo-american-lafarge.pdf

of applications'.⁹ Our analysis has mainly focused on primary aggregates, which was the main focus of the concerns raised. However we have included secondary and recycled aggregates within the scope of the reference so that the CC can assess the competitive constraint from this source.

- 3.7 The value of primary aggregates produced in the UK was £1.425bn in 2009, representing nearly a 30 per cent drop from values seen in 2006 through to 2008 of around 1.8bn.¹⁰
- 3.8 Total aggregates sales in Great Britain in 2009 was 198 million tonnes. This is down from a peak in the late 1980s of 330 million tonnes of which 300 million were primary aggregates, as illustrated below.¹¹ Sales of recycled and secondary aggregates have grown steadily now accounting for just over 50 million tonnes.
- 3.9 In Northern Ireland, average annual production has been fairly constant at 25 million tonnes over the last 15 years but this fell to 20 million tonnes in 2009.¹²

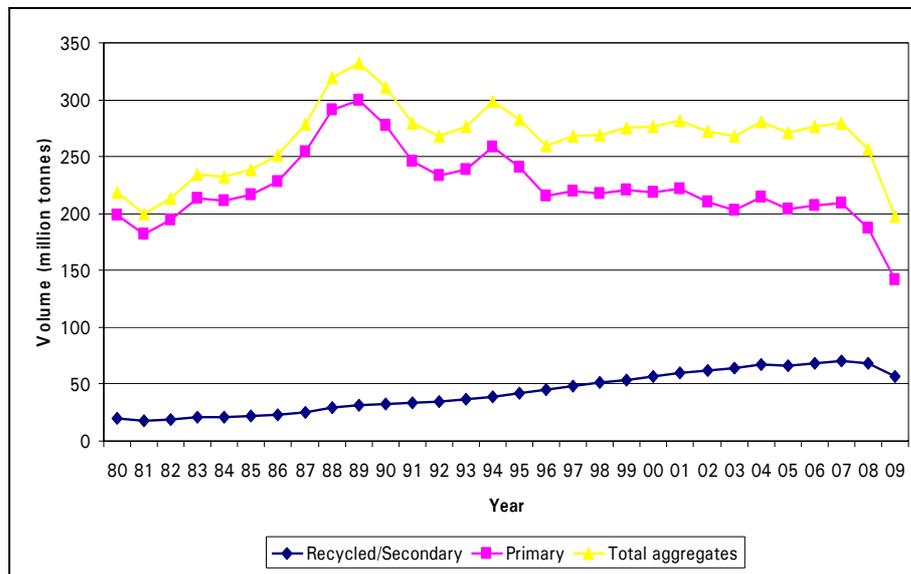
⁹ M.5803 *Eurovia/Tarmac*, Commission decision, 10 June 2010, paragraph 11.

¹⁰ British Geological Survey

¹¹ Mineral Products Association

¹² Department Enterprise, Trade and Investment Northern Ireland; Minerals Branch, annual minerals statements

Figure 3.1: Aggregate sales, GB



Source: Mineral Products Association

3.10 Ninety per cent of all aggregates are used by the construction sector which has been badly hit by the recession. Demand for aggregates has been similarly affected – the chart above shows significant falls in volumes in both 2008 and 2009. The industry forecasts a return to growth in 2013 after the bulk of public spending cuts have taken place.¹³

3.11 There may also be a longer term, structural decline in primary aggregates demand due to an increasing trend to newer construction materials and the shift towards using secondary and recycled aggregates following the introduction of the landfill tax in 1996 and the aggregates levy in 2002.

¹³ BDS Marketing Research, 'Estimated market shares of pits, quarries and marine wharves in Great Britain (2009)'

3.12 There are approximately 235¹⁴ operators in the industry, supplying primary aggregates from more than 1200 sites including quarries and wharves. Five firms account for nearly 75 per cent of primary aggregate output, with a large number of significantly smaller firms making up the remainder. The table below lists the top 10 primary aggregates firms.

Table 3.1: Top 10 aggregates firms (GB)

Company	Share of primary production (%) 2009
Tarmac	20.8
Aggregate Industries	17.8
Hanson	14.2
Cemex	11.5
Lafarge	9.0
Breedon	2.3
Brett	1.9
Marshalls	1.1
Others	21.4

Source: BDS Marketing Research, 'Estimated market shares of pits, quarries and marine wharves in Great Britain' (2009)

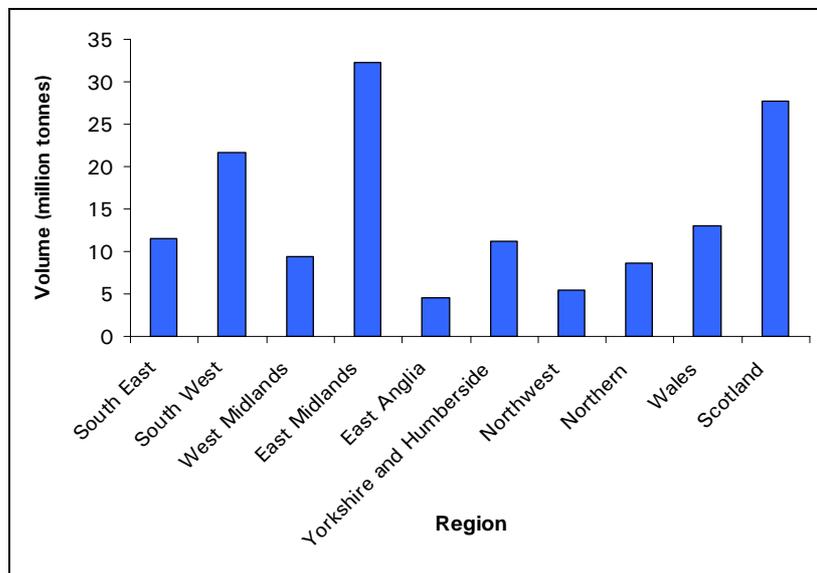
3.13 Aggregates are a low-value and heavy raw material, which means that transportation costs can make up a significant proportion of the final price the customer pays. For this reason aggregates are typically not transported more than 30 miles, with an average distance travelled in 2009 of 24 miles.¹⁵ Within a 30-mile radius, concentration is often much higher than the national market share figures above suggest. Concentration is examined in more detail in the next chapter.

¹⁴ BDS Marketing Research

¹⁵ Mineral Products Association, Sustainable Development report, 2009

- 3.14 The availability of primary aggregates is determined by geology. In England for example, land-based aggregates are broadly split by a line going from the south west in Devon and Somerset to the north of Norfolk and south of Lincolnshire. To the south of this line, sand and gravel is predominantly found with some soft rock (such as limestone), whilst to the north it is predominantly hard rock with some sand and gravel deposits. Marine sand and gravel is dredged off the south coast, the East Anglian coast, the Thames Estuary and parts of the Welsh coast.
- 3.15 This means that demand for aggregates is not necessarily in the same place as supply – in particular the South East of England has little hard rock. The imbalance between geographical availability of aggregates and sources of demand results in inter-regional flows, which occur where it is economically viable to transport over longer distances, as in the case of crushed rock transported by rail and sea from the North to the South East.

Figure 3.2: Primary land-won aggregates output, by region, GB 2009



Source: BDS Marketing Research, 'Estimated market shares of pits, quarries and marine wharves in Great Britain (2009)'

3.16 However, the pattern of trade is not wholly determined by market forces – the planning system also has a key role in controlling supply. The Managed Aggregates Supply System (MASS) sets out the amount of aggregates to be provided in England in each region.¹⁶ A detailed description of the planning system for aggregates is provided in Chapter 6 and Annexe B.

¹⁶ England and Wales share a broadly common system that allows for national management of aggregates supply, while Scotland and Northern Ireland take separate approaches.

Cement

- 3.17 Cement is a fine powder that acts as a binder. It is mainly used for producing concrete, by mixing it with aggregates and water, but it can also be used to manufacture mortar for bonding bricks. Some 52 per cent of cement is used for making ready-mix concrete, with the remainder being sold to merchants and building products manufacturers.¹⁷
- 3.18 Cement is made by heating pulverised limestone in a furnace to 1480°C (2700°F) to form clinker. The clinker is then ground with gypsum to a fine powder which forms cement. Its characteristics allow it to be stored dry in silos for many months. Unlike aggregates, cement's relatively high value per tonne means that it can be profitable to transport over longer distances and to trade it internationally.
- 3.19 We refer throughout this document to grey cement when we talk about cement. We have received two representations that the OFT has failed to take into consideration cementitious materials such as pulverised fly ash and ground granulated blast furnace slag (GGBS).
- 3.20 The Anglo American/Lafarge Merger Decision¹⁸ concluded that, whilst cementitious material was partially substitutable for some purposes (including ready-mix concrete) it did not form part of the same economic market. Furthermore, even if cementitious materials were included in our assessments of market share, the national shares of

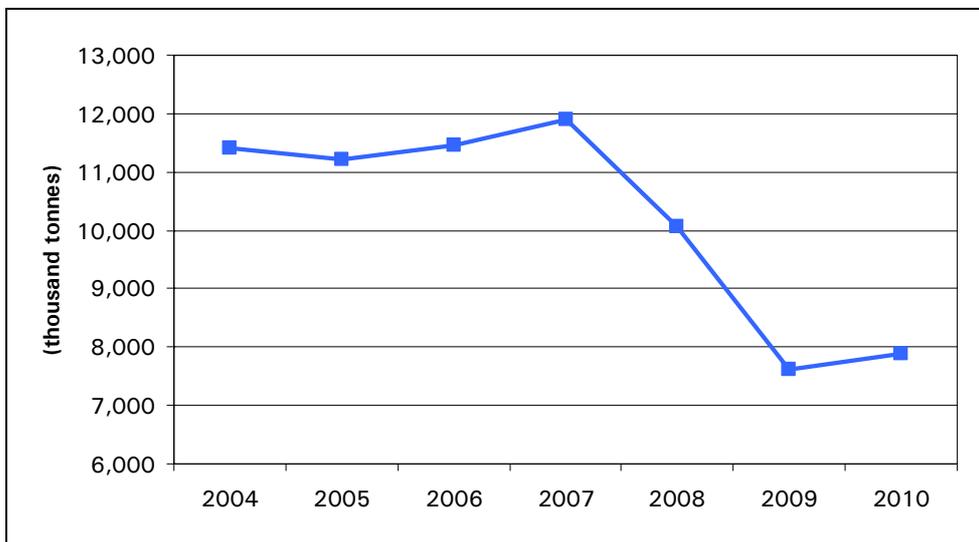
¹⁷ Mineral Products Association, Cement Statistics January 2011

¹⁸ *Proposed joint venture between Anglo American Plc and Lafarge S.A*, ME/5007/11, November 2011, paragraph 110: www.of.gov.uk/shared_of/mergers_ea02/2011/anglo-american-lafarge.pdf

cement accounted for by the majors would still indicate very high concentration.

3.21 Total GB domestic production in 2010 was about eight million tonnes which represents a three per cent increase from 2009 levels. However, the financial crisis at the end of 2007 saw output fall from 12 million tonnes in 2007 to below eight million in 2009, as illustrated in the chart below. Production started to grow again in 2010 although it is still far below the levels prior to 2007 which had been fairly stable at over 11 million tonnes per annum.

Figure 3.3: Cement production GB



Source: BIS 'Monthly statistics on building materials and components', May 2011

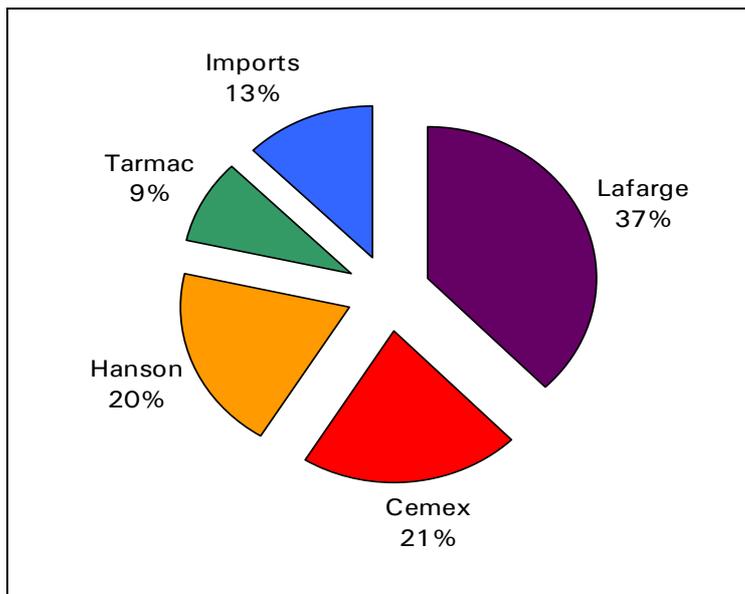
3.22 Imports of cement into GB in 2010 were 1.2 million tonnes, an increase of 2.5 per cent from the previous year.¹⁹

¹⁹ BIS, 'Monthly statistics on building materials and components', November 2011

3.23 The value of cement sales was estimated to be £900 million in 2009. This represents a decline in sales of 11 per cent from 2008.²⁰

3.24 There are four cement producers in the UK, all of which are owned by multinational companies also involved in the extraction of aggregates and the production of ready-mix concrete. The only one of the five major aggregates firms that does not manufacture cement domestically – Aggregate Industries – is the largest importer. It imports cement from its parent company (Holcim) through its subsidiary Paragon, with an estimated four per cent of the total market (and 30 per cent of the imported cement market). The graph below shows the market share of each firm and that of importers.

Figure 3.4 Cement estimated market shares, 2010, UK



Source: OFT estimates & BIS 'Monthly statistics on building materials and components', May 2011.

²⁰ PRODCOM, National Statistics website, intermediate final estimates 2009

- 3.25 There are 12 operational cement manufacturing plants and two grinding and blending plants located across Great Britain. Tarmac is the smallest producer with a single cement plant with a capacity of over 800,000 tonnes per year, mostly for internal use. Lafarge is the largest with six million tonnes capacity at five plants in Great Britain and one in Northern Ireland. Hanson and Cemex each have three plants.
- 3.26 There have been some closures and mothballing of cement plants in recent years.²¹ CEMEX closed its Barrington cement plant in South Cambridgeshire in November 2008. In February 2009 Lafarge initially mothballed its Westbury plant before later dismantling it. In July 2009, Hanson's Flintshire site stopped production.
- 3.27 In 2008 there were at least 22 dedicated cement importing terminals in the UK with 12 owned by the large firms²² and eight importers, some of which are owned by foreign, large-vertically integrated companies and some by domestic independent firms.

²¹ Civitas, 'Rock solid?' An investigation into the British cement industry', David Merlin-Jones

²² Lords Select Committee on European Union written evidence: Memorandum by the British Cement Association, 2008

Table 3.2: Number of operating cement plants and import terminals operated by majors, UK

Company	Number of cement plants	Number of import terminals
Cemex	3	6
Aggregate Industries	0	4
Hanson	3	2
Lafarge	5	3
Tarmac	1	0

Source: Companies websites

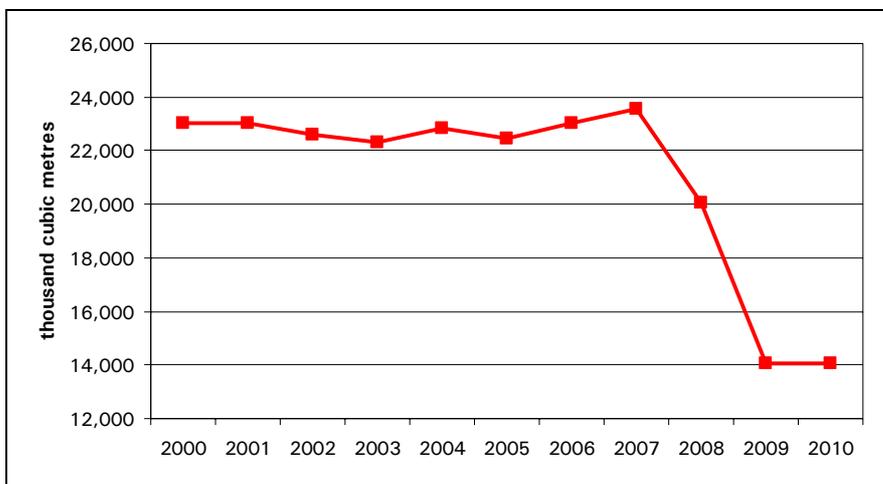
Ready-mix concrete

- 3.28 For the purpose of this study we have focused our attention on the ready-mix concrete sector. However, concrete can also be sold in pre-cast form, for example, blocks, roofing tiles, floor tiles, paving, pipes and precast structural products. These are excluded from the scope of this market study.
- 3.29 Ready-mix concrete is a mixture of coarse and fine aggregates, cement and water. It is delivered wet and can be moulded into any form. It is the most common form of concrete and is highly versatile lending itself to a wide range of applications in the construction of buildings, roads and other infrastructure.
- 3.30 There are several approaches to manufacturing and delivering ready-mix concrete including plant batched, on-site batched and on-site plant. Plant batched is the most common, where the raw ingredients are mixed at a fixed location before dispatch by special lorries to the site to be poured. With this approach, only relatively short transport distances are possible due to the highly perishable nature of liquid concrete. On-site batched concrete is mixed on the back of a vehicle at the customer's site. On-site plants are used where large volumes

of concrete are required for a particular project with the raw materials delivered separately.

3.31 Fourteen million cubic metres of ready-mix concrete were delivered in the UK over 2009, a fall of 30 per cent from the previous year and 40 per cent lower than the peak of production in 2007. As the chart below shows, before 2007 deliveries had remained fairly constant with minor fluctuations.

Figure 3.5: Ready-mix concrete deliveries UK



Source: BIS

'Monthly statistics on building materials and components', May 2011

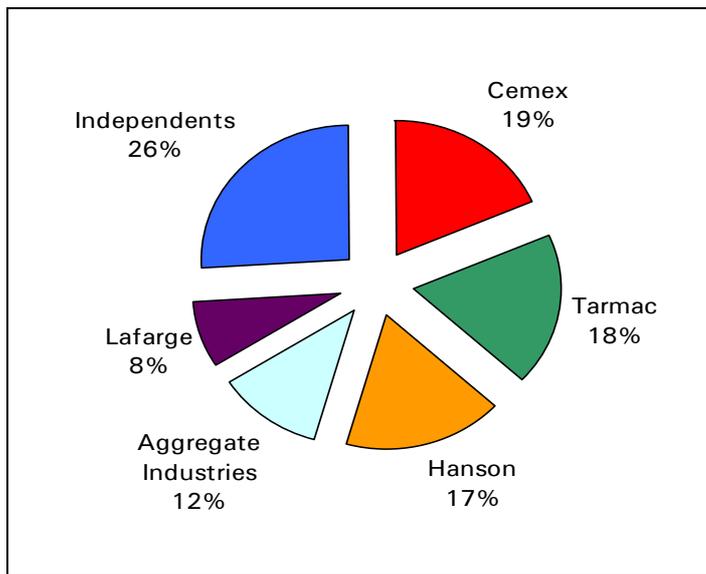
3.32 The total value of sales in the ready-mix concrete market in 2009 was estimated to be £1.01bn, a fall of 26 per cent on the previous year.²³

3.33 In 2009 there were 47 companies in Great Britain that produced 30,000m³ or more, along with 159 smaller companies that operate

²³ PRODCOM, National Statistics website, intermediate final estimates 2009

their own concrete batching plant.²⁴ However, the top five firms in the ready-mix concrete sector have a combined share of over 70 per cent at the GB level.²⁵ Outside the top five, the next largest firm has a 1.4 per cent share with most other firms having shares of less than one per cent and covering only a small geographic area.

Figure 3.6: GB shares of ready-mix concrete volumes excluding on-site batched, 2009



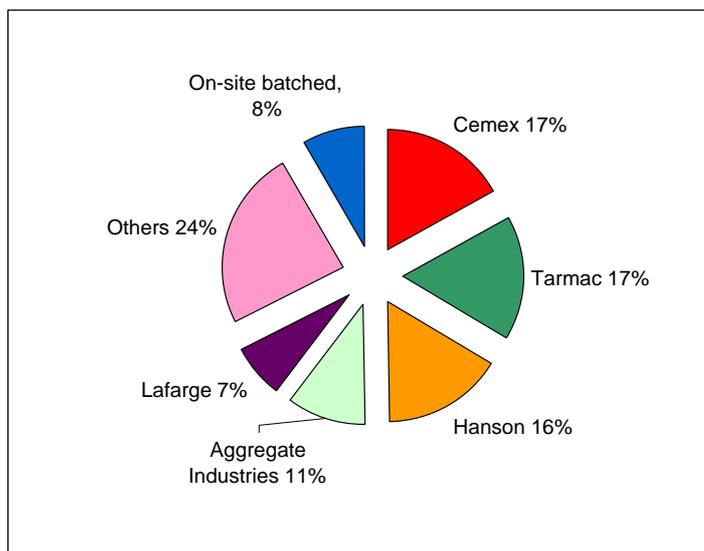
Source: BDS Marketing Research, 'Estimated market shares of ready mixed concrete companies in Great Britain (2009)'

²⁴ BDS Marketing research 'Estimated market shares of ready mixed concrete companies in Great Britain (2009)'

²⁵ This does not take into account on-site batched ready-mix concrete which has been growing in popularity over the last few years. If on-site batched concrete is taken into account, the overall market share of the majors in 2009 is in the region of 68 per cent.

3.34 Three respondents pointed out that the OFT had not taken into consideration volumetric trucks (also called on-site batching) in its description of the ready-mix concrete sector. We acknowledge that whilst we have referenced volumetric trucks in footnote 21 of the provisional decision, this could have been included in the chart above. We provide below an updated overview of market shares but point out that even including volumetric trucks there is still quite a high level of concentration.

Figure 3.7: GB shares of ready-mix concrete volumes, 2009



Source: BDS Marketing

Research, 'Estimated market shares of ready mixed concrete companies in Great Britain (2009)'

3.35 We note that in the Anglo American/Lafarge Merger Decision, the OFT does not include volumetric trucks in its market definition, but has regard to any constraint that they might impose. We have included volumetric trucks within the scope of the reference so that the CC can similarly have regard to the competitive constraint.

3.36 The distance ready-mix concrete can travel from a plant is limited by the time it takes to set and so the market for ready-mix concrete

tends to be geographically small. As a result, market shares can be much higher at the local level than the national picture might suggest,²⁶ with only a few firms operating in each county. The presence of the major producers is also notable with at least one major in every county. Data from BDS indicates that in some cases there may not be any independents present, although we note BDS data may not be comprehensive.

Summary

3.37 This chapter has looked at the overall industry characteristics of the aggregates, cement and ready-mix concrete markets and current market conditions. Notable amongst these are the presence of the five majors in all three product markets (Aggregate Industries through its subsidiary Paragon) and the high market shares collectively enjoyed. Features of the market that may have an impact on competition are explored in more detail in the following chapter.

²⁶ We note that in the Anglo American/Lafarge Merger Decision ready-mix concrete markets were assessed on the basis of 10-mile radials. See *Proposed joint venture between Anglo American Plc and Lafarge S.A*, ME/5007/11, November 2011, paragraph 191: www.offt.gov.uk/shared_offt/mergers_ea02/2011/anglo-american-lafarge.pdf

4 INDUSTRY FEATURES AND IMPACT ON COMPETITON

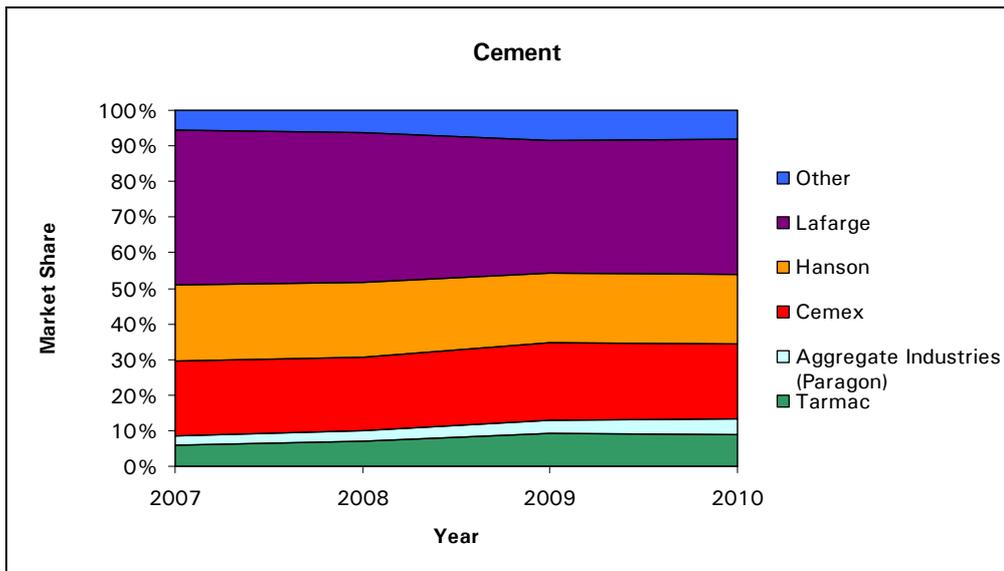
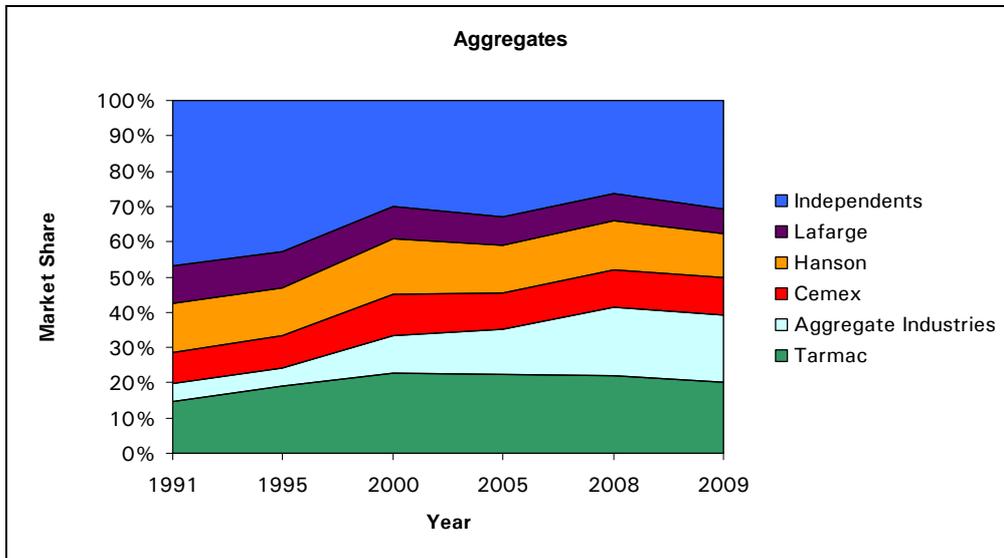
- 4.1 In this section we explore in more detail those features of the industry that could potentially give rise to competition problems. These are concentration, vertical integration, high barriers to entry, homogeneous products, market transparency, and multi-market contact.

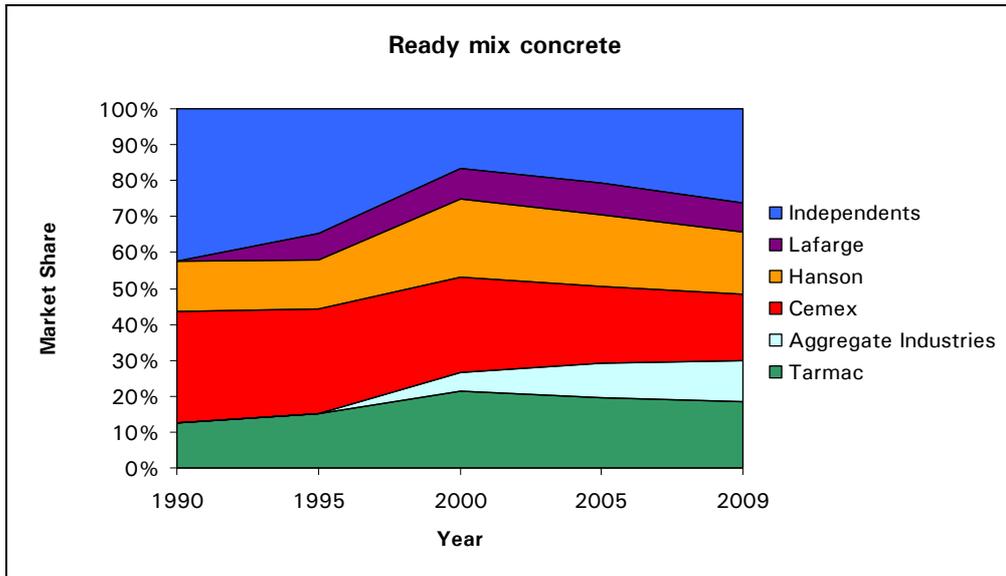
Concentration

National level

- 4.2 As outlined in the previous chapter, all three product markets are highly concentrated at a national level with five major players accounting for upwards of 90 per cent of the cement market, 75 per cent of aggregates sales and circa 70 per cent of ready-mix concrete production. There is a considerable difference in scale between the majors and the largest independent in each market – there is no comparably large independent producing any of the three products.
- 4.3 The figures below show the movement in market shares over time for the three products. Concentration has increased steadily in primary aggregates over the last two decades, mainly due to the expansion of Aggregate Industries in recent years. For cement we have figures only for the period since 2007, in which time concentration (in terms of market shares though not the number of firms) has decreased slightly. Concentration in ready-mix concrete is a more complex story, with the entry of Lafarge and Aggregate Industries, but the market share of independents declined sharply in the 1990s and has risen since 2000.

Figures 4.3-4.5: Market shares of top five firms and independents





Source: BDS Marketing Research and OFT information submissions

Local level

4.4 National market share figures mask significant regional or local variations. This is true to a lesser extent for cement - in the recent Anglo American/Lafarge Merger Decision the OFT found some evidence that cement markets may be regional or, at most, national.²⁷ Markets for aggregates and ready-mix concrete tend to be much more local. We received representations from three firms that the European Commission and national competition authorities in merger cases recognise that competition in aggregates is local, but that the OFT has used national and regional shares to characterise concentration.

²⁷ Proposed joint venture between Anglo American Plc and Lafarge S.A, ME/5007/11, November 2011, paragraphs 111 to 115 : www.of.gov.uk/shared_of/mergers_ea02/2011/anglo-american-lafarge.pdf

- 4.5 We recognise that markets in aggregates and ready-mix concrete are local. However it is not appropriate for a Phase 1 investigation to gather market share information for every local market in the country. We had access to a source of county-level data and we used this as a proxy for local conditions as presented below. We recognise that this is imperfect and may not reflect that fact that some local markets will be narrower (as per the analysis in the Anglo American/Lafarge Merger Decision²⁸) - as such some local markets may be even more concentrated than our data suggests.
- 4.6 For primary aggregates and ready-mix concrete, we have also examined concentration at the county level by looking at the concentration ratio²⁹ (CR5) and Herfindahl-Hirshman Index (HHI).³⁰
- 4.7 For primary aggregates, CR5 in Great Britain as a whole increased from just over 50 per cent in 1991 to over 70 per cent in 2009. In Scotland over the same period concentration moved from just under 20 per cent to over 50 per cent and in Wales from 45 per cent to over 80 per cent. Within England, the South West and East Midlands are particularly concentrated with more than 80 per cent of output accounted for by the five largest firms since 2000.

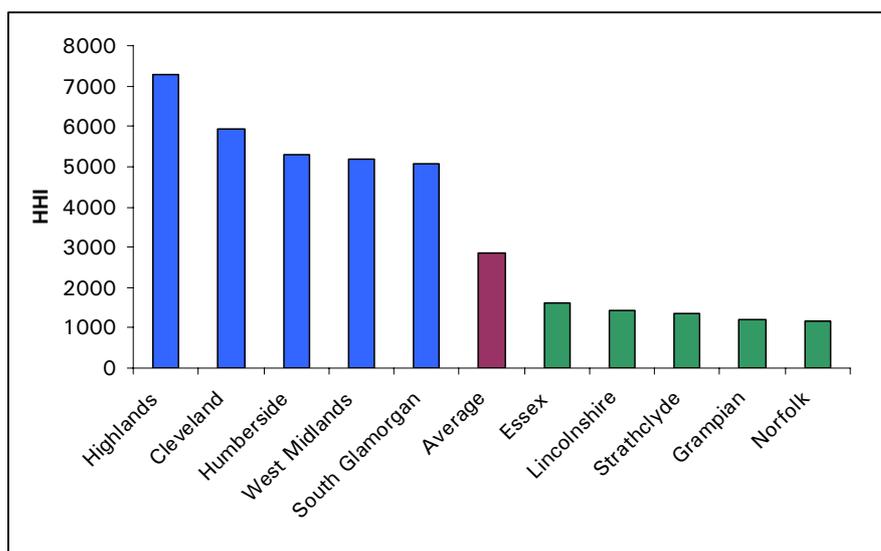
²⁸ In that decision, local aggregates markets were assessed at the level of 30-mile radials, while for ready-mix concrete the local market analysis was conducted at the 10-mile radial level. See *Proposed joint venture between Anglo American Plc and Lafarge S.A*, ME/5007/11, November 2011, paragraphs 136 and 191:
www.offt.gov.uk/shared_offt/mergers_ea02/2011/anglo-american-lafarge.pdf

²⁹ Concentration ratios measures the total output in an industry by a given number of firms. In this case we are interested in the five largest firms' share of production.

³⁰ The HHI is a measure of market concentration that takes account of the differences in the sizes of market participants, as well as their number. The HHI is calculated by adding together the squared values of the percentage market shares of all firms in the market.

4.8 Figure 4.6 shows the HHI at county level for those counties with the five highest and five lowest values, and the average HHI. With an average county level HHI of over 2,800, the sector could be regarded as highly concentrated at the county level.³¹ As discussed above, county-level concentration figures almost certainly understate the concentration within many local geographical market areas, which are likely to be smaller still.

Figure 4.6: HHI aggregates by county, 2009



Source: Analysis of BDS Marketing Research data

4.9 The market for recycled aggregates is much more competitive with an estimated 650 plants recycling construction demolition and excavation waste, operated by more than 450 companies in Great

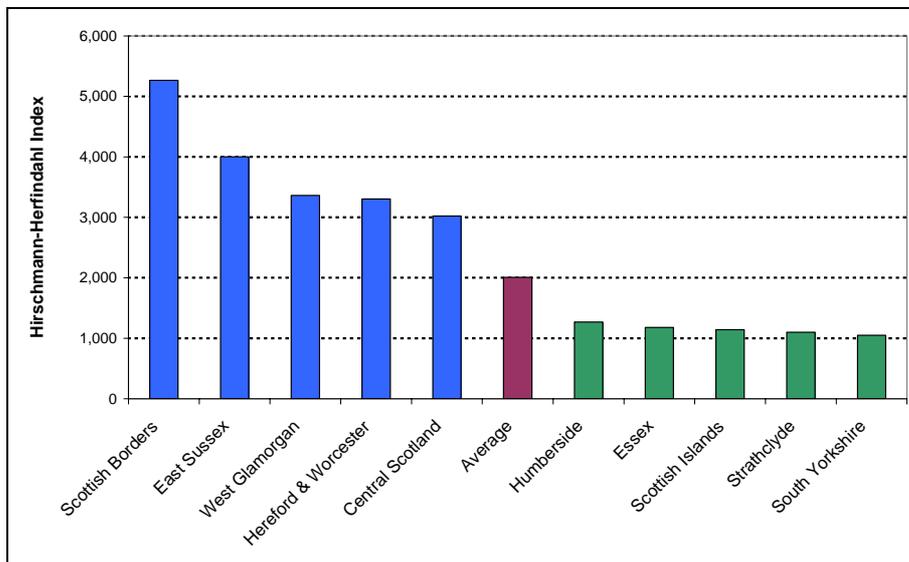
³¹ The level of the HHI ranges from zero (ultra-fragmented) to 10,000 (pure monopoly). The OFT/CC Merger Guidelines 2010 regard any market with an HHI exceeding 1,000 as concentrated and any market with a HHI exceeding 2,000 as highly concentrated.

Britain.³² The top 10 companies produce an estimated 25 per cent of recycled aggregates in Great Britain.

4.10 In the ready-mix concrete sector, concentration has also increased overall since 1990, with CR5 moving from under 60 per cent of the market to around 75 per cent (where volumetric trucks are included CR5 is 68 per cent) At county level, the average HHI shows the ready-mix concrete sector to be highly concentrated with an average HHI of 1,960. For some counties this figure is much higher, as illustrated in Figure 4.7. Again, we note that county-level concentration figures almost certainly understate the concentration within many local geographical market areas, which are likely to be smaller still.

³² BDS Marketing Research, 'Aggregates recycling in Great Britain', 2010. These figures exclude plants that recycle for a company's own use only and plants that recycle other types of waste and mobile plant.

Figure 4.7: HHI ready-mix concrete by county, 2009



Source: Analysis of BDS Marketing Research data

4.11 In the provisional decision, we indicated that we had looked at the relationship between prices at quarry level and concentration in local aggregates markets and had found no clear correlation.³³ This finding could be consistent with several hypotheses:

- Threat of entry perfectly constrains competition – we considered this is unlikely, given high physical entry barriers.
- Two players are sufficient for competition and additional players have no impact on price – we considered this to be plausible to the extent that parts of the aggregates sector could be characterised as bidding markets. However, whether two players are all that is needed for effective competition depends on the two firms being genuinely identical and genuinely competing, just

³³ Paragraph 4.9 in the provisional decision.

as in non bidding markets.³⁴ Nevertheless, we observed that a high proportion of aggregates are not sold through tendered contract.

- There may be tacit coordination.

4.12 We indicated that, while we were unable to come to a firm assessment of whether competition has been adversely affected, in our view the question merited further investigation.³⁵

4.13 One respondent commented that the analysis between prices at quarry level and concentration concluded that the absence of correlation could be consistent with tacit coordination without any assessment of the basis for this, or the likelihood thereof.

4.14 The hypotheses outlined above are simply those that are consistent with a finding of no correlation between price and concentration. We did not firmly conclude that tacit coordination was the most likely scenario.

4.15 We also accept that there were limitations to this analysis and we have not placed undue weight on this evidence for that reason.³⁶ However we remain of the opinion that the relationship between price and concentration in local aggregates markets is an issue that may warrant further investigation by the CC, if the CC so decides.

³⁴ Paul Klemperer, *Bidding Markets*, Report for the Competition Commission, June 2005

³⁵ Paragraph 1.9 in the provisional decision.

³⁶ Such a simple analysis is likely to suffer from measurement error (for example, it may not be appropriate to measure concentration at the county level when markets are local in scope) and omitted variable bias (for example, looking at prices without looking at costs may not give robust results).

Conclusion on concentration

- 4.16 Increased concentration does not necessarily lead to anti-competitive outcomes. There are many industries in which a small number of large firms compete actively, and the exit of inefficient competitors can result in increased consumer welfare.
- 4.17 However, concentration can be a factor facilitating coordination. In markets comprising a small number of firms each firm might find it relatively easy to predict the reaction of its competitors to any action it might take. This could provide an opportunity for firms to coordinate their behaviour for mutual advantage or it could simply dull the incentive to compete, leading to a situation in which rivalry to attract new customers becomes muted.³⁷

Vertical integration

- 4.18 Aggregates, by and large, are a low value product which is used as an input to higher value added downstream products such as concrete and asphalt.³⁸ Over the last couple of decades there has been a trend towards vertical integration between the upstream and downstream product markets.
- 4.19 The trend towards vertical integration is particularly notable with the entry into the UK market of international cement manufacturers which have purchased domestic building materials firms. These UK

³⁷ Paragraph 5.5, OFT, 2006, Market investigation references: *Guidance about the making of references under Part 4 of the Enterprise Act*, OFT 511. Available at: www.of.gov.uk/shared_of/business_leaflets/enterprise_act/of511.pdf

³⁸ Asphalt is a mixture of aggregate and bitumen used in road laying

firms had already started to integrate their operations vertically, and were then in turn acquired by international cement manufacturers.

4.20 The table below shows the most significant transactions in recent years, covering both vertical integration and horizontal consolidation in the industry.

Table 4.1: Recent Transactions

Acquirer	Target	Effect	Year
Aggregate Industries	Atlantic Aggregates	Horizontal, aggregates	2009
Holcim	Aggregate Industries	Vertical - international cement firm buys UK aggregates and ready-mix concrete	2005
Anglo American	Tarmac	Vertical - international mining firm buys UK aggregates and building materials	2000
Heidelberg Cement	Hanson	Vertical - international cement firm buys UK aggregates and ready-mix concrete	2007
Aggregate Industries	Foster Yeoman	Horizontal, aggregates	2006
Hanson	Civil and Marine	Horizontal, aggregates	2006
Cemex	RMC	Vertical - international cement firm buys UK aggregates and ready-mix concrete	2005

Acquirer	Target	Effect	Year
Lafarge	Castle Cement - West Thurrock Cement Terminal	Horizontal, cement	2005
Lafarge	Port Land Cement Company	Horizontal, cement	2005
Midland Quarry Products (Tarmac/Hanson JV)	Hanson Quarry Products Europe - Griff Quarry	Horizontal, aggregates	2004
Lafarge	Blue Circle Industries	Horizontal, cement	2001
Heidelberg Cement	Castle Cement	Horizontal, cement	1999

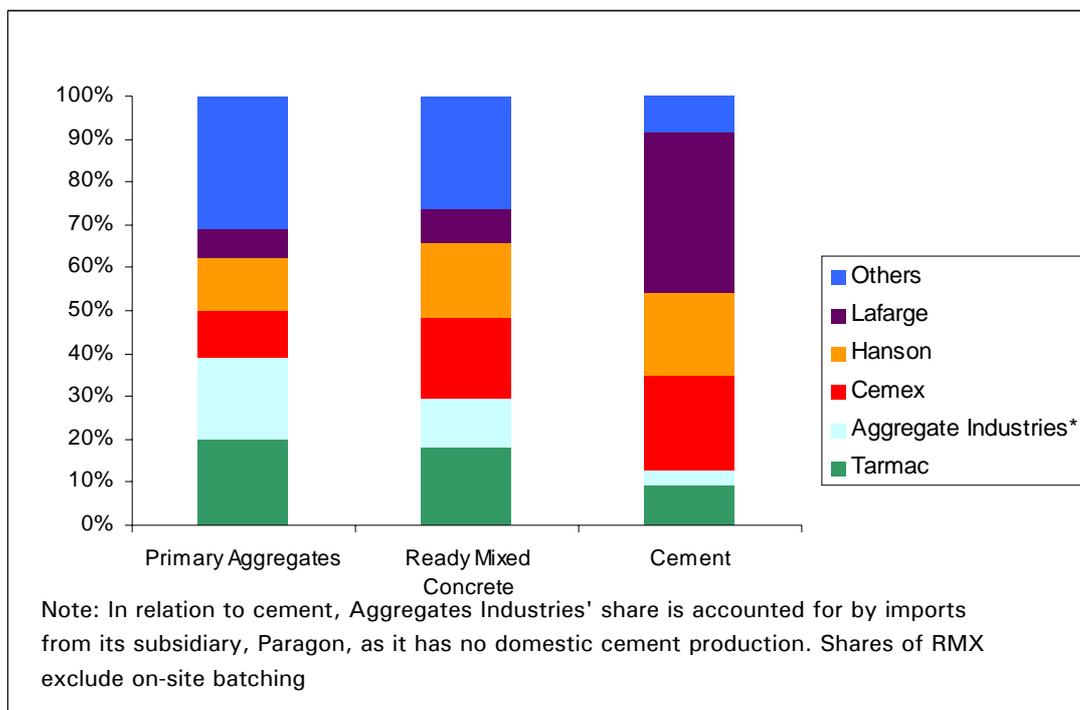
Source: Company websites, OFT merger decisions.

- 4.21 This pattern of consolidation has resulted in five major firms with a large network of aggregates and ready-mix concrete operations throughout the country. By contrast, independent producers tend to be regional, if not locally based. Some independents may be integrated in aggregates and ready-mix, while others may produce only one or the other.
- 4.22 One respondent highlighted that almost all transactions listed above were reviewed and cleared by the OFT or the European Commission and that market shares and vertical structure are results of these decisions. We accept this is the case, and merely point out that the pattern of consolidation over the last decade has resulted in increased integration up and down the supply chain.
- 4.23 However we do not accept that this implies that there are no grounds to suspect possible coordination, as a number of respondents

claimed. The OFT does not consider that past merger decisions, in isolation or in combination, reflect current competitive conditions in those markets. The merger regime is applied to specific mergers, at a specific time, and a history of clearances does not necessarily indicate that there are currently no features of the market or markets in Great Britain which may adversely affect competition.

4.24 The figure below illustrates the extent of vertical integration in terms of the market shares of each of the majors in aggregates, cement and ready-mix concrete.

Figure 4.1: Market shares at the GB level, 2009



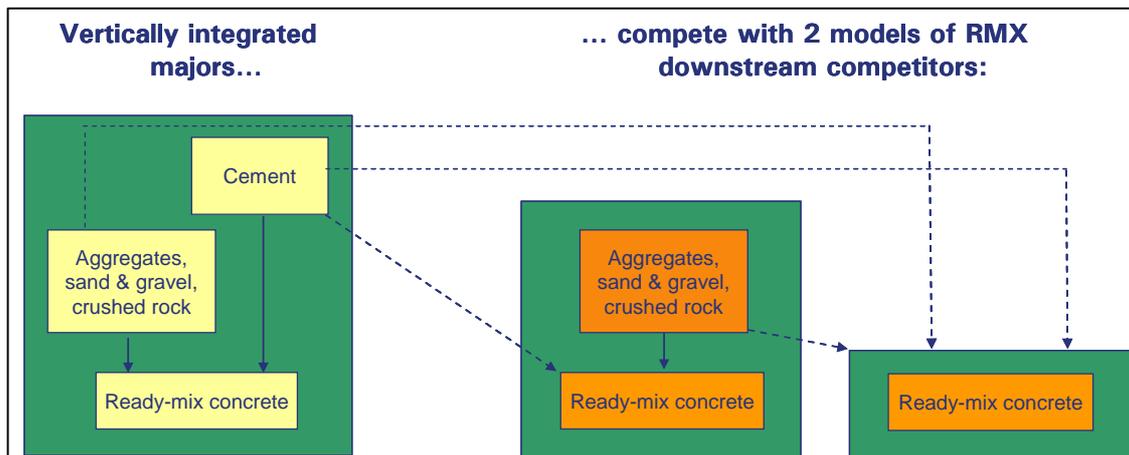
Source: BDS Marketing Research and OFT information submissions

4.25 Vertically-integrated firms will sell a proportion of their cement and aggregates internally, selling the remainder to external customers.

They may also be in competition with these customers in local aggregates, ready-mix concrete or asphalt markets. We have been told that internal sales of aggregates can range from between 20 per cent up to 90 per cent depending on the aggregate type and company.

- 4.26 Figure 4.2 illustrates how vertically integrated majors compete with two types of independent producer in the ready-mix concrete market – aggregates firms which also have ready-mix concrete plants (often on site at quarries), and independent ready-mix concrete producers, which have to buy in both aggregates and cement.

Figure 4.2: Models of vertical integration



- 4.27 In some cases it may not be feasible for the downstream operations of the vertically integrated firms to purchase aggregates internally, where they do not produce the right type of aggregate in the right quantity in the right place. In this case they will purchase from nearby competitor quarries. Cross supply of aggregates is therefore a common feature of the market. Cement is also cross-supplied, with

cement manufacturers purchasing between eight and 25 per cent of their requirements from one another.³⁹

- 4.28 Vertical integration is not, of itself, anti-competitive, and can be pro-competitive, as economies of scale and scope can lead to a direct reduction in costs where firms operate at more than one level of the supply chain. Vertical integration may also improve the coordination of upstream production and downstream distribution, leading to lower transaction and inventory costs, and may allow the firm to remove the double-marginalisation that occurs where the different stages in the supply chain are served by separate firms.⁴⁰
- 4.29 However, vertical integration can also have anti-competitive effects as integrated firms can raise input prices for their downstream competitors, reducing their rival's ability to compete downstream and hence resulting in softened price competition. Vertically-integrated firms can also foreclose non-integrated competitors either by refusing to supply them or by discriminating against them through input pricing.
- 4.30 The concerns raised by independents about the behaviour of the vertically-integrated majors are dealt with in the next chapter.

³⁹ OFT Information requests

⁴⁰ For example, where an independent ready-mix concrete producer buys cement and aggregates from a major, both the major and the ready-mix concrete producer will set their prices independently and both charge a mark-up. This results in higher prices than the case where a single firm produces both the inputs and the final product and so sets a single mark-up in relation to the price of final product alone

High barriers to entry and expansion

Aggregates

- 4.31 Barriers to entry into land-based primary aggregates are high – aggregates can only be quarried where they are available which, together with public opposition to quarries, limits the number of new quarries that can be exploited.
- 4.32 One respondent submitted that there are no high barriers to expansion in aggregates, with this particular respondent's capacity utilisation below 60 per cent. Whilst we accept that barriers to expansion for incumbents may be low in this context, barriers to entry for new sites are high.
- 4.33 We review in detail the barriers to entry in relation to the planning system for land-based primary aggregates later in this report. We also provide a discussion of the main comments submitted to us on planning. We remain of the view that one of the main effects of the planning system is that some aspects favour incumbents⁴¹ over new entrants. It does this by favouring extensions of existing permissions over permissions for new sites. The minimum reserves target imposed by the Managed Aggregates Supply System (MASS) may also be treated as a cap by some planning authorities, meaning that it is unlikely that new permissions will be granted while existing reserves exceed the minimum target level. Lastly, the costs and complexities of the planning system, whether imposed by EC and/or environmental regulation, favour larger firms with well resourced planning teams and incumbents with connections in the local area.

⁴¹ By incumbents we mean firms already operating a quarry regardless of size or business structure

We note this latter point is by no means confined to aggregates planning and is a feature of the planning system as a whole.

- 4.34 Barriers to entry into marine aggregates are also high given the costs of vessels.⁴² As a result, new entrants are deterred by the significant up-front costs involved. Permission for dredging marine aggregates is a requirement but this is mainly based around the environmental acceptability of the proposal rather than limitations in terms of marine aggregates availability. It is cost rather than availability or the planning system which creates barriers to entry.
- 4.35 Barriers to entry into secondary and recycled aggregates are lower and we note the rapid expansion of recycled aggregates in particular in recent years. However, availability and uses of secondary and recycled aggregates are patchy. For example, china clay requires access to a source of material not widely available; demolition waste is more likely to be found in urban areas, and is not suitable for all uses.
- 4.36 Secondary and recycled aggregates account for only a quarter of aggregates use at present and are by no means perfect substitutes for primary aggregates⁴³ so the lower barriers to entry in this segment of the market provide only limited comfort.

⁴² Crown Estates estimates between £30 to £50 million per vessel

⁴³ Some people in the industry are of the view that recycled and secondary aggregates are pretty much at maximum and that future demand will continue to be largely dependent on primary land-won aggregates – see Nigel Jackson, Chief Executive, Mineral Products Association, Agg-net, 7 July 2011

Cement

- 4.37 Barriers to entry into cement are also high as evidenced by the lack of new entry into the market from a domestic manufacturer and by the small number of firms in the UK, all of which are big international companies. Factors inhibiting entry include not only the actual costs of a cement plant, which could be in the region of £100 million, but also the need to have access to a lime quarry to manufacture cement. Planning permission for a new cement plant is also seen in the industry as very unlikely.
- 4.38 We heard from one firm that an independent cement importer is looking to start up production in the UK. We have discussed this with the firm in question to confirm this. However, the OFT cannot place too much weight on an **intention** and whilst we recognise there is potential for entry, this is not enough to change our mind. Furthermore, any entry would not be 'new' but would involve reinstating a disused plant. As such, the issue of obtaining planning permission still remains for other potential entrants.
- 4.39 One company also indicated that barriers to expansion in cement are low given high levels of excess capacity. Whilst this may be true, it does not change the fact that barriers to entry are very high, nor that cement is highly concentrated. It does not change our concerns around vertical integration and the possibility of coordination.
- 4.40 Three companies also told us that there are a large number of importers and independently-owned import terminals and that barriers to entry for importers are low. This assertion is illustrated with data on imports which suggests that importers have grown their market share during the downturn from eight to 13 per cent between 2005 and 2010. One firm also told us that volume has gone up and that this is expected to increase with excess capacity in Ireland, Greece and Spain.

- 4.41 We recognise that market share of importers has increased over the last three to five years. However, a significant proportion (30-40 per cent) of cement imports is accounted for by one of the majors, Aggregate Industries ('AI'). Moreover, the majority of cement imported by AI is for its internal use and so imposes little or no competitive constraint on the domestic producers.
- 4.42 We also note that while market share has risen, according to the MPA, import volumes have actually decreased from 2007 where they stood at 774,000 tonnes compared to 742,000 tonnes by 2010.⁴⁴
- 4.43 The Anglo American/Lafarge Merger Decision⁴⁵ stated that parties to the joint venture acknowledged that the cement market is national and regional, rather than wider than national. Unless customers are close to import terminals, then imports are not an option open to them. Indeed, importers' share is much lower in some regions, at less than 10 per cent in Scotland, the West Midlands and Wales suggesting that they will not always impose a constraint on the domestic producers.
- 4.44 The majority of cement customers we have spoken to as well as those providing third party responses to the Anglo American/Lafarge Merger investigation, did not see imports as a viable alternative to domestically produced cement.
- 4.45 As noted in the provisional decision, we acknowledge that cement can be imported but this is not a purchasing strategy attractive to

⁴⁴ MPA, Monthly cement statistics

⁴⁵ *Proposed joint venture between Anglo American Plc and Lafarge S.A*, ME/5007/11, November 2011: www.offt.gov.uk/shared_offt/mergers_ea02/2011/anglo-american-lafarge.pdf

many customers due to distance to sea, economies of scale, concerns over exchange rate, reliability and quality of supply. Our concerns over barriers to entry in the cement market therefore remain.

Ready-mix concrete

- 4.46 For ready-mix concrete, barriers to entry are much lower in that the level of financial resourcing needed is lower and the planning process is relatively straightforward.
- 4.47 Four respondents pointed out that the independent ready-mix concrete sector has grown over the last 10 years and that they gained share in all regions with 23 new operators entering between 2005 and 2009.
- 4.48 We accept that the independent ready-mix concrete sector has grown its market share and this may reflect lower barriers to entry.
- 4.49 However, we have some evidence to suggest that fear of predation can be a significant barrier for either aggregate producers wanting to enter the ready-mix concrete market or existing ready-mix concrete producers looking to expand their operations. A more detailed account of this evidence is provided in the next chapter.

Summary of barriers to entry

- 4.50 Barriers to entry are high in aggregates, because it is difficult and expensive to get permission to quarry. In particular it is easier for incumbents to extend existing permissions than for new entrants to gain new permissions. Financial barriers are high in cement, and there may also be reputational barriers to this market. Physical and financial barriers to entry are lowest in ready-mix concrete but again there may be reputational factors deterring new entry.

Product homogeneity

- 4.51 Product homogeneity is a market feature that can tend to assist with coordinated behaviour. Where the various firms in a market essentially sell the same product, it is easier to arrive at an understanding, say on price, and for that understanding to be sustained. While, homogeneity can also, in some circumstances, create more intense competition, where there is high concentration, frequent interaction (see below) and high barriers to entry, then product homogeneity may facilitate coordination.
- 4.52 All three products can be characterised as homogeneous. Whilst there are various types and grades of aggregates, there are no significant differences in quality between producers (for example Type-1 aggregate is the same product whether purchased from one company or another). The same could broadly be said for cement and ready-mix concrete.

Market transparency

- 4.53 Market transparency helps oligopolistic firms predict and monitor the reactions of their competitors, which can assist with tacitly coordinated behaviour or may simply dull the incentive to compete.
- 4.54 A range of factors contribute to market transparency in this sector:
- Many firms, including the majors, are customers of one another up and down the supply chain and in different local markets. As discussed in more detail in the following chapter, as customers they receive advance notice of other firms' pricing intentions.
 - There is a high degree of transparency in relation to capacity planning, for both aggregates and cement, as the length of time and consultation needed to get planning permission mean

capacity intentions are highly visible. The planning system is discussed in more detail later in this report.

- There are also detailed market reports available, which provide information on market shares down to the local level, production volumes, level of aggregate reserves as well as more site specific information. In addition, the particular nature of the planning system for aggregates means that a number of detailed reports are generated.

Multi-market contact

- 4.55 Multi-market contact increases the frequency of interactions between the firms. As with transparency, this may help firms predict and monitor the reactions of their competitors. Multi-market contact may also soften asymmetries in market share that arise in individual markets. For example, one firm may have a competitive advantage in one local market and its rival can have its own competitive advantage in another local market. While a local market analysis might suggest that collusion is difficult to sustain, multi-market contact restores in such a case an overall symmetry.⁴⁶
- 4.56 Multi-market contacts are extensive in this industry, notably because firms compete in local markets up and down the supply chain, but also because they buy from, and sell to, one another in many of these markets.
- 4.57 A further source of contact between firms is joint ventures (JVs). The major companies are involved in around 30 JVs at present.

⁴⁶ The Economics of Tacit Collusion, Final Report for DG Competition, European Commission, Marc Ivaldi, Bruno Jullien, Patrick Rey, Paul Seabright, Jean Tirole, March 2003

These exist in both the operation and ownership of quarries, marine aggregates dredgers, ready-mix concrete plants, asphalt plants, and infrastructure such as marine wharves. Annexe A provides a list of JVs known to the OFT. Some of the JVs between the major firms are a legacy of predecessor companies that used such ventures to extend their product or geographic scope. However the majors have also entered into new JVs in recent years.

- 4.58 We have also been told that asset swaps are common and we have evidence of firms exchanging plants/quarries in different parts of the country, instead of buying and selling assets through cash sales. For example we are aware of one case where a ready-mix concrete plant in one part of the country was swapped for a sand and gravel quarry in another, with the result that the firms had almost identical ready-mix concrete output in the county where the ready-mix concrete plant had changed ownership. In another asset swap, two majors swapped ready-mix concrete plants resulting in one of them gaining production in an area they were not previously operating.
- 4.59 The significance of asset swaps in our view is two fold:
- They illustrate the extent of multimarket contact. The exchange of these assets must be negotiated nationally given the different local and product markets involved, and so indicate the extent to which these firms are in close contact with one another.
 - Asset swaps may be used to increase the symmetry of market shares in local markets (this is a possible interpretation of the examples mentioned above) which may assist coordination or at least dull the incentive to compete.
- 4.60 Three respondents commented that JVs and cross-supplies are pro-competitive and necessitated by the location of quarries. Similarly, it was put to us that asset swaps are normal in many industries and

that no evidence has been presented as to the extent to which these could assist coordination.

- 4.61 We acknowledge that this may well be the case. However, we maintain that they illustrate the degree of multi-market contact that exists in this industry which could aid coordination.

Conclusion

- 4.62 This section has discussed a number of features of this industry that can in principle give rise to competition concerns. In the next chapter we discuss the concerns raised by parties in the course of the study.

5 ISSUES RAISED DURING THE COURSE OF OUR STUDY

- 5.1 Our study of the aggregates sector has revealed a range of concerns among stakeholders about how competition operates in this sector. We also heard a range of views on planning and other issues. However, most concerns about competition in the market were related to the extent of vertical integration between the aggregates, cement and ready-mix concrete sectors, and to the conduct of the vertically-integrated majors. This was the reason for extending the scope of the study into cement and ready-mix concrete.
- 5.2 This chapter sets out the main concerns that were raised with us during the course of our market study in relation to competition in the sector. Specific issues about planning and procurement are discussed in the next chapter. This chapter begins by summarising the concerns raised and anecdotal evidence presented to the study. It then goes on to cover the analysis we have undertaken to substantiate the anecdotal evidence received.

Anecdotal evidence

- 5.3 During the course of the market study we spoke to a diverse range of stakeholders, including producers and customers of aggregates and, to a lesser extent, of ready-mix concrete and cement products. We met directly with 19 companies, received written information from over 50 firms (comprising both competitors and customers) and received a further 13 submissions from other parties, three of which were anonymous.
- 5.4 The majors' responses to the consultation suggested that the OFT had over-relied on unverified and unsubstantiated evidence.
- 5.5 The OFT can find reasonable suspicion based on anecdotal evidence in combination with other sources of evidence. Clearly the weight

that we place on anecdotal evidence is a matter of judgement. In this regard we note that the OFT received a large number of additional complaints in the course of its work on the recent Anglo American/Lafarge merger - the Decision referred to the fact that 'a significant number of third parties complained that national suppliers of cement ... and national suppliers of aggregates, RMX and asphalt ... regularly engage in coordinated behaviour to the detriment of customers.'⁴⁷ This additional volume of broadly consistent complaints arguably increases the weight that can be placed on such anecdotal evidence in this case.

5.6 The majors' responses to the consultation also suggested that, in contrast to the weight placed on complaints from smaller players, the OFT had not undertaken adequate engagement with the major players in the industry, and that in failing to do so we had not followed our own policy.⁴⁸

5.7 We accept that we could have engaged more with parties at the time of extending the scope of the market study to ready-mix concrete and cement. Nonetheless, we met with all parties that requested a meeting during and following the consultation period, and the OFT does not accept that the parties have been prejudiced in any way by lower levels of engagement at the time the scope was extended.

5.8 In our view, the engagement we have undertaken has given us sufficient understanding of the market to be satisfied that the Section

⁴⁷ *Proposed joint venture between Anglo American Plc and Lafarge S.A*, ME/5007/11, November 2011, paragraph 267: www.offt.gov.uk/shared_offt/mergers_ea02/2011/anglo-american-lafarge.pdf

⁴⁸ The policy referred to is Transparency, a Statement of the OFT's Approach, May 2010, OFT 1234

131 of the Enterprise Act 2002 (reference test) is met and to exercise our discretion.

5.9 Turning to the anecdotal evidence itself, as set out in the provisional decision, we heard a range of accounts, most of which related to the behaviour of the vertically integrated majors. We have also received six further accounts during the consultation process. These included comments on a perceived 'squeeze' between the high price of cement and the low price of ready-mix concrete, the difficulty of obtaining competitive quotes for cement, aggressive pricing in ready-mix concrete, and the fact that the major firms announce price rises at the same time as one another and of similar amounts. We discuss these issues in more detail below.

5.10 The complaints and allegations received were for the most part either made anonymously or could not be fully substantiated as complainants were reluctant to make formal complaints or provide written submissions. We were told that there was reluctance on the part of independent firms to provide evidence, particularly in writing, for fear of commercial retaliation. For example one letter (from an aggregates customer) read:

'sorry this has to be anonymous which is not my style but I would not be able to ever gain competitive prices ever again from these internationally huge businesses.'

5.11 Given the lack of detail provided and the difficulty of following up to substantiate particular accounts (notably those made anonymously) it is very difficult to come to a firm conclusion as to whether individual allegations might represent potential infringements of competition law. Individually, each account is insufficient to form the basis of, or justify prioritising, an investigation under the Competition Act 1998 (Competition Act). Collectively, however, the evidence does seem to indicate competition problems in the market. The fact that we

received a significant number of accounts which are broadly consistent with one another, suggests that independents perceive a serious threat from the behaviour of the vertically integrated majors.

- 5.12 We provide more detail on the various accounts we have received below.

'Squeeze' between cement and ready-mix concrete prices

- 5.13 Independent ready-mix concrete operators report suffering a margin squeeze between the consistently high price of cement (an input to ready-mix concrete) and the low price of ready-mix concrete. Quite a number of independent operators in the aggregates and ready-mix concrete industries are of the view that the majors are willing to lose money in ready-mix concrete knowing that they make profits in cement.
- 5.14 Some ready-mix concrete producers and aggregate producers have attempted to set up buyer consortia in order to import cement and some have even considered opening their own cement plant in order to reduce reliance on the majors. However, risk of exchange rate fluctuations and the fear of retaliation from incumbent cement producers during the set up process (as they would still need to rely on the majors for cement during that time) give rise to concerns which have prevented these from going forward.
- 5.15 Comments received from customers and competitors include:

'The large companies such as Lafarge, Hanson and Cemex are 'within pennies of each other' as prices of cement go up, but these cement prices are not reflected in the general market for concrete.'

'We have found in recent times that purchases of cement from xxx were having to be made at higher prices which were not reflected in

the market price of the concrete product. This had the effect of reducing the margin obtainable on concrete by an independent producer such as ourselves.'

'I am particularly concerned at the move within the vertically integrated major companies producing and selling cement to push up the price of cement to independent companies whilst reducing the price of their own concrete products (such as ready-mix concrete) to the market...This is unfair competition and clearly could lead to less competition in the market place once all of the independents suppliers' costs are pushed above the selling price for concrete. Whilst initially this gives good value to customers, in the longer term it will reduce competition.'

'Independents have not gone out of business yet, mainly because they have been able – particularly in the downturn where there has been excess aggregates capacity – to make up for expensive cement by squeezing their aggregates supply chain but it is merely a matter of time.'

5.16 The anecdotal evidence suggests that majors are not competing with one another to supply independents even in areas where they do not have a ready-mix concrete presence – this implies they are passing up an opportunity to make cement sales without cannibalising their own downstream customer base or indeed their rivals' customer bases. This implies that the behaviour is coordinated or at least that competition is muted in these markets.

5.17 Possible hypotheses for this include:

- The majors have some kind of understanding that they will not supply cement to independents in non-presided areas. This enables incumbent suppliers to extract rent, while containing the common competitive threat posed by downstream independents.

- Complaints may simply reflect difficulties faced by independents in competing against more efficient vertically integrated companies. Operating multiple concrete plants allows economies of scale by logistically coordinating deliveries of a highly perishable product on short notice to consumers at multiple locations. More generally, vertically integrated players may be able to offer better prices for ready-mix concrete because they avoid double marginalisation.

5.18 Our analysis appears to confirm that there has been a divergence between the price of cement and the price of ready-mix concrete, and that the price charged to independents for cement exceeds the price the majors charge themselves and each other. The analysis is consistent with but in no sense conclusive proof of either of the hypotheses described above. The analysis is described in detail later in this chapter.

Difficulty obtaining competitive quotes

5.19 As noted above, the margin squeeze allegation implies a lack of rivalry between the majors – if this were not the case, independents facing a cement price increase from their particular supplier could source cement at a competitive price from a different firm.

5.20 In connection with the margin squeeze issue we heard a range of accounts as to why independents were not able to obtain a competitive price elsewhere. We were told that either the other majors are not interested in quoting, or else provide quotes which are no better than, if not far higher than, their existing rate. We were told that the majors explain this by citing production shortages. However, at present there appears to be excess capacity in the cement sector (as evidenced by falling production volumes and the number of recently closed or mothballed plants) which does not, prima facie, support the explanation of production shortages.

5.21 Two of the majors submitted during the consultation process that, in those instances where they have not provided a quote this could have been on the basis of the poor credit history of a particular company or because the external supply of some majors is limited in scale and in geographic scope. Whilst the former explanation is plausible, it does not satisfactorily explain why a certain customer may not have credit history issues with one major and thus be able to trade, but not with another.

5.22 The comments we received on refusal to supply included:

'We are not able to play one cement supplier off against another to obtain a better price, you have to rely on your relationships with your current supplier to keep you competitive.'

'We have tried but can't get any 'sensible' prices out of xxx or xxx. Consequently we are very reliant on xxx as a source and feel very exposed in terms of supply risk.'

'We have to buy from xxx; other companies won't give you a price or will quote double the market price. The official reason given is no capacity, but in reality it's because the big companies don't want to undermine xxx's price.'

5.23 We have also received two more allegations of refusals to supply during the consultation process.

5.24 As noted earlier, the geographic market for cement is considerably wider than that for aggregates or ready-mix. In theory it is hard to see why any one of the majors could not offer a price for delivering cement in most parts of the country, given that it can be economic to transport cement over large distances. Refusal to supply cement to an independent firm at a reasonable price therefore suggests a lack of rivalry among the majors.

5.25 We have carried out an additional piece of analysis, albeit at high level, following consultation to determine whether distance was a factor in those complaints relating to refusal to supply. Our theory was that if these customers were located reasonably far from cement plants then this may provide an explanation as to why firms may be reluctant to supply or even quote. We were able to carry out this analysis for six buyers, where we had sufficient information relating to location of ready-mix concrete plants in relation to the majors' cement plants. The analysis shows that for five of these, distance could not be considered a reason not to supply.

5.26 Comments from independents about their perception of rivalry between the majors included:

'During lean times majors frequently target volume which is inevitably held by small independent companies such as my own so as to avoid commercial conflict with other major suppliers.'

'We have heard of incidents where a salesman has said that he is not allowed to quote and the customer should go to company xxx instead. Also we have heard of agreement between companies whereby one supplies aggregates and another read-mix concrete in a certain area and they do not compete with one another.'

'The price differential between the main operators is very similar as they don't want to upset each other as they also trade with each other across a portfolio of products behind the scenes. For example, xxx has a deal but buys off xxx. Due to this reciprocal trading, how aggressive are they? If one upset the market by taking a customer through aggressive pricing, how might they be treated if they need supply later? It is an incestuous relationship.'

Aggressive pricing

- 5.27 In addition to margin squeeze via input foreclosure, we also received a number of complaints of aggressive downstream pricing in ready-mix concrete and asphalt.⁴⁹
- 5.28 It has been reported to us (though we have not confirmed this) that the majors are supplying ready-mix concrete below cost and to a level at which independents cannot compete. Similarly, there was a claim that some major aggregate producers have taken 'a hit' on asphalt, with majors reducing the price at the last minute in order to win the contract, to levels competitors could not match (and allegedly a price level at which majors would incur losses).
- 5.29 The comments on aggressive pricing included:
- 'Majors are charging prices that do not cover their costs which I believe is predatory and if it continues many of us will go out of business which in the long term will reduce competition.'
- 'My only conclusion is that xxx are trying to drive us out of business as it is not commercially viable for them to supply concrete at these prices.'
- 5.30 This behaviour would not constitute predatory pricing in the sense of being an abuse of dominance unless a single firm was found to be dominant in the relevant local market(s). We have reviewed the information received and have not found this to be the case although we have not undertaken a full analysis. However, it may be a further

⁴⁹ Aggregates are a key input into asphalt (the other being bitumen). Whilst asphalt is not directly in scope, we have included in our study accounts involving supply of aggregates to asphalt contractors.

indication of a common strategy on the part of the majors to limit the competitive threat from independents.

Threat of retaliation

- 5.31 We were also told of threats to cut off supply of aggregates or cement as a means of retaliation by the majors for behaviour perceived to be contrary to their commercial interest. For example, we heard that an independent had been warned off supplying ready-mix concrete in areas outside its 'normal' market territory.

Parallel pricing

- 5.32 We understand from discussions with a range of firms that it is common practice across the industry to send price increase letters to customers in advance of implementation. These price letters detail the amount by which product prices will rise and the timing of such increases.
- 5.33 We note two points in relation to these letters. The first is that to the extent that firms in these markets are customers of each other, they receive advance notice of each others' price increases.
- 5.34 The second is that we have been told that the majors tend to put prices up by similar amounts and at the same time. We have also been told that sometimes a major may take the lead in terms of announcing a price rise, with the others following closely behind, or that quotes have been delayed until there was a clear indication of what others may do regarding their price increases. We have also heard that letters used to be sent once or twice a year on 1 January and 1 June, but recently have been sent more often, sometimes monthly.

- 5.35 We have collected a sample of around 50 price letters from the majors to diverse customers including house builders, asphalt contractors and independent aggregates and ready-mix concrete suppliers, dated from January 2010 to April 2011. The letters contain details of future price increases of products including aggregates, ready-mix concrete, asphalt, cement and other building products.
- 5.36 The letters within this sample were sent at very similar times, often with the same implementation date. Usually they were sent about a month in advance, with a range of between three months' and two weeks' notice being given.
- 5.37 Some letters outline price rises for a single product, while others include a range of products such as aggregates, asphalt and ready-mix concrete. Cement prices seem to be sent separately. The price increases tend to be relatively close in terms of amount. On one occasion within the sample, letters from two firms were sent very close to one another in time, and contained the same price increases for the same products, set out in the same order. We note that similar evidence was gathered and is referred to in the Anglo American /Lafarge Merger Decision in relation to price letters for cement for these two companies⁵⁰.
- 5.38 Some of the comments we have received on this issue are as follows:

'There is never any notification of price reductions and often the letters will include increases with ancillary items like plant opening

⁵⁰ *Proposed joint venture between Anglo American Plc and Lafarge S.A*, ME/5007/11, November 2011: www.oft.gov.uk/shared_oft/mergers_ea02/2011/anglo-american-lafarge.pdf, page 83

charges, increases in haulage costs etc which are all in line with each other.'

'Our contractors are frustrated in trying to achieve a competitive price as the prices charged by suppliers are so close together: they observe annual pricing rounds where one supplier will put their price up and the others will then follow suit within weeks.'

- 5.39 We understand, however, that the prices set out in price increase letters are in practice used as a starting point for negotiations with customers and that firms generally fail to achieve the prices set out in the price letters, in part because of the rebates offered to large customers.
- 5.40 All five majors commented that price letters do not translate into price increases at the same level, or sometimes at all with one particular firm saying that they are set at the same time to facilitate customers' budgeting each year and that they are sent at a similar time due to similar shock costs.
- 5.41 In the Anglo American /Lafarge Merger decision the OFT acknowledged (in relation to cement) that actual price increases may not follow exactly the announced price, but noted that on the basis of the parties' data, price announcements do tend to result in an increase in cement price, at an aggregated level. The Decision further noted that:

'price announcements enable the national firms to reach a common understanding that an increase in price will result. Although non-binding, the headline price announcement letters provide a simple mechanism, reinforced through repeated use and experience, to generate a tacit understanding on pricing behaviour. Further, they signal intentions to other market participants and condition market

expectations about the existence, the timing and the scale of the pricing increase initiatives.

Given that the national players would expect each other to send out their price letter at or around the same time, the OFT considers that any deviation from such agreement to send out the price letter at the prescribed time could easily be detected. The OFT is therefore of the view that it is likely that, even if the price announcement does not lead to the full listed price increase for all customers, coordinating firms will still understand that an overall price rise should result from the collective behaviour.

In terms of the scale of any price increase, a large announced increase in a given product signifies a stronger push for increased prices on the part of suppliers than a smaller per tonne announced increase will do.

Similarly, it is more likely that a price increase initiative for one supplier will be successful if customers are aware that other suppliers have recently announced similar, or identical, price increases for the same product.

The OFT does not consider it necessary to prove that a price change is fully implemented in respect of all customers, rather that an increase in price is attempted, and is in fact, commonly achieved (albeit that the actual amount increased by individual customer will depend on the circumstances of that customer)⁵¹.

5.42 We remain of the view that these letters may have a role in signalling price intentions, thus softening competition. Furthermore, some

⁵¹ See OFT Decision on Proposed Joint Venture between Anglo American plc and Lafarge SA, 2 November 2011, paragraphs 304, 305 and 307.

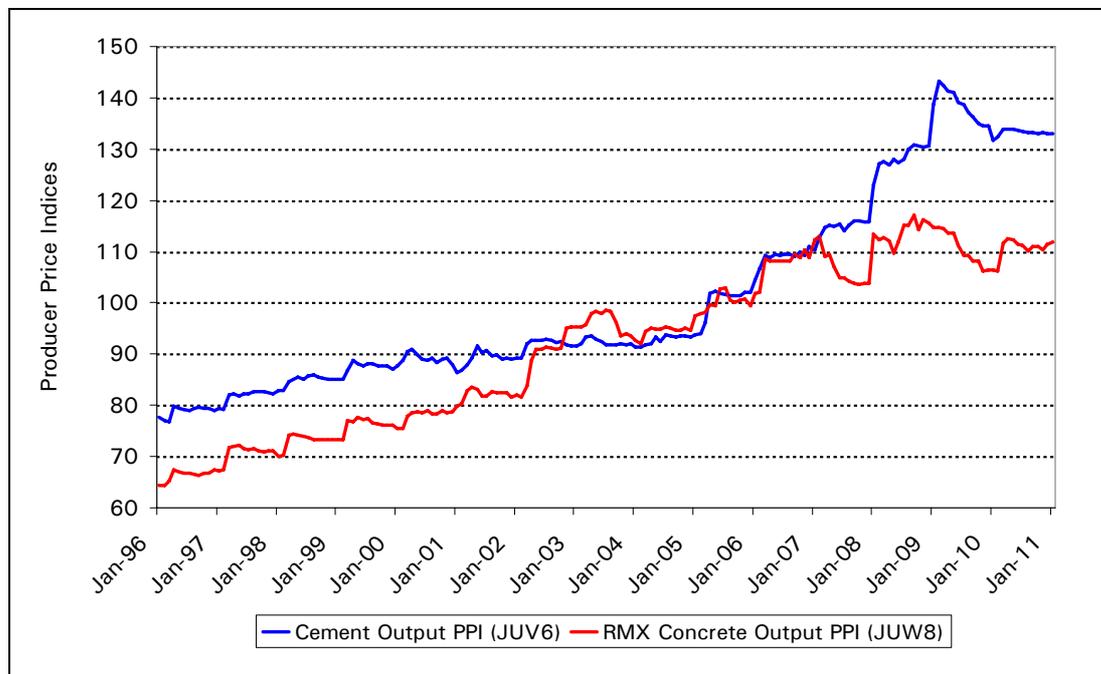
customers do pay 'list' prices, as discussed in more detail in the next chapter.

Performance indicators

- 5.43 We looked to see whether the data available to us support the suggestion that there has been a squeeze between the price of cement and of ready-mix concrete.
- 5.44 Publicly available data from ONS appear to confirm that there has been a 'squeeze' between the price of cement (which has risen in recent years) and the price of ready-mix concrete (which has fallen then stabilised). Figure 5.1 shows output Producer Price Indices ('PPIs') for cement and ready-mix concrete.⁵² The two price series are more or less in line until around 2007. From around 2007, the price of cement seems to have increased faster than the price of ready-mix concrete. Moreover, there was a sharp increase in the price of cement around 2009 that is not mirrored in the price of concrete.

⁵² Output PPIs show the prices received by manufacturers for the goods they produce

Figure 5.1: Output PPIs for cement and ready-mix concrete (2005 = 100)



Source: OFT analysis using data from ONS.

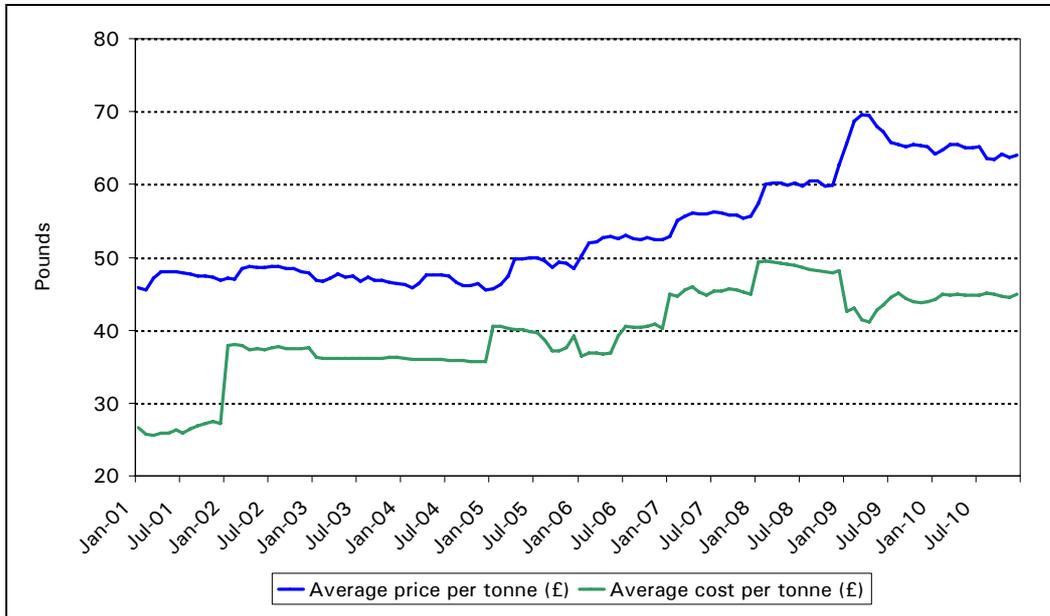
5.45 Since cement is a major cost component of ready-mix concrete (around 45 per cent), it is surprising that price changes in cement do not appear to be fully reflected in ready-mix concrete in the period since 2007. This pattern of prices would be consistent with margin squeeze in the market for ready-mix concrete, though it is, of course, not conclusive evidence of this.

5.46 Firm-level data supplied by two of the majors⁵³ provide further corroborative evidence of a divergence between cement prices and ready-mix concrete prices and a consequent possible squeeze.

⁵³ Where data were supplied by the other majors, these were not of sufficient quality and/or did not cover a sufficient period of time.

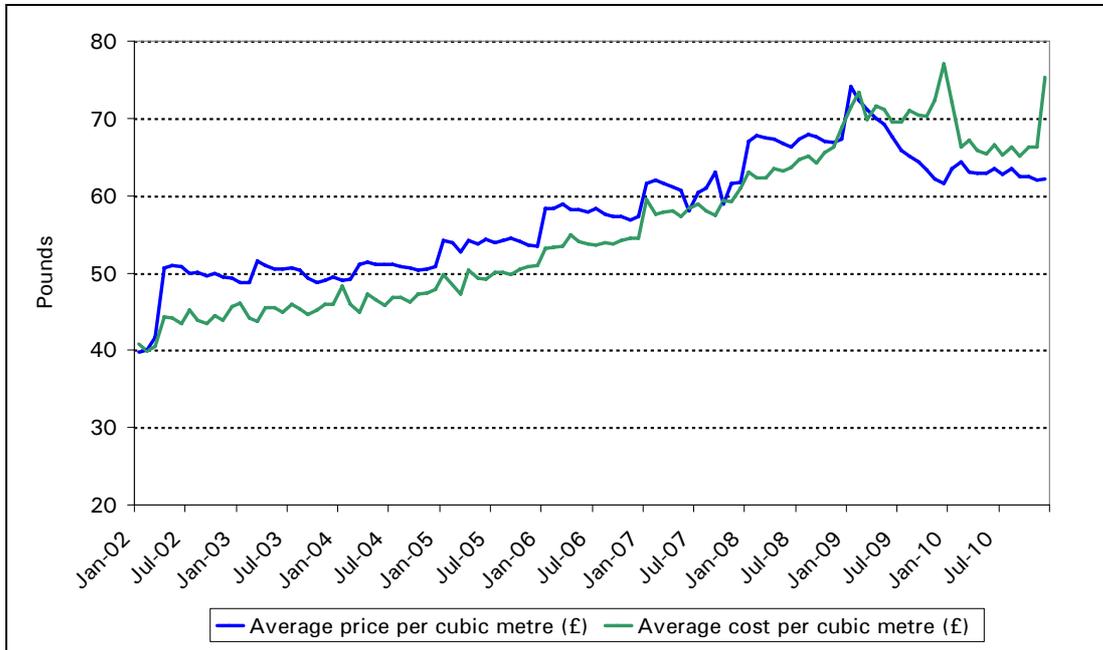
- 5.47 For one major, monthly data on volumes, costs and prices allowed us to estimate its average prices and average total costs for both cement and ready-mix concrete. These data also allowed us to estimate the firm's marginal costs in relation to ready-mix concrete. Both of these analyses – described in more detail below - suggested that ready-mix concrete margins fell in late 2009 and 2010.
- 5.48 Figures 5.2 and 5.3 below show the average price and average cost for cement and ready-mix concrete, respectively, over time. For cement, the gap between average price and average cost has widened from 2009 onwards.
- 5.49 For ready-mix concrete, over the same time period (from 2009 onwards), average cost is actually higher than average price, suggesting that margins may even be negative. Moreover, during 2009 ready-mix concrete average price fell while average cost increased (possibly reflecting the increase in the average price of cement, since this is a major cost component).

Figure 5.2: Cement – average price and average cost per tonne based on data from one supplier



Source: OFT analysis

Figure 5.3: Ready-mix concrete – average price and average cost per cubic metre based on data from one supplier



Source: OFT analysis

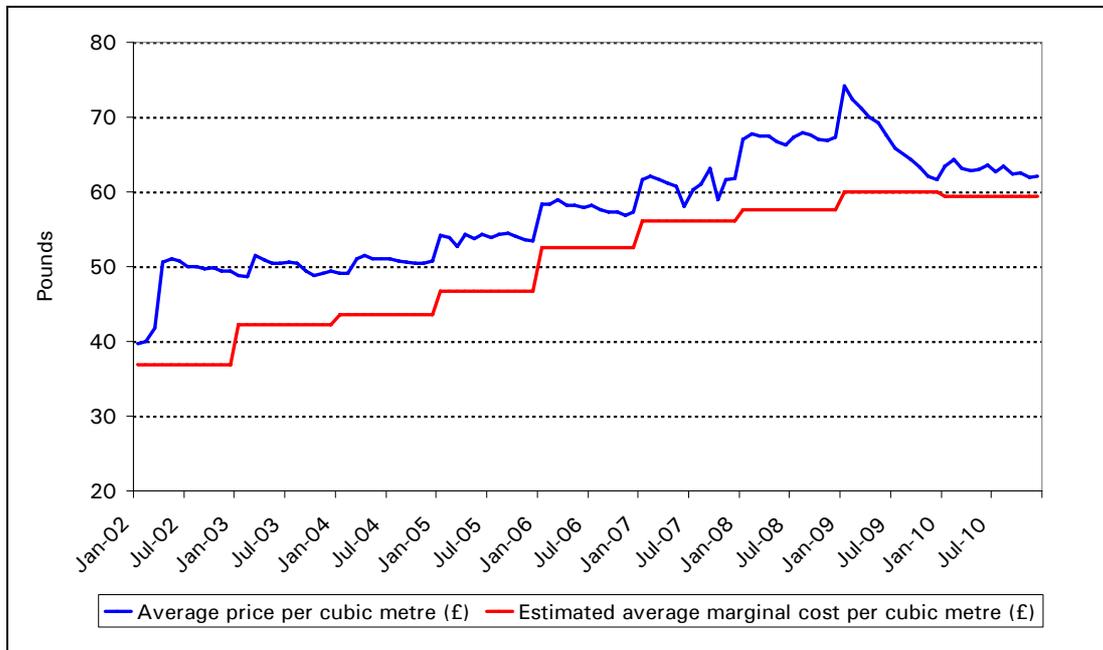
5.50 We also used the data to estimate the (average annual) marginal cost of ready-mix concrete for this firm. An econometric analysis was conducted using the total cost and total quantity of ready-mix concrete produced by the firm and this produced estimates of marginal cost for each of the years 2002 to 2010.⁵⁴

5.51 Figure 5.4 below shows actual average price over time and estimated average marginal cost for ready-mix concrete for each year. Again, these results suggest that margins have been falling in 2009 and 2010 compared to earlier years. Alternatively they could

⁵⁴ All of these marginal cost estimates were significant at the 99 per cent confidence level.

be a consequence of the recession with lower demand and constant supply leading to lower margins.

Figure 5.4: Ready-mix concrete – price and average marginal cost



Source: OFT analysis

5.52 Annual price and cost data supplied by a second major suggested that its margin on ready-mix concrete was significantly lower in 2009 and 2010 than in previous years, falling by 75 per cent between its 2008 level and the level in 2009 and 2010.

5.53 These results are indicative but not determinative of a margin squeeze.

5.54 Furthermore, in relation to the analysis that we have conducted, we note that there are serious limitations in the data available to us. In particular, the analysis is based on accounting costs, rather than economic costs. Moreover, the estimates are based on national

averages and this further complicates their interpretation, as ready-mix concrete markets are local in scope.

- 5.55 Data problems notwithstanding, these findings could be considered consistent with a concerted effort by the majors to exclude or contain the competitive threat from independent ready-mix concrete operators. We do not rule out the possibility that these results could simply reflect competition in the context of rising input prices and falling demand for concrete due to the slow-down in construction. Nonetheless the slow down affected both sectors, so we might have expected cement and ready-mix concrete prices to follow a similar trajectory. If anything, we might have expected a sharper fall in the price of cement than in the price of ready-mix, since cement has higher fixed costs of production.
- 5.56 In this regard we note that, based on data supplied by the parties, in the Anglo American/Lafarge Merger Decision, the OFT found that cement margins were high. Furthermore, the OFT found that these high margins in conjunction with spare capacity and the parties' claims that demand was elastic were 'hard to reconcile with the parties' arguments that there is not pre-existing coordination'.⁵⁵
- 5.57 On balance we consider the observed falls in ready-mix concrete margins to be potentially indicative of margin squeeze by the majors but not to represent definitive evidence of this.
- 5.58 We also examined differentials between cement prices that the majors charge themselves for cement, the prices they charge each other, and the price charged to independents. We found that

⁵⁵ See *Proposed joint venture between Anglo American Plc and Lafarge S.A*, ME/5007/11, November 2011, paragraphs 280 to 283:

www.of.gov.uk/shared_of/mergers_ea02/2011/anglo-american-lafarge.pdf

independents may be charged higher prices, in the region of 14 per cent more. On the basis of the data available, we calculated the average price charged per tonne of cement internally, to other majors and to independents – these are shown in Table 5.1 below. We additionally ran econometric analysis to control for the fact that independents are, on average, smaller volume customers and to assess whether the price difference was due to volume. This analysis also suggested that independents pay on average 13 per cent more than other majors and that volume differences are not driving prices.⁵⁶ Such price discrimination could be consistent with an attempt by the majors to squeeze the margins achieved by independent ready-mix concrete producers.

Table 5.1: Average cement price and volume per type of customer

Customer	Average price (per tonne)	Average volume (tonnes)
Internal	£81.45	625,702
Major	£80.70	68,950
Independent	£92.28	31,483

Source: OFT information requests

5.59 Three firms indicated during the consultation that they do not price independents higher and that any difference may be based on volume. We revisited our analysis to address this and found, based on the data supplied by these three firms during the market study phase, that independents were charged higher prices to an extent that was not explained simply by volume differences.

⁵⁶ The coefficient on the independent dummy variable is statistically significant at the 95 per cent confidence level.

- 5.60 We acknowledged in the provisional decision, and again acknowledge here, that limitations in the data available to the market study means that the above analysis is not wholly conclusive but that it provides reasonable grounds for suspecting that competition is adversely affected.
- 5.61 We have carried out a further piece of analysis after two of the majors submitted that switching between different cement suppliers by independent ready-mix producers is more prevalent than the OFT had considered. They regarded this as indicative of a competitive cement market.
- 5.62 One major estimated that 'churn' levels⁵⁷ by independent ready-mix customers (in respect of purchases of cement) were around four per cent between 2006 and 2007 (pre-recession) whereas they were 31 per cent between 2007 and 2010'. The second firm provided a list of 11 customers who had switched in 2009 as 'illustrative examples' of independent ready-mix concrete customer switching.
- 5.63 The OFT asked the two companies to provide the data underpinning these assertions. In the first case, an initial list of independent ready-mix concrete customers lost and gained since January 2009 was submitted, which showed that their churn rate was 25 per cent in 2009 and 12 per cent in 2010. They then further submitted an analysis of switching based on looking at those independent ready-mix concrete customers who switched between 2006 and 2007 and at those who switched between 2007 and 2010. They concluded

⁵⁷ The data the major supplied looked at its cement customers who were independent ready-mix concrete producers in 2006 and identified those that were no longer customers in 2007. The proportion of volumes that these lost customers account for was then reported to the OFT as evidence of 'churn'. The same analysis was conducted looking at customers in 2007 who had switched away from this supplier by 2010.

that the churn rate between 2006 and 2007 was just under one per cent, while between 2007 and 2010 it was 32 per cent.

- 5.64 The OFT does not consider this to be convincing evidence that there is widespread switching among independent ready-mix concrete producers in their cement procurement as claimed, as the 32 per cent figure represents switching over a period of three years, and not 32 per cent annually.
- 5.65 The second firm supplied data on customer switching covering the period 2007 to 2011 to substantiate its assertion that the OFT has underestimated the ability of independent RMX producers to switch cement suppliers. This showed that churn rates had risen from five per cent in 2007 to seven per cent in 2008 and then to 22 per cent in 2009, but had fallen back to six per cent in 2010. The OFT has not verified these figures, but even if they were correct, we do not consider that these data necessarily point to high levels of customer switching as a general feature of these markets. For example, the higher figure for 2009 could be explained, to some extent, by a one-off event in the industry, where another major switched its cement supply from external sales to internal supply to its own in-house ready-mix concrete production.
- 5.66 In addition to switching, the second respondent also estimated that 'around 13 per cent of its ready-mix concrete customers single-source their cement supply', although this was later clarified to mean independent customers as a whole and not just ready-mix concrete customers. We have analysed the data provided and our analysis shows that in fact 72 per cent of their ready-mix concrete customers single-sourced their cement.
- 5.67 The OFT accepts that some ready-mix concrete customers can and do switch between cement providers. However the evidence of such

switching provided is not enough to remove our concern about the operation of the market.

Conclusion

- 5.68 We have described above the representations and accounts we have received about competition in these markets. These indicate, at a minimum, that there is real concern among independent operators about exclusionary or exploitative behaviour by the majors. If true, this indicates a lack of rivalry between the majors.
- 5.69 Four respondents pointed out that the independent ready-mix concrete sector has grown over the last 10 years and that they gained share in all regions with 23 new operators entering between 2005 and 2009. We note though that eight companies have ceased concrete production over the last 12 months.⁵⁸
- 5.70 We accept that the independent ready-mix concrete sector has grown its market share, as discussed in the previous chapter and in the provisional decision.
- 5.71 We reiterate that in terms of the quantitative analysis, we are not required to undertake exhaustive analysis given the scope of a Phase 1 investigation. This means we are unwilling to draw firm conclusions in this respect but what analysis we have conducted is consistent with the hypothesis that the major firms may collectively be squeezing the independent ready-mix concrete sector.
- 5.72 The analysis and evidence in this chapter and the preceding one lead us to believe that competition in the aggregates, cement and ready-mix concrete sectors does not appear to be working well. There may

⁵⁸ Recession takes its toll on ready-mixed sector, Agg-net, 17 November 2011

be a lack of rivalry rooted in underlying and persistent features of these markets. These features may enable the vertically-integrated major firms to pursue a collective strategy of containing or excluding independent competition.

- 5.73 We are concerned that the lack of rivalry may result in consumer harm through higher prices in the short-term, and the squeeze may lead to erosion of independent competition in the medium to long term. The effect in the long run could be a further weakening of competition between the majors, resulting in higher prices for aggregates, cement and ready-mix concrete.

6 OTHER FINDINGS FROM OUR MARKET STUDY

- 6.1 During the course of our market study we also examined the planning system in relation to aggregates as we wanted to look at whether high barriers to entry and Government involvement influenced competitive conditions.
- 6.2 During the consultation, we received submissions from 18 bodies in relation to the planning system. The majority of these representations cover issues of clarification regarding our portrayal of the planning system. The majors suggested that direct engagement with DCLG as part of the review of the National Planning Policy Framework (NPPF) would be a better way to address any problems identified as opposed to including planning within the scope of the market investigation reference.
- 6.3 We accept that the current NPPF process provides an opportunity to make recommendations. However the NPPF does not set out to deal with competition issues. We also note that the section of the NPPF relating to minerals is short and appears to be largely similar to existing policy statements. Nonetheless, we will engage with DCLG as part of the NPPF process, as it relates to aggregates, if and appropriate.
- 6.4 However, the CC can and does make recommendations on planning (for example, see Supply of Groceries in the UK Market Investigation)⁵⁹ – the CC has the same powers as the OFT to make recommendations to Government and can also engage with DCLG during the NPPF process.

⁵⁹ *The supply of Groceries in the UK market investigation*, April 2008: www.competition-commission.org.uk/rep_pub/reports/2008/fulltext/538.pdf

- 6.5 The planning system is an important part of what makes the sector work in the way it does – affecting barriers to entry, capacity decisions, and the transparency of capacity intentions - and therefore we believe it needs to be considered as part of any in-depth examination of the market. We will not therefore exclude planning from the reference.
- 6.6 In this chapter we also cover issues in relation to the procurement of aggregates which have emerged during our work. This aspect of the study does not form part of the market investigation reference but was in the provisional decision document as a finding of the market study and so is included here for completeness.

The planning system

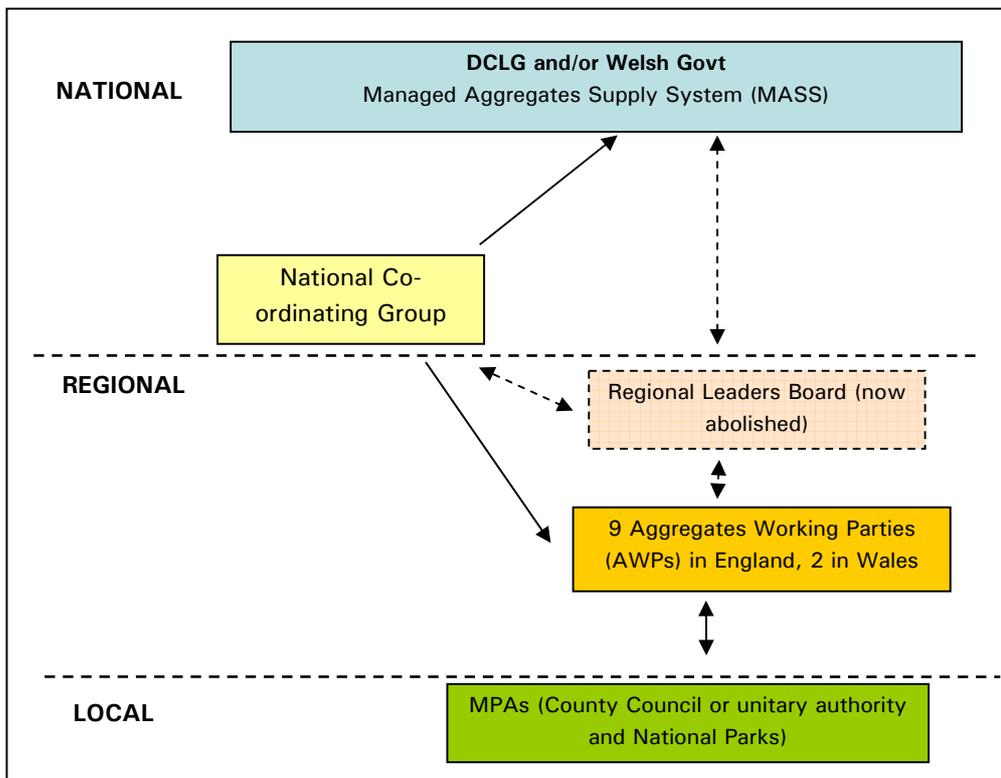
- 6.7 The planning and environmental permitting systems in the UK, which govern how land can be used, are significant factors in the operation of the aggregates market. Their effect varies according to the type of aggregate: primary (land-won and marine), secondary, or recycled. Variations also exist by territory: England and Wales share a broadly common system that allows for national management of aggregates supply, while Scotland and Northern Ireland take separate approaches. The rest of this chapter covers the planning system for England and Wales although many of features discussed are also applicable to other parts of the UK. A more detailed outline of these planning systems, including information on the recent and anticipated changes to the planning system such as the removal of the regional planning layer, can be found at Annexe B.
- 6.8 Land-won primary aggregates are subject to both town and country planning restrictions for land use and a Managed Aggregates Supply System (MASS) that seeks to reconcile supply and demand

requirements, setting targets for reserves of permitted supply (landbanks)⁶⁰ based on econometric modelling of demand in Great Britain which is then disaggregated into England, Wales and Scotland and then into the different English regions. Minerals Policy Statement 1 (MPS1) states that Mineral Planning Authorities (MPAs) should ensure a landbank of 'at least 7 years for sand and gravel and at least 10 years for crushed rock', and that these levels should be an 'indicator of when new permissions for aggregates extraction are likely to be needed'.

- 6.9 Within England and Wales, a supporting infrastructure has evolved to enable MASS, led by the Department of Communities and Local Government (DCLG) with a National Coordinating Group acting at national level, Aggregates Working Parties to advise on the apportionment of supply across different regions, and local Mineral Planning Authorities. MPAs are responsible for reconciling the requirements of both town and country planning and MASS, and delivering and enforcing the actual local planning decisions to implement these. Figure 6.1 illustrates how MASS works.

⁶⁰ A land bank – measured in years – is the stock of permitted reserves that have valid planning permission, and is calculated by dividing the volume of existing permitted reserves by the average annual provision in the area. Landbanks link demand forecasts and supply expectations, and are therefore key when MPAs consider planning applications.

Figure 6.1: The MASS in operation



6.10 Numerous changes have recently occurred and are yet anticipated to the planning system, particularly with regard to increasing local empowerment. The major structural consequence has been the intention to remove the regional planning tier. DCLG has also announced a review of planning policy, designed to consolidate policy statements, circulars and guidance documents into a single concise document that sets out the Government's priorities for the planning system, covering all major forms of development proposals handled by local authorities. This will be called the National Planning

Policy Framework. A draft Framework document was put out to public consultation on 25 July 2011.⁶¹

- 6.11 Marine, secondary and recycled aggregates are subject to different planning regimes which are explained in Annexe B. Here we concentrate on land-won aggregates as this is the main area where concerns have been raised during the course of the study.
- 6.12 Stakeholders' views suggest that the planning system may create significant barriers to entry to the aggregates market. It may also increase market transparency – particularly as regards capacity planning – and entrench existing supply patterns. These concerns are outlined below.

Barriers to entry

- 6.13 The potential barriers to entry that we have considered are threefold: aspects of the planning system that favour incumbents over new entrants; the potential for incumbents to hoard landbanks in order to exclude new entrants; and the barrier represented by the costly planning application process. We discuss each in turn.

Favouring incumbents over new entrants

- 6.14 The planning system appears to favour incumbents in several ways: most notably by favouring extensions of existing quarries over new applications on greenfield sites, but also by treating land bank target levels as a ceiling or cap for the amount of aggregates to be extracted at the local level, and finally because the complex and

⁶¹www.communities.gov.uk/publications/planningandbuilding/draftframeworkconsultation

costly process of applying for planning consents favours larger, more experienced firms. We look at each in turn.

- 6.15 Generally, planning permissions are not typically granted for the whole life time of a site in terms of available aggregates but instead are for a specific period of time, though the length of that period varies case by case. We understand that, for social and environmental reasons, MPAs generally favour extending the time period on existing planning permissions for quarries as opposed to granting permissions for new ones. Data from CLG confirms that from 2000 to 2010 extensions were more readily granted than greenfield developments, while the 2005 Aggregates Mineral Survey showed that 68 per cent of sand and gravel applications and 89 per cent of crushed rock applications granted in England between 2002 and 2005 were for extensions.
- 6.16 Extensions are both more commonly granted and cheaper than starting a new site, so incumbents have a clear advantage over new entrants when it comes to securing reserves for aggregates extraction.
- 6.17 Four respondents agreed that extensions are favoured over new sites and provided reasons as to why this was the case, which is generally for environmental reasons and to minimise impacts. We accept that there are valid reasons why extensions are preferred over new sites and merely point out the effect this may have on competition. One respondent acknowledged that by the planning system being 'skewed' in favour of incumbents, this acts as a deterrent to new entrants, which serves to enhance the market power of the majors.
- 6.18 To be clear, we do not distinguish between different types of firms with the term 'incumbent'. In this context incumbent means a firm which already operates in the particular market or location. This may

be a major but also any company regardless of its size or business status. Some respondents seemed to have misunderstood the term incumbent.

- 6.19 Although the policy intention is for landbanks to be designated minimum thresholds of permitted reserves,⁶² we understand that, being unwilling to permit more quarrying than is necessary, MPAs sometimes treat their land bank target as a maximum or cap. In such cases, where a landbank target is met, entry or expansion will effectively not be possible until such time as the landbank falls beneath target levels. Meanwhile the market is essentially closed to new entry. For example, one asphalt plant operator we spoke to commented that they would like to have their own supply of aggregates but that it is impossible for them to secure a planning permission for a site as the landbank is fully allocated.
- 6.20 We received mixed views on this issue. Four industry respondents argue that landbanks are treated as a cap and that MPAs use the requirements as a maxima rather than minima, or are treating the policy with some flexibility. A further three respondents, this time from the planning community, argue that the policy is not a cap and that many MPAs have a landbank figure that is well below the apportionment figure. Further, if treating the landbank as a cap is done by only a few MPAs, then this should not be implied to be widespread.
- 6.21 We have no evidence that any cap on landbanks has caused harm but consider there is a theoretical risk they could be used in a way that adversely affects competition. We also recognise the

⁶² Paragraph 4.1 of Annex 1 (Aggregates) of Minerals Policy Statement 1, Nov 2006

importance of environmental considerations in deciding the level of permissions to grant.

- 6.22 Lastly, incumbent firms can over time build up a strong network of relationships with planning authorities and the local community more broadly. By contrast, newcomers may be put off by the costs in time and money of seeking planning permission.

Landbanks and mothballing sites

- 6.23 As discussed above, MPAs may sometimes treat landbanks as a cap, so that a large landbank can act as an absolute barrier to entry. Furthermore, not all of a landbank need be actively operated at any time, nor is it necessary that operators extract the amount permitted. It would therefore, in theory, be possible for operators to hoard land strategically to bar a competitor or new entrant from gaining permission for another site in the same area. This may be more likely where ownership of the landbank is highly concentrated.
- 6.24 Whilst there is some provision for competition effects to be considered when evaluating a planning application (there is provision to review the appropriateness of the landbank), this does not appear to be systematically taken into account or carried out in practice. Furthermore, planning permission is linked to the land rather than to the company extracting the minerals.

- 6.25 We have also been told that aggregate producers are currently mothballing⁶³ some of their sites, a strategy which may well be explained by a drop in construction demand and which some respondents have acknowledged. We also understand that there is little incentive for operators to return sites they do not operate - minimum royalty fees apply, but these are low relative to the cost of new planning if they want to start supplying again.
- 6.26 With this in mind, we undertook some analysis to test whether the planning system might create incentives for incumbent firms to mothball sites for strategic rather than pure economic reasons – in other words to hoard landbank and create a barrier to entry.
- 6.27 Certain conditions need to prevail for strategic mothballing of sites to work. The firm mothballing its quarry must be large enough to survive losing production capacity and must operate another quarry able to serve the same area in order to gain from the higher prices. There must be few other competitors in the area and any competitors must be producing near to full capacity so they lack the ability to increase output and mitigate the other firm's actions of increasing prices. As noted, the landbank itself could then act as a barrier to entry to prevent new businesses, attracted by higher prices, from entering the market.

⁶³ 'The term 'mothballed' or 'inactive' is used to describe a site that is not currently in operation but that is closed temporarily with the intention or possibility of re-commencing extraction in the future. The reserves at these sites still count towards the land bank in that area. By contrast the reserves at 'dormant' sites as defined under the Environment Act (1995) or the Planning and Compensation Act (1991) no longer count towards the land bank.'

- 6.28 We ran a number of tests on data from AWP annual reports and OFT information request responses, looking at the link between the number of inactive sites and the level of landbanks and reserves in an area. Overall, the analysis was inconclusive, with no clear indication that the planning system has the effect of encouraging incumbents to hoard land by mothballing sites. However, there were serious limitations in the data available to us – more detailed analysis may yield clearer results.
- 6.29 Three respondents highlighted during the consultation that mothballing has occurred due to the economic downturn as it was not economically viable to run some sites. One of these respondents further said that strategic mothballing is not economically viable, given the large fixed cost investment required to set up a quarry and maintain planning permissions.
- 6.30 Another of these respondents also argues it would be difficult to differentiate sites mothballed strategically from those for market-related reasons, and that such a strategy would not be credible in the current construction downturn. They argue that even if such conduct were tenable, the incentives to do so have been created by MPAs' interpretation of the landbanks.
- 6.31 Three other respondents, two of which were AWPs, reported no experience of mothballing quarries. One however said it was possible but that if it did happen, it would be in localised instances and not widespread.
- 6.32 Our view remains that, in theory, it would be possible for a landbank to be controlled by a single operator. We have not been able to fully analyse the pattern of landbanks and the extent to which they may be controlled by one or two companies with the data we have available. However we understand there are landbanks in parts of

the country that are controlled by one or two operators, for example in Durham.

- 6.33 As indicated above, we do not have evidence to suggest that mothballing is used anti-competitively – we simply note the possibility.

Costly applications

- 6.34 The planning system entails significant costs and time delays to entry. This may favour those with deeper pockets who can afford to wait longer, as well as those with better resourced planning teams, greater expertise, and better connections in the local area. This is true irrespective of whether we talk about aggregates, housing or any other good which is subject to the planning system.
- 6.35 Costs include permission fees, fees for preparing the application, commissioning environmental and expert reports, time costs of extensive lobbying and consultation, recurring archaeological costs to maintain special features of interest to the site during development, and restoration costs once the mineral workings have been completed. In addition, a number of firms told us that the planning system is contributing to higher land costs as minerals royalties payable to land owners are driven upwards by the scarcity of suitable land identified by the planning system.
- 6.36 Increasingly the trend towards more inclusive community consultations on permissions may be exacerbating the costs associated with planning. In particular, we heard numerous comments that the plan-led system introduced by the Planning and Compulsory Purchase Act 2004 has been detrimental, with slow adoption of plans under extensive consultation requiring significant duplicative detail to be submitted both at plan and application stage.

- 6.37 We have been told that small operators in particular try to avoid engaging with the planning system, preferring to buy existing sites that come onto the market, for example due to the sale of a family-run business.
- 6.38 Seven respondents highlighted that the system is slow and costly. Some however mentioned that this does not favour big firms over smaller ones and that planning success rates were broadly the same for SMEs as for big companies. We agree that small and large operators are treated the same by MPAs and face the same costs (and never intended to suggest that this was not the case). However, we have heard from smaller operators that they do not actually like to submit planning applications due to the cost, so planning success rates do not reflect those companies choose not to make an application in the first place.
- 6.39 While the MPAs may take good care to treat applicants even-handedly, it is possible that large companies could nonetheless be at an advantage, because they are more likely to be able to call on financial resources or in-house expertise. Small companies can of course engage planning consultants, but we have been told this may not be financially viable for some small operators. We acknowledge that this situation is likely to apply to most sectors and not just aggregates.
- 6.40 We also heard from two respondents who highlighted that the complex and expensive planning system is due to increasing legislation from the EU and environmental concerns.
- 6.41 We accept this is a contributing factor and, as we said in the consultation on the provisional decision, we recognise that there is of course a trade-off in planning between speed and ease of process on the one hand, and giving due weight to environmental and community concerns on the other. Identifying the right trade-off is a

matter for community policy and local government. We aim here only to highlight some of the considerations relevant to competition in these markets, and in particular barriers to entry. We have fed the views gathered in the course of this work into Government policy on planning through channels such as the growth review.

Market transparency

- 6.42 To operate the MASS effectively, there is a high degree of transparency within the industry as to patterns of demand and supply. Detailed data is regularly gathered from producers and market reports published. Information on planning applications is published and development sites are heavily trailed from an early stage through development plans. Although sensitive information such as updated sales and reserves data by site are not included in market reports, by tracking and combining the available information over time, an informed guess of competitive positions is likely to be possible and indeed companies exist that specialize in drawing together the industry picture and selling this market analysis. While the collection and analysis of market data serves an important purpose, a high degree of market transparency can also have the effect of dampening competition.
- 6.43 It is also possible that there is a degree of information sharing within the Aggregate Working Parties (AWPs),⁶⁴ where the close relationship between industry individuals and those involved in planning policy could create relationships which, whether or not intended, may indirectly benefit the companies attending. In the provisional decision

⁶⁴ AWPs (previously known as Regional Aggregate Working Parties, or RAWPs, until the regional layer was abolished in July 2010), comprise MPAs and industry and advise on how regional aggregates levels should be apportioned sub-regionally. AWPs also produce monitoring reports on aggregates production and the level of reserves or landbanks.

we noted that stakeholders did not raise any concerns in this regard, instead emphasising the technical role of the AWP.

- 6.44 During the consultation process however, we received a detailed submission suggesting that 'one AWP is acting to preserve the market share and other interests of certain quarry companies' and that the role of that particular AWP has expanded to determine the sub-regional allocation.
- 6.45 The majority of respondents, on the other hand, said that the OFT had misunderstood the role of the AWP, who are technical bodies with no decision-making powers. They pointed out that no commercially sensitive information is disclosed at meetings; minutes are published on DCLG's website; data is provided to MPAs on a confidential basis and AWP participants do not have access to it, with information being collated according to the 'three company rule'⁶⁵ before being presented to AWP.
- 6.46 However, we also heard from one AWP that the reduction in the number of companies has inhibited the amount of data that can usefully be published whilst maintaining confidentiality, so the Mineral Products Association has relaxed adherence to the 'three company rule' to facilitate better appreciation of reserves and production information for mineral planning purposes, with the dispensation applying to MPA members only. In addition, in this

⁶⁵ The three company rule is applied when an AWP wishes to publish confidential information, meaning any figure must relate to a minimum of three companies (not three sites as these could be operated by less than three companies). This is to prevent a single company's figures from being disclosed. If a figure relates to less than three companies, agreement must be sought from the company or companies concerned. If no agreement can be reached then the figures may be amalgamated with those of other companies or alternatively the relevant figure will not be released but noted as confidential.

particular AWP, it does not in any case apply to those members who specifically require their details to be kept confidential.

- 6.47 We have not come to a view as to whether the role AWP's may or may not impact on competition, but observe that they are another potential opportunity for companies to find out more about what their competitors are doing.
- 6.48 We have received a strong representation from the West Midlands AWP, and a supporting submission from another AWP, in relation to the statement in the consultation document that said we have been told that some AWP's, for example the West Midlands AWP, have been delegated the authority to undertake the apportionment process, which appears to go beyond the technical, advisory role envisaged and into decision-making.
- 6.49 The West Midlands AWP strongly refutes that they were delegated authority to undertake the apportionment process, and is concerned that this was not investigated and substantiated. The OFT was told by one of the parties we consulted during the market study that the West Midlands AWP had been tasked with doing the apportionment by the Regional Assembly. However it appears we misunderstood the extent of the task.
- 6.50 The West Midlands AWP told us that it was asked to carry out technical work regarding the methodology for apportionment on behalf of the West Midlands Regional Assembly, 'which involved producing and testing some options and assumptions and consulting with the Assembly. The Assembly made the decision based on AWP's advice but did not accept their advice'.
- 6.51 We note that three AWP's have told us that they been tasked with testing new methods of apportionment, too. One of them expressed concern when it was asked to do this by DCLG because testing new

methods of apportionment was not covered by its contract with DCLG and because of its solely technical role (with testing new methods of apportionment going beyond that technical role).

- 6.52 We note that the question still remains about how the AWP's will be used now that the Regional Assemblies have been abolished. Making recommendations about apportionment methodology seems to go beyond their technical role, even if another body makes the final decision. This is something for DCLG to take into account when reviewing how the system will now work in light of the NPPF and the Localism Act 2011.⁶⁶
- 6.53 We also commented in the consultation document that majors are more likely than independents to send representatives to the AWP's, as expected from large companies with significant head office resource. We found that some of the small independents are not aware of the MASS or the role of AWP's. We have been told that the BAA, the trade association which represents smaller aggregates producers, sends a representative to AWP meetings and that this representative rotates amongst their company members. Three other respondents expressed surprise that some small independents were not aware of MASS. We can only repeat what we were told by these small firms.
- 6.54 Overall, we still consider that whilst a degree of sharing information on aggregates supply and permitted reserves is probably necessary for the functioning of the MASS, this information sharing contributes to the overall transparency of the industry, with associated implications for competition.

⁶⁶ The Localism Act 2011 received Royal Assent on 15 November 2011. See: www.legislation.gov.uk/ukpga/2011/20/contents/enacted/data.htm

Entrenching existing supply patterns

- 6.55 The planning system has also been criticised for entrenching existing supply patterns by basing apportionments on historical data. The allocation of supply targets by area has tended to follow past production patterns rather than take into account factors such as sustainability, availability and expected location of anticipated demand. We note in particular that allocating supply targets of land-based aggregates based on historical production may limit the scope for marine, secondary, and recycled aggregates to play a greater role in meeting demand for aggregates over time.
- 6.56 We are aware that some regional bodies have been testing new methods of apportionment which are not based on historical data. This has the potential to change the requirements allocated to different parts of the country. We understand that industry received the new method with mixed views as there were concerns that operators might no longer get permission in an area where they previously quarried. Reviewing how apportionments are undertaken may have an effect on possible entrenched patterns of supply.
- 6.57 We received representations from two respondents who agree that deciding on future provision based on historical sales could well entrench existing supply patterns. However another respondent observed that where different methods have been trialled, past sales data have still been a significant criterion in analyses.
- 6.58 While MASS clearly imposes a degree of central planning on aggregates supply, it is a matter for policy makers as to whether alternative solutions better meet the social, environmental and economic needs of the country.

Conclusion on planning

6.59 The planning system for aggregates is designed to secure supply where, in the face of public opposition to minerals extraction, supply might otherwise not be naturally forthcoming.

6.60 The Government is considering responses to its consulting on the draft National Planning Policy Framework. Here we highlight a number of issues which may be considered in any review of the MASS system:

- Recommended minimum landbank levels may be rigidly observed, creating an absolute barrier to entry: where MPAs apply land bank targets as a strict cap, entry or expansion will effectively be barred until such time as the landbank falls beneath target levels. Furthermore this may – under certain, fairly restricted conditions - incentivise the hoarding or mothballing of sites, prolonging this effect. If the landbank targets were applied more flexibly, consistent with existing national guidance and with a view to potential competitive benefits, this might reduce this effect.
- The involvement of industry in MASS may result in a greater degree of market transparency than is desirable from a competition perspective: companies attending AWP may indirectly benefit from the close relationship with policy officials, whilst the high degree of information sharing as part of MASS may facilitate transparency in the industry as to future capacity decisions, outputs, and reserves and blunt competition.
- The predictability of MASS may slow down a competitive market response to unfolding opportunities: The use of historical data entrenches existing supply patterns and does not allow the market to develop in a competitive way, which may mean that it is slower (or unable) to respond to changes in the market.

Alternative methods of apportionment that have been trialed in some areas, if successful, could be considered for use more widely, to allow more dynamic adjustment to local demand and other needs.

- 6.61 Whilst we have made some observations as to what could be considered as part of the review of the MASS system, we reiterate our assessment that planning is an essential part of how the aggregates sector operates and, as such, is part and parcel of some of the competition problems we have identified. We therefore believe it needs to be considered as part of any examination of the market.

Procurement of aggregates

- 6.62 During the course of our market study, a number of issues in relation to the procurement of aggregates were raised. We briefly discuss below the common methods of procurement in the sector, and the use of rebates and discounts. As previously noted, procurement does not form part of the market investigation reference, nor we did receive any submission on procurement during the consultation period, but is included here for completeness.

Procurement methods

- 6.63 We understand that procurement is undertaken in a diverse range of ways. A number of aggregate customers purchase on the spot. Other customers, notably those with fixed plants (such as ready-mix concrete or asphalt) tend to negotiate their prices annually based on their volume requirements for that year.
- 6.64 Other forms of procurement include written contracts, typical for major national builder merchants and contractors, and 'call-off contracts' - agreements with customers as to the price per tonne which will be charged for the sale of relevant aggregate product to

be supplied to that customer over a particular period of time, usually one year.

- 6.65 Customers in the public sector are more likely to procure aggregates through framework agreements,⁶⁷ (but rarely ready-mix concrete or cement) which tend to be three to five years in duration and which typically will have five or six suppliers. More frequently, customers do not purchase aggregates (or ready-mix concrete and cement) directly but tender whole construction projects (for example road repairs), and the winning construction firm buys aggregates and other materials on their behalf.

Rebates and discounts

- 6.66 Many suppliers offer rebates and discounts to major buyers, be they construction firms buying on behalf of customers, or large end-users buying directly. Rebates can take many forms but a common feature is that the percentage discount given to a customer increases with the volume of product purchased. Sometimes there is a link to guaranteed volumes in that a certain discount is obtained only if a certain volume is purchased.
- 6.67 Competition debates about rebates in general centre on the incentive they provide to stay with one supplier rather than switching away, and the possibility of foreclosure and impeding rivals' access to a

⁶⁷ An agreement with suppliers, the purpose of which is to establish the terms governing contracts to be awarded during a given period, in particular with regard to price and quantity.

distribution chain. In these markets, competitive concerns about rebates would be more about the former rather than the latter.

- 6.68 We did not receive any competition complaints about rebates or procurement practices more generally from either competitors or customers. Nonetheless given the potential for rebates to have anti-competitive effects, this aspect might merit further investigation.
- 6.69 The main concern raised about rebates in the course of the market study was about whether savings from rebates and discounts are passed through to final consumers. This is significant given the amount of public expenditure on construction.
- 6.70 It is not clear that rebates associated with bulk purchases of aggregates (and other construction materials including ready-mix concrete) are passed directly back from construction contractors to the ultimate buyers. Although we have been told that construction firms have an open book policy, as their clients require that they are invoiced for materials at cost price, we understand that in some cases aggregates are invoiced to the client at 'list' price, rather than net of any rebates associated with the purchase.
- 6.71 This may be because it is not straightforward for construction firms to link rebates to particular purchases on behalf of particular clients, when the rebate may be offered on the basis of all the business done on behalf of all customers in the course of a year. We recognise also that competition between contractors should ensure that any price benefits resulting from rebates are ultimately passed through to end-users. Nonetheless, competition between contractors does not necessarily guarantee that the rebates will be passed back to the customers that 'earned' them.
- 6.72 For this reason there may be scope for some large aggregates users to make significant savings by procuring aggregates directly, rather

than through contractors. For example, we understand a large user has moved to purchase aggregates directly in order to directly secure discounts on that product and has made significant savings in doing so. A second firm is undertaking a category management approach to procurement in order to generate increased value through greater efficiencies and lower unit costs. For smaller users, however, the prices available via large contractors may well be better than the prices they could themselves negotiate.

- 6.73 We understand that the direct purchasing of aggregates by large users is relatively new and not yet widespread. This suggests that there may be further room for improving efficiency in the procurement of aggregates, particularly on the part of large buyers in the public and utilities sectors.

Conclusion on procurement

- 6.74 We did not receive complaints that the way in which aggregates, cement and ready-mix concrete are procured is distorting competition. Nonetheless procurement practices and rebating can in principle limit the effectiveness of competition in a market.
- 6.75 An additional finding from our market study is that there may be scope for savings in procurement of aggregates by large users – this may be significant in terms of public procurement. The OFT highlighted this in its report *Assessing the impact of public procurement on competition*, which highlighted that, in construction-related sectors, public sector demand is significantly fragmented which may lead to a failure to exercise countervailing buyer power and achieve value for money. By improving its procurement process, the public sector could reduce profits earned by suppliers, which

would be reflected in lower prices, better quality or other improvements.⁶⁸

⁶⁸ OFT, *Assessing the Impact of Public Procurement on Competition*, September 2004, Chapter 6.

7 DECISION ON THE MARKET INVESTIGATION REFERENCE

- 7.1 In the light of the evidence gathered and presented in this report, the responses to the consultation and our assessment of competition in the sector, the OFT has considered whether it would be appropriate to refer the markets for cement, ready-mix concrete and aggregates to the Competition Commission (CC) for further investigation.
- 7.2 In order to make a market investigation reference, the OFT must have reasonable grounds for suspecting that any feature or combination of features of a market in the UK for goods or services, prevents, restricts or distorts competition in connection with the supply or acquisition of any goods or services in the UK or part of the UK (the 'reference test'). Where this threshold is met, the OFT has discretion as to whether to make a reference. This section sets out why we are confirming our decision that the reference test is met in this case and to exercise our discretion to refer.

Overview

- 7.3 We discuss the various steps in the legal test in detail below. In summary, however, the reasons we are referring these markets to the CC for further investigation are as follows.

Evidence that competition may not be working well

- 7.4 First, we have evidence that competition may not be working well in these markets. In particular, the anecdotal evidence and analysis presented in chapter 5 points to:
- Difficulties faced by independent ready-mix concrete operators in obtaining competitive quotes for cement from alternative suppliers, and the importance independent operators place on their relationship with their existing supplier.

- A possible 'squeeze' between the price of cement (which has risen in recent years) and the price of ready-mix concrete (which has fallen, then stabilised). We also have evidence that independents may be charged higher prices for cement than the majors charge each other.
- Pricing letters from the major firms coming out at similar times and announcing similar price increases. Although these letters represent a starting point for negotiations between customers and suppliers and do not fix prices as such, these similarities may indicate that price rivalry is not as intense as it could be. These price letters may signal intentions to other market participants and condition market expectations about the existence, the timing and the scale of the pricing increase initiatives.

7.5 In our view this evidence suggests that competition in these markets, at least between the major firms, may not be operating effectively.

7.6 Second, there are a number of features of these markets that economic theory predicts can make it possible and rational for firms to coordinate their conduct (including their pricing) with one another. Such coordination may not be undertaken pursuant to any agreement between the firms (though, of course, it may be), but can be based on mutual expectations, for example about how other firms will behave and/or how they would respond to a price or other change by a competitor.

7.7 The OFT's guidance on market investigation references states as follows:

'In markets comprising a small number of firms (oligopolies) each firm might find it relatively easy to predict the reaction of its competitors to any action it might take. This could provide an opportunity for firms to coordinate their behaviour for mutual

advantage or it could simply dull the incentive to compete, leading to a situation in which rivalry to attract new customers becomes muted.'⁶⁹

7.8 The guidance then goes on to provide a non-exhaustive list of market features that may assist the coordination of behaviour. As detailed below, many of these features are present in the markets for aggregates, cement and ready-mix concrete, which may make it rational and possible for at least the large firms to coordinate their behaviour with one another. These factors, seen against the background of the evidence that competition in these markets may not be working well, lead us to suspect that there are features of these markets which may be individually, or in combination with one another, restricting or distorting competition in connection with the supply of aggregates, cement and ready-mix concrete within the UK.

7.9 The CC has powers to investigate in greater depth how well competition is working, and in particular to address the underlying market features that might be making coordination feasible, stable and persistent in this sector, or dulling the incentives to compete.

The reference test

7.10 The reference test⁷⁰ sets out three types of market feature that could have an adverse effect on competition: structural features, conduct of firms, and the conduct of customers. There will often not be clear separation between structural features and those relating to conduct

⁶⁹ Paragraph 5.5, OFT, 2006, Market investigation references: *Guidance about the making of references under Part 4 of the Enterprise Act*, OFT 511. Available at: www.of.gov.uk/shared_of/business_leaflets/enterprise_act/oft511.pdf

⁷⁰ Formally the reference test is set out under Section 131 of the Enterprise Act 2002.

but broadly chapter 4 covers features and chapter 5 covers conduct of firms. Conduct of customers is not a factor that we suspect adversely affects competition in this market.

7.11 The OFT's guidance mentions the more important features that can give rise to concern,⁷¹ and includes a (non-exhaustive) list of market features that may assist the coordination of behaviour.⁷² As summarised below, many of these features are present in the markets for aggregates, cement and ready-mix concrete, and in combination, give rise to concerns regarding the extent of competition in these markets.

7.12 All five majors suggested that the OFT had not analysed whether the necessary conditions for tacit co-ordination are present. We do not consider an exhaustive assessment of factors facilitating collusion is necessary before the OFT can decide that the section 131 threshold test is satisfied. Similarly, we do not believe that we need to have developed a detailed theory of harm, but rather that it is sufficient to point to factors which, looked at in the round, provide the OFT with reasonable grounds for suspecting that there are features of the market that are preventing, restricting or distorting competition. In the event that a reference is made, the detailed analysis of the market(s) and the drawing of firm conclusions will be a task for the CC.

⁷¹ Paragraph 5.1, OFT, 2006, Market investigation references: *Guidance about the making of references under Part 4 of the Enterprise Act*, OFT 511

⁷² Paragraph 5.5, *ibid*

Barriers to entry

- 7.13 The existence of substantial barriers to entry can assist coordination. As described in paragraphs 4.31 to 4.51 in chapter 4, both the aggregates sector and the cement sector feature high barriers to entry in terms of both physical and capital requirements and the difficulty of obtaining planning permission. Elements of the planning system for aggregates in particular create substantial barriers to entry by favouring incumbents over new entrants.
- 7.14 In addition, there may be reputational barriers: fear of retaliation by the majors may deter independent ready-mix concrete producers from attempting to enter the cement market, or aggregates producers from entering ready-mix concrete.

Concentration

- 7.15 As described in paragraphs 4.2 to 4.17 in chapter 4, all three product markets are highly concentrated with five major players accounting for upwards of 90 per cent of the cement market, 75 per cent of aggregates sales, and circa 70 per cent of ready-mix concrete production. There is a considerable drop in scale between the majors and the largest independent in each market – there is no comparably large independent producing any of the three products.

Vertical integration

- 7.16 As described in paragraph 4.18 to 4.30 in chapter 4, vertical integration is a significant feature in this industry, with all five of the majors active in all three product markets. Vertically integrated firms are in a position to raise the price of inputs to downstream activities, potentially softening competition in those downstream markets and/or foreclosing non-integrated competitors.

Transparency

- 7.17 Transparent prices, outputs and market shares which allow competitors to be well-informed about each others' behaviour can assist coordination. As described in paragraph 4.54 to 4.55, there is a high degree of transparency in all three sectors. The vertically-integrated firms buy from and sell to one another in different local markets, which means they receive advance notice of each others' price intentions. Industry reports for aggregates as well as ready-mix concrete make available detailed granular information on market shares, sales volumes and reserves. The planning system provides a high degree of transparency about capacity planning in cement and aggregates in particular. Industry associations and aggregates working parties may help firms know what their competitors are doing.

Multi-market contacts

- 7.18 Multi-market contacts can assist coordination. As described in paragraph 4.56 to 4.62 multi-market contacts are a significant feature of this industry, in which national, vertically-integrated firms may compete and/or deal with each other in local markets up and down the supply chain. There are also a significant number of joint-ventures and asset swaps which entail contact at a local market level and sometimes across different local markets.

Homogeneity of products

- 7.19 The impact of the market features described above may be affected by the fact that, as described in paragraph 4.52 to 4.53, aggregates, cement, and ready-mix concrete are each, to a large extent, homogeneous products. Although there are different types of cement, and a variety of different types of aggregates produced in the UK, differences are limited and within each type there is little

differentiation by firm in terms of brand or quality. Homogeneity of the firms' products can make coordination more likely.

Performance information indicating that competition may be adversely affected

- 7.20 Our guidance states that, when considering the possibility of coordination in oligopolistic industries, the OFT will not need to establish conclusively that observed conduct reflects coordinated rather than competitive behaviour. However, it will need to establish that relevant market features are present (see above) and will need to have a reasonable suspicion that oligopolists are not competing effectively with consequences that are likely to be detrimental to their customers.⁷³
- 7.21 As noted above and detailed in chapter 5, we have considerable anecdotal evidence that suggests that competition is not working well in these markets – this certainly appears to be the perception of the smaller players in the industry.
- 7.22 We have attempted some quantitative analysis to test this perception. With the data made available to the market study this has necessarily been limited. Nonetheless, we have looked at evidence to support the allegation of a 'squeeze' between the ready-mix concrete and cement prices.
- 7.23 As regards evidence of a 'squeeze' between the price of cement and the price of ready-mix concrete (described in detail in chapter 5 paragraphs 5.43 to 5.60):

⁷³ Paragraph 6.6, *ibid.*

- Data received from firms as well as publicly available data appears to confirm that there has been a 'squeeze' between the price of cement (which has risen in recent years) and the price of ready-mix concrete (which has fallen then stabilised).
- We have some evidence that suggests independents may be charged around 13 per cent more for cement than the majors charge each other.

7.24 During the consultation two majors stated that they had experienced a high degree of switching and churn in cement sales to their downstream independent ready-mix concrete customers and that this was evidence of a competitive cement market. These two parties provided evidence to support the information. The OFT has reviewed and analysed the data but we do not believe it strongly supports their assertions. Whilst we accept that switching is possible for some customers, this is not significant enough to remove our concerns regarding the operation of the market.

7.25 We also note that a number of findings in the OFT's recent merger decision on the Anglo American/Lafarge joint venture are supportive of our conclusions on these markets.⁷⁴ While the focus of that investigation was, naturally, much narrower in scope, we note that a number of the findings in the Merger decision support our findings

⁷⁴ This proposed joint venture, involving the UK aggregates, cement, ready-mix concrete and asphalt activities of Tarmac (a subsidiary of Anglo American plc) and those of Lafarge, was investigated by the OFT between May 2011 and November 2011. The investigation was carried out separately to this market study and published its findings seven weeks after the OFT published its market study and proposed reference to the CC. See *Proposed joint venture between Anglo American Plc and Lafarge S.A*, ME/5007/11, November 2011: www.offt.gov.uk/shared_offt/mergers_ea02/2011/anglo-american-lafarge.pdf

that there are features of these markets that adversely affect competition.

7.26 In assessing coordinated effects in relation to cement, the merger investigation found a number of grounds for concern.⁷⁵

- First, it outlined evidence that suggested that coordinated effects may exist pre-merger: consistent third party complaints, the contents of a document supplied by Tarmac, and the high gross margins on cement enjoyed by Tarmac and Lafarge.
- Second, the decision points out that features exist that make coordination feasible: just four domestic manufacturers; market transparency; regular price increase letters that tend to lead to actual price increases; structural links through joint ventures and cross-supply arrangements; and visibility of customer switching.
- Third, the decision concluded that coordination would be both internally and externally sustainable.
- In addition, the decision points out that the increased symmetry of the vertically integrated majors as a result of the merger is likely to increase the incentives of the national players to coordinate.

7.27 The Section 131 assessment is made on the basis of all the evidence currently available including the Merger decision findings. We consider that these findings provide further evidence that the

⁷⁵ *Proposed joint venture between Anglo American Plc and Lafarge S.A*, ME/5007/11, November 2011, paragraphs 261 to 352:

www.offt.gov.uk/shared_offt/mergers_ea02/2011/anglo-american-lafarge.pdf

reference test is met and also that the OFT should exercise discretion to refer as outlined below.

Appropriateness of a reference

7.28 Once the reference test is met, the decision on whether to make a reference rests on the exercise of the OFT's discretion. The OFT's guidance on market investigation references sets out four criteria that must, in our view, be met before we decide to make a reference:

- proportionality – the scale of the suspected problem, in terms of its adverse affect on competition, is such that a reference would be an appropriate response to it
- availability of remedies – there is a reasonable chance that appropriate remedies will be available
- alternative powers – it would not be more appropriate to deal with the competition issues identified by applying the Competition Act or using other powers available to the OFT
- undertakings in lieu – it would not be more appropriate to address the problem identified by means of undertakings in lieu of a reference.

7.29 These four factors are considered in turn below.

Proportionality

7.30 A reference to the CC imposes substantial burdens on the businesses concerned and in addition requires a significant resource commitment by the CC itself. For this reason it is important to consider whether a reference is a proportionate response to our concerns.

- 7.31 Of particular relevance in this context is that, in our view, the suspected adverse effects are likely to be having a significant detrimental effect on customers. As noted above, the impact on consumers of a lack of effective competition in this market might well take the form of higher prices, possibly exacerbated by erosion of the independent sector over time.
- 7.32 The OFT guidance identifies three criteria as relevant to whether adverse effects on competition are significant: the size of the market, the proportion affected by the features in question, and the persistence of the features in question. In this case we believe the potential harm to consumers could be significant on the basis of all three.
- 7.33 The market for aggregates, cement and ready-mix concrete is very large: turnover in the aggregates, cement and ready-mix concrete sectors in 2009 was circa £1.4bn, £0.9bn and £1bn respectively. Moreover, these products are key inputs to the construction industry, which in turn is a very important sector of the UK economy. If market features are harming competition, the detriment to competition and consumers will have been accumulating over time, and will probably continue to accumulate for the foreseeable future, until the underlying features are remedied. It follows that even a small reduction in any adverse effects which the CC may find and be able to remedy would be likely to far outweigh the costs of the reference.
- 7.34 A significant proportion of the market is affected by the features identified above. Some features are market-wide, while others (for example multi-market contact) relate only to the major firms, but the majors account for the majority of each of the three markets.
- 7.35 The features identified above are unlikely to be short lived. The market structure has not changed significantly in the last few years

except that it has become more concentrated (in the case of aggregates) and certain mergers have increased the extent of vertical integration.

7.36 The OFT has also considered whether there are likely to be offsetting benefits to consumers from the market features we suspect are having an adverse effect on competition. While we recognise that certain features – for example the national coverage and vertical integration that lead to multi-market contact between the major firms – can have efficiency benefits, it is far from clear that these possible benefits outweigh the detriments which may be arising from those features.

7.37 The majors submitted that an MIR would place significant financial and management demands on industry players, particularly given the EC Article 101 investigation (please see paragraphs 7.63 to 7.69 below) and the CC merger investigation. They argued in particular that:

- insufficient weight has been placed on the burden on businesses
- an MIR would be disproportionate in a downturn given the economic uncertainty facing the businesses
- a large volume of information has already been requested by the CC in relation to the Tarmac/Lafarge merger
- material overlaps between the CC's market investigation and key stages in the EC investigation may require the diversion of key management and administrative resource which could prejudice the ability of relevant parties to defend themselves in the EC proceedings

- an MIR would therefore militate against the principles of legal certainty and good regulation.
- 7.38 We have considered these arguments carefully and re-examined the balance between burdens and benefits that was assessed in the context of proportionality in the provisional decision.
- 7.39 In our view, respondents have not challenged that the market is large and important nor that even a small improvement could have a significant impact in value terms.
- 7.40 We recognise that a MIR imposes significant burdens on industry participants. However we note that the smaller firms who responded to consultation were all supportive of a MIR, suggesting that they do not view the burden as disproportionate. Larger firms might reasonably be expected to have greater resources at their disposal to deal with regulatory matters.
- 7.41 We appreciate that a number of parties may be subject to information requests arising from the ongoing EC investigation and/or from the merger investigation. However it is also the case that, if and insofar as the parties are required to provide similar information to the CC in the context of the market investigation, there may be scope for some of the work undertaken in responding to previous information requests to be reused or adapted so that duplication is minimised.
- 7.42 The OFT does not accept that the requirement to provide information for the purposes of the market investigation would prejudice the ability of parties to defend themselves in relation to the EC investigation. We have no reason to doubt that the CC will itself act proportionately in the information requests that it makes and will show flexibility where appropriate. At the same time, it is fair to note that major multinational corporate groups typically have access to considerable in-house and external legal and economic expertise.

- 7.43 In addition to these comments, a number of other arguments were also made. Lafarge and Tarmac during the consultation process submitted that the OFT should not make a reference until after the CC has reported on the Anglo American/Lafarge Joint Venture in May 2012. The reason given for this (beyond the burdens on business, as discussed above) was the prospect of structural changes resulting from the merger which may remove OFT concerns, or at least fundamentally change any analysis of the market. Lafarge stated that, in a similar situation (Local Bus Services), the OFT awaited the outcome of the CC merger investigation on Stagecoach Group plc/Preston Bus Limited.
- 7.44 The OFT does not consider that this proposed course would be appropriate in the present case. The local bus example is not a comparable situation. In that case, the OFT did not delay the reference pending the outcome of the CC merger enquiry but rather, at the request of the CC as a result of resourcing issues.⁷⁶
- 7.45 In any event, in view of the nature of the market features suspected of having an adverse effect on competition in the present case, the OFT considers it very unlikely that the structural changes resulting from the merger would affect its concerns in such a way as to cause it to conclude that a MIR was no longer appropriate. The suggestion from Lafarge and Tarmac that the OFT would have to re-do its analysis following the merger decision again fails to recognise the preliminary nature of the OFT's evaluation. It will be for the CC to carry out a detailed evaluation of competition in the market, and the CC and the parties may well find that the efforts made to gather information in the context of the merger investigation are of assistance in abridging the efforts required to furnish the CC with the

⁷⁶ Moreover, in that case, the delay was a matter of only a couple of weeks.

information it requires for the purposes of a market investigation pursuant to the MIR.

- 7.46 The majors also submitted that an MIR is not necessary to make recommendations on the planning regime. We recognise that OFT can make recommendations on planning directly. However the planning system undoubtedly has a significant effect on the way competition operates in this sector – affecting barriers to entry, capacity decisions, and the transparency of capacity intentions - and therefore we believe it needs to be considered as part of an in-depth examination of the market.
- 7.47 Another respondent argued that there is no consumer harm arising from the features we have identified as a concern and that any evidence of consumer harm there is relates primarily to grey cement.
- 7.48 The evidence on which the OFT relies in assessing the level of consumer detriment is set out in its provisional decision, and above. Our analysis relates not only to grey cement but also to aggregates and ready-mix concrete. We are satisfied that we have reasonable grounds to suspect that the adverse effect on competition of the features we have identified is significant.

Availability of remedies

- 7.49 Without wishing to anticipate the outcome of the MIR, and recognising that any remedies would have to be supported by evidence of a remediable problem, our view is that there is likely to be a range of potential remedies available to address the competition concerns we have outlined and that, depending on the degree of harm identified, some or all of these are likely to prove efficient and proportionate.

- 7.50 It would be the CC's role, if it found adverse effects on competition, to undertake detailed analysis of the causes and devise potential remedies, taking into account any interactions between them. This would require further detailed consultation.
- 7.51 We set out some initial views on potential remedies for each market below, noting that due to the close connections between the markets and the extent of vertical integration, remedies in one product market will have an impact on one or two of the other markets as well. We consider these remedies under the headings of improving independents' access to cement, addressing information sharing, and planning and public policy.

Access to cement

- 7.52 Barriers to entry in ready-mix concrete are fairly low – securing access to inputs (aggregates and cement) is the key issue. Access to aggregates is a very local matter. Cement on the other hand appears to be a regional or a national market – any remedy that improved access to cement would benefit the whole country. We have considered the potential for remedies that would allow ready-mix concrete operators to source cement other than from the vertically-integrated majors with whom they are in competition.
- 7.53 We indicated in our provisional decision that possible remedies may include divestment of mothballed or closed cement plants, if they have not been in operation for a given period of time. In response, one party submitted that significant investment would be needed to begin production from a mothballed cement plant. However, this argument appears inconsistent with the argument from the same party that barriers to expansion for cement are low given high levels of excess capacity. We also suggested that another potential remedy might be the development of an import terminal access regime, to ensure independents have fair access to terminals from which to

import cement. One party submitted in response that 'there are already a large number of import terminals run by the independents which indicates that access to infrastructure is not causative of the perceived problems'. However, as we indicated, these were initial views on potential remedies available to the CC. It is for the CC to determine whether or not any such remedy would, in fact, be proportionate or appropriate.

Information-sharing

- 7.54 There may also be remedies available to address any undue information sharing. For example, while the vertically integrated majors are necessarily customers of one another and therefore in receipt of each others' pricing information, there may be scope to introduce 'Chinese walls' to limit the number of people within each firm able to access pricing information received from competitors.

Planning and public policy

- 7.55 In terms of the role of incumbents in planning through MASS, there may be scope to place tighter controls on the involvement of incumbents in capacity and output planning decisions, and on how information is shared through this process.
- 7.56 There may also be scope to look at competition issues in more detail during the planning process. For example, competition in the form of control and use of the existing landbank could be considered more closely when evaluating planning applications, in particular where several applications to serve the same local market are submitted.
- 7.57 In relation to adverse effects on competition arising from laws, regulations or government policies, we note that the CC cannot

directly remedy such adverse effects but may submit a report to the Government – as may the OFT as an outcome of a market study.⁷⁷ In this case we consider a reference to the CC would be preferable to further work in this area by OFT primarily because the grounds for a reference are significantly wider than laws, regulations or government policies, and it is possible that some of what may be required would involve CC order-making powers to impose remedies or at least to orchestrate their implementation. We also recognise that the CC has additional resources, stronger information gathering powers and more formal evidence gathering procedures, which may be valuable in developing remedies.

Alternative powers

- 7.58 The OFT has considered whether it would be more appropriate to use alternative powers to deal with the competition issues identified above. In particular we considered whether there was scope to address these issues using the Competition Act 1998, and whether the ongoing investigation by DG Comp into the cement and related sectors would address these issues. We discuss each in turn below.

Competition Act

- 7.59 We have considered whether the concerns we have identified could be addressed through enforcement action under the Competition Act instead.
- 7.60 In the course of looking at these markets, we have received a number of complaints which allege, or which might on analysis be understood to be alleging, infringements of the Competition Act. The

⁷⁷ Paragraph 2.31, *ibid.*

incidents drawn to our attention by these complaints have, however, been mostly local or narrow in scope. Enforcement action would therefore be limited in scope to particular instances of anti-competitive behaviour, and would not address the wider market dynamics or the structure of the market or other market features we have identified.

7.61 The MIR will have a different and much broader focus: how competition is working, including the structure of the market, and the existence of multi-level contacts between competitors and other features which might be facilitating or encouraging tacit co-ordination or otherwise having an adverse effect on competition. In short, the main problem is, we suspect, structural.

7.62 For this reason we think an MIR is the appropriate tool for further investigation of competition problems in this sector. Only a CC market investigation would both provide the kind of holistic analysis we think is needed, and open up a range of potential remedies for the structural and other features we have identified.⁷⁸ A Competition Act investigation is not an effective alternative for dealing with our concerns.

DG Comp proceedings

7.63 The European Commission (EC) is currently investigating the markets for cement and related products. These related products include ready-mix concrete and aggregates.

⁷⁸ We will of course continue to consider each and every individual Competition Act allegation that is made to us and will, where appropriate, carry out investigations and/or share information with the EC and other national competition authorities.

7.64 Our MIR guidance says that OFT will not normally refer a market to the CC when a significant feature of that market is being investigated by the EC under articles 81 or 82 (now 101 and 102).⁷⁹

7.65 We received a number of submissions that making a MIR while the EC investigation is ongoing would be inconsistent with the Guidance. In particular, a number of respondents have submitted to us that:

- A CC market investigation would present fundamental difficulties of principle given that, they submit, there would be a substantial overlap with the EC investigation.
- There is a risk of conflicting remedies if the EC finds infringement and the CC finds an adverse effect given that the CC would be under a duty to ensure that any remedies imposed did not adversely affect the flexibility of the EC to impose remedies for Article 101 infringement. This would create difficulties because of the need to comply with Article 3 of Regulation 1/2003/EC (Modernisation Regulation).⁸⁰
- The CC might reach a finding inconsistent with the EC, and this would violate the principle that domestic competition authorities must avoid taking steps which are in conflict with, or inconsistent with, those taken by the EC.

⁷⁹ Paragraph 2.16, *ibid.*

⁸⁰ 1/2003/EC: Council Regulation of 16 December 2002 on the implementation of the rules on competition laid down in Articles 81 and 82 of the EC Treaty.

- A parallel investigation by CC and EC is not envisaged by the Notice on Cooperation of Competition Authorities.⁸¹

7.66 We have considered these objections carefully but do not find them to be well-founded. As explained above, the CC will be investigating the way competition is working in these markets and, in particular, whether or not there are structural or other features of those markets that are having an adverse effect on competition. We see no reason to anticipate that the CC would find it necessary to make any findings that would be inconsistent with the EC investigation or would limit the EC's scope to impose remedies requiring that any infringements that its investigation identifies be brought to an end.

7.67 In relation to the operation of the Notice on Cooperation of Competition Authorities, the OFT view is that, under the Modernisation Regulation, it is envisaged that the competition network will coordinate with a view to ensuring the most efficient use of resources to deal with competition cases under the enforcement regime with the objective that each case should be handled by a single authority (recital 18). One of the objectives of this is to ensure that the competition rules are applied consistently (recital 17). It is for this purpose that the Commission may relieve national competition authorities of competence to apply Article 101. As explained above, however, the CC's market investigation would not be applying Article 101, but would be investigating, under a domestic law procedure, whether there are features of the market(s) that are having an adverse effect on competition.

⁸¹ Commission Notice on cooperation within the network of competition authorities (2004/C101/03)

7.68 In all the circumstances, we consider there to be good reasons for making the MIR, and we do not consider the ongoing EC investigation provides a sufficient reason for departing from that course. That is because:

- We do not believe that the EC investigation can address the features which we suspect of having an adverse effect on competition in these markets.
- We have considered the practicalities of the CC inquiry running at the same time as the EC investigation and do not believe either that this would entail undue burdens on business (in the light of the offsetting customer benefits) or that it would create undue difficulties for the two authorities.
- There are real costs to delaying a CC inquiry until the EC investigation is complete.

7.69 We discuss these reasons in more detail below.

Potential remedies

7.70 As noted above, enforcement of competition law addresses specific instances of anti-competitive conduct, rather than how markets work in a holistic sense. While enforcement action can be an important deterrent to entry into anti-competitive agreements and abuse of dominant position, it does not address market features that may be having an adverse effect on competition even without competition laws being infringed. Even the powers for structural and behavioural

remedies in the Modernisation Regulation can only be exercised to bring specific infringements to an end.⁸²

- 7.71 We do not, therefore, believe that the EC investigation – even if it finds an infringement – can address and potentially remedy the features that we suspect of adversely affecting competition in these markets.

Practicalities of simultaneous processes

- 7.72 The EC investigation focuses on whether competition law has been infringed, with a view to identifying any infringements (for example, of Article 101 of the Treaty on the Functioning of the European Union), requiring the termination of such infringements, and imposing penalties.
- 7.73 The focus of a market investigation by the CC would be different. The CC would focus on how firms compete in this market and the economic effects of prevailing market features which may be hampering effective competition. The CC would be looking at underlying conditions in the industry (including, in particular, structural features), rather than investigating suspected anti-competitive agreements or concerted practices. The CC would also be looking at issues specific to the UK, including local market

⁸² Under Article 7 (1) the European Commission may require undertakings which are found to have infringed Article 101 or Article 102 of the Treaty to bring such infringement to an end. For this purpose, it may impose on them any behavioural or structural remedies which are proportionate to the infringement committed and necessary to bring the infringement effectively to an end. Structural remedies can only be imposed either where there is no equally effective behavioural remedy or where any equally effective behavioural remedy would be more burdensome for the undertaking concerned than the structural remedy.

features such as the interaction between competition and the planning system.

- 7.74 Furthermore, we do not believe that any uncertainty as to the outcome of the EC investigation would prevent the CC from reaching its own conclusions as to whether there are features of the market that adversely affect competition, and whether these are remediable.

Cost of delay

- 7.75 We also considered the implications of delaying making a reference until a time when no significant feature of the market is being investigated by the EC.
- 7.76 Although it is difficult to estimate the likely costs and benefits of a CC inquiry with any precision, the industry is so large and important that we can be confident that the potential long-running benefits of an inquiry which identifies appropriate remedies are likely to be of an order of magnitude greater than the one-off costs of the inquiry itself. Such benefits would accrue to consumers and, via a reduction in public expenditure on construction materials, to taxpayers. This presents a powerful argument against delay because, for all the time delay persists, the potentially very significant ongoing benefits that could accrue from such remedies are being forgone.
- 7.77 In terms of how long such a delay might be, we note that the current EC investigation started some time prior to the unannounced inspections in 2008 and that the EC opened formal proceedings in late 2010. The investigation is not yet at the stage where a Statement of Objections has been published. In addition, several of the companies involved in the EC investigation have challenged the request for information sent by the EC in the General Court.

Although this challenge was rejected by the General Court,⁸³ this has delayed matters and it is therefore possible that any final decision by the EC on the alleged infringement(s) could take significant time. We note that the EC's previous cement cartel investigation lasted around five years, with appeals taking a further decade. This industry has, therefore, been under investigation or appeal for much of the last 20 years, and there is no clear end-date at the present time.

7.78 Our view, therefore, is that in an industry of this scale, delaying making a reference could have significant costs and furthermore that the delay involved in waiting for the completion of the EC investigation would probably be years not months.

7.79 For these reasons altogether we consider that it is, in the circumstances, appropriate – and very much in the public interest – that we make a reference at this point in time, that is, without delaying until after the outcome of the EC investigation. While the MIR Guidance recognises that our preference is normally to wait until after other EC or Competition Act investigations are completed, so as to limit the burdens on relevant businesses, we consider that the reasons we have identified justify taking a different course in the present case. These are very important markets that deserve to be subjected to the kind of detailed analysis that a CC market investigation provides. Elements within this sector of the economy have been the subject of EC and other competition investigations for many years, and we do not consider that it would be right for the CC's examination of these markets – and therefore the benefits to consumers that such an examination might produce – to be delayed for a prolonged, indeterminate period.

⁸³ See Cases T-292/11, T-293/11 and T-302/11.

Undertakings in lieu of a reference

- 7.80 Under section 154 of the Enterprise Act 2002 (EA), if the OFT considers that it has power to make a market investigation reference, the OFT may accept undertakings instead of making a reference. Under section 154(3), when considering any undertakings the OFT must have regard to the need to achieve as comprehensive a solution as is reasonable and practicable to the adverse effect on competition identified (and any detrimental effects on customers resulting from the adverse effect on competition).
- 7.81 We have not received any offers of relevant undertakings.

Conclusions on the case for a reference

- 7.82 We believe that the statutory test in section 131 EA02 for making a reference is met. Having taken account of the relevant factors set out in the OFT's guidance document on market investigation references, we have decided to exercise our discretion to make a reference. We believe this is the best course of action to address features of the market which we suspect of giving rise to endemic competition problems which are unlikely to be remedied without the CC's intervention using the broad range of remedial options which can be obtained only following a CC investigation.

Scope of the reference

- 7.83 Section 133(1) of the EA02 requires a market investigation reference to specify the description of goods or services to which the feature or combination of features concerned relates. We propose to refer the aggregates, cement and ready-mix concrete market to the CC.

- 7.84 In terms of the geographic scope,⁸⁴ at the time of the provisional decision we proposed the reference should cover the United Kingdom as a whole.
- 7.85 During the consultation process we received representations from one company that Northern Ireland should be excluded from the geographic scope of the reference to the CC as the features which the OFT has identified under the statutory test (section 131 EA02) as possibly leading to competition concerns are not present in Northern Ireland.
- 7.86 Having looked at the available evidence and in the light of the submission received, we consider that Great Britain and Northern Ireland appear likely to be distinct geographic markets, and that the features identified above – in particular concentration and vertical integration – are present to a greater extent in Great Britain than in Northern Ireland. On this basis we have decided not to include Northern Ireland in the scope of the reference. However, we have not come to a view as to whether Northern Ireland is a competitive market and may decide to look at this geographic market in more detail in the future.
- 7.87 The Terms of Reference are set out at Annexe C.

⁸⁴ Section 133(2) and (3) gives the OFT the power (but not a duty) to frame a market investigation reference so as to limit the scope of a CC investigation by reference to the place where goods or services are supplied or acquired.

A LIST OF JOINT VENTURES

Joint Venture	Companies	Stating Date	Product
Island Barn Aggregates Ltd	Cemex Lafarge	20/03/1991	Marine aggregates and Infrastructure
Cemex Ready Mix East Anglia	Cemex Lafarge	30/09/1997	Ready mixed concrete
Brett Hall Aggregates Ltd	Cemex Brett	17/08/1991	Marine aggregates and infrastructure
Humber Sand & Gravel Ltd	Cemex Hanson	13/10/1993	Marine aggregates and infrastructure
Isle of Wight Aggregates Ltd	Cemex Tarmac	10/02/2003	Marine aggregates and infrastructure
Mersey Sand Suppliers (partnership)	Cemex Tarmac	21/03/1997	Marine aggregates and infrastructure
Purfleet Aggregates Ltd	Cemex Hanson	11/07/1983	Marine aggregates
Blackwater Aggregates	Cemex Gent Fairhead	21/12/1999	Aggregates
Processing Ash LLP	Cemex Lafarge	24/01/2005	Ash
A1 Dishforth to Barton	Cemex Al	n/a	n/a

Joint Venture	Companies	Stating Date	Product
Cross rail excavated material	Cemex Ketbray Logistics	01/07/2010	n/a
Hepplewhite Quarries and Plant Hire Ltd	Tarmac Lafarge	n/a	Aggregates
Midland Quarry Products	Tarmac Hanson	n/a	Aggregates and asphalt
Newhaven Roadstone	Tarmac Colas	2002	Asphalt
RH Roadstone Ltd	Tarmac Lafarge	n/a	Aggregates
Charcon Holdings Ltd	AI Caprio Group	n/a	Precast concrete products
Mid Kent Concrete Ltd	AI S J Clubb	n/a	Ready mixed concrete
North Kent Roadstone Ltd	AI Eurovia	n/a	Asphalt plant
Redditch Concrete Ltd	AI S E Davis & Sons Ltd	n/a	Ready mixed concrete plant
C & G Concrete Ltd	Hanson Gilman Family	n/a	Ready mixed concrete
H.H. & D.E. Drew Ltd	Hanson Drew and Badcock Families	1967	Aggregates and ready mixed concrete
Joyce Greene Aggregates Ltd	Hanson J Clubb	2001	Aggregates

Joint Venture	Companies	Stating Date	Product
Smith Concrete Ltd	Hanson Smith Family	1970	n/a
Brett Lafarge Ltd	Lafarge Brett	19/03/1997	Aggregates
Britania Aggregates	Lafarge Brett	1998	Marine aggregates
Elstow Asphalt Ltd	Lafarge Tarmac	17/07/2004	Asphalt
Harlow Asphalt Ltd	Lafarge Tarmac	17/7/2002	Asphalt
GRS Bagging Ltd	Lafarge GRS Roadstone Ltd	14/07/2003	Bagging aggregates

B PLANNING SYSTEM IN THE UK

- B.1 This annexe gives an overview of the planning system in the UK, with particular focus on aggregates.⁸⁵ It should be noted that different planning systems apply to different types of aggregates; furthermore there are differences in the way that parts of the UK engage in planning. England and Wales share a broadly common system that allows for national management of aggregates supply, while Scotland and Northern Ireland take separate approaches.
- B.2 This annexe therefore focuses on England and Wales for primary aggregates - both land-won and marine-dredged – as this is the most extensive of the existing systems. Recycled and secondary aggregates are briefly discussed at paragraphs B.41-B.44 and significant differences to these frameworks in Scotland and Northern Ireland are discussed at paragraphs B.45-B.60.

Primary land-won aggregates

- B.3 In England and Wales, there are two elements to the planning system with regard to land-won aggregates, which are necessarily related, and are discussed in turn below:
- planning permission for new quarries or extensions to existing quarries, or 'land use planning'

⁸⁵ The planning systems for cement and ready-mix concrete plants are broadly similar to that for aggregates, although neither features national co-ordination of supply like aggregates. Mineral Planning Authorities make the local planning decisions and must consider all usual development criteria, including environmental impact. For cement kilns, Mineral Planning Authorities are also expected to ensure there is an adequate supply of raw materials available.

- planning the level of output and supply of aggregates to meet need, or the Managed Aggregates Supply System ('MASS').

Land use planning

- B.4 The legal framework for land use planning is based largely on the Town and Country Planning Act, originally introduced in 1947, updated in 1990 and further modified by the Planning and Compulsory Purchase Act 2004. Most forms of development in the UK, including mineral extraction and related activities, require planning permission before development can take place.
- B.5 The key features of the planning framework are:
- A hierarchical structure of guidance and plans at national, regional and local level against which planning applications are assessed. Guidance is provided by the Department for Communities and Local Government (DCLG), who is responsible for national planning policy in England, and the Welsh Government with responsibility in Wales.
 - Guidance setting out the national policy approach in England includes Planning Policy Guidance Notes (PPGs), which are gradually being replaced by Planning Policy Statements (PPSs), as well as supplementary 'circulars'
 - Specifically in relation to minerals, DCLG has also published Minerals Planning Guidance Notes (MPGs), which are being replaced with Minerals Policy Statements (MPSs), and set out national Government policy on minerals and planning
 - In Wales, *Planning Policy Wales* (2002), *Mineral Planning Policy Wales* (2000) and *Local Development Plans Wales*

(2005) set out national planning policy, and are supplemented by Technical Advice Notes (TANs)

- Regional Assemblies, Regional Development Agencies (RDAs) and Government Offices for the Regions had responsibilities for regional planning and producing Regional Strategies (RSs) and plan documents, though as noted in paragraph B.20 below, these have been abolished, and whilst RSs still exist, the Government has announced its intention to abolish these as part of the Localism Bill.
- Land use planning decisions are usually taken at a local level by local planning authorities. For mineral decisions, these authorities are the Mineral Planning Authorities (MPAs).⁸⁶ MPAs are responsible for developing a 'Minerals and Waste Development Framework' (MWDF) in England, or in Wales Local Development Plans, to plan for future provision of minerals and waste disposal in that area; deciding planning applications; and monitoring existing developments.
- For all planning, the Secretary of State for Communities and Local Government (England) or Welsh Ministers have the power to intervene and 'call in' applications or recover appeals, where a decision could have significant effects beyond the immediate locality, a conflict with national policy or could impact on national security.

B.6 It should be noted that numerous changes have recently occurred and are yet anticipated to the planning system, particularly with regard to increasing local empowerment. The major structural

⁸⁶ Where there is a unitary authority, for example in Wales, Greater London, and metropolitan areas, this is the MPA. County Councils and National Parks are also MPAs.

consequence has been the intention to remove the regional planning tier (see paragraphs B.20 and B.21 below). DCLG has also announced a review of planning policy, designed to consolidate policy statements, circulars and guidance documents into a single concise document that sets out the Government's priorities for the planning system, covering all major forms of development proposals handled by local authorities. This will be called the National Planning Policy Framework. A draft Framework document was put out to public consultation on 25 July 2011.

Managed Aggregate Supply System ('MASS')

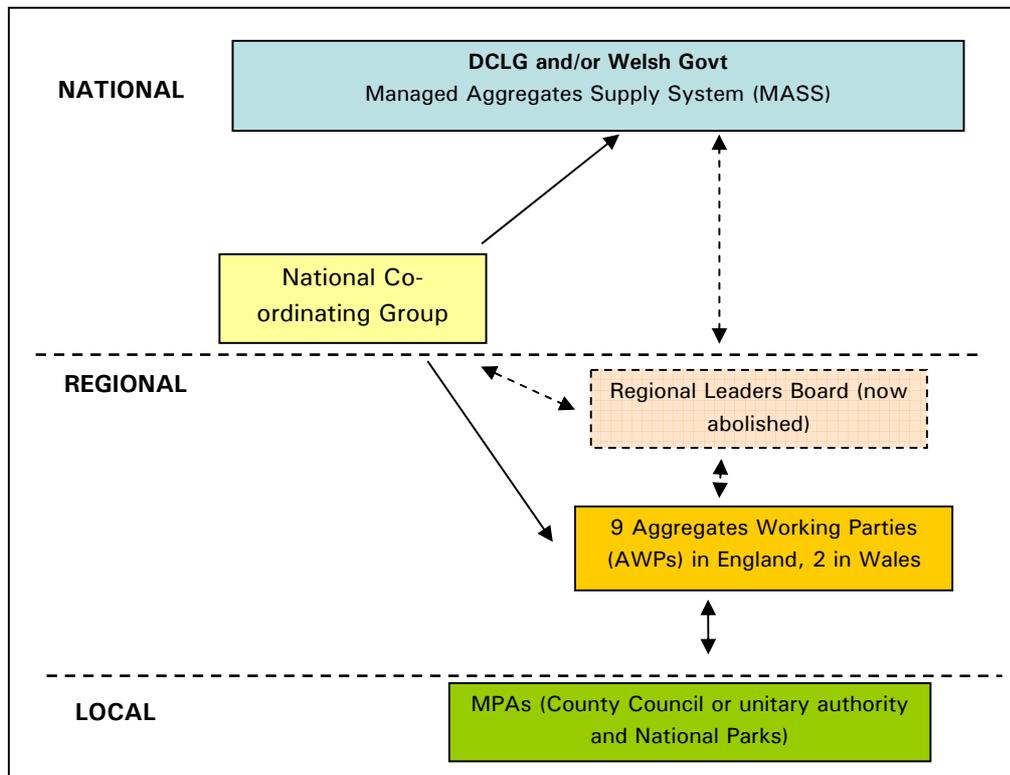
- B.7 MASS exists in England and Wales, and is a mechanism which facilitates planning for aggregates. It evolved from the Verney Review of 1976, which was commissioned by Government to consider the supply and demand of aggregates. Verney reported: high persistent overall levels of demand for aggregates; regional imbalances of resource (minerals can only be worked where they arise naturally), most notably shortages in the South East, often coupled with high levels of demand; and increasing conflicts between the working of sand and gravel resources and the safeguarding of high quality agricultural land, and in relation to the extraction of hard rock from areas of high landscape value.
- B.8 To reduce the risk of potential future shortages due to this situation and match demand requirements and supply availability, Verney recommended a centrally planned demand management system for aggregates together with a reduction of the constraints on marine dredging and transporting aggregates by sea; and endorsed the concept of Regional Aggregates Working Parties ('RAWPs') to assist in policy development and providing technical advice.
- B.9 The aim of the MASS is to meet the justified need for aggregates, as far as practicable, at the least social, economic and environmental

cost. MASS is implemented through regular demand forecasts and local authorities maintaining 'landbanks'⁸⁷ of permitted reserves, as well as monitoring of supply, resources and sales.

- B.10 MASS is coordinated nationally, given the geographical and geological imbalance of resources. Figure 1 below shows the relationship between these bodies.

⁸⁷ A landbank is the stock of permitted reserves that have valid planning permission. Minerals Policy Statement 1 (MPS1) states that MPAs should ensure a landbank of 'at least 7 years for sand and gravel and at least 10 years for crushed rock'. MPS1 also states that these levels should be an 'indicator of when new permissions for aggregates extraction are likely to be needed'. Landbanks are the key mechanism for ensuring an adequate and steady supply of aggregates, and provide the link between demand forecasts and supply expectations. Landbanks are therefore key when MPAs are considering planning applications. Similar guidance exists in Minerals Planning Policy Wales and MTAN 1 Aggregates in Wales.

Figure 1: Bodies involved in MASS



National

- B.11 DCLG has significant responsibilities in respect of implementing MASS, and maintains the econometric model of aggregates demand on which the national and regional guidelines are based. DCLG also monitors the operation of these guidelines, by gathering data and commissioning various surveys (on an England and Wales basis): the Annual Minerals Raised Inquiry; the Aggregate Minerals Surveys, taken every four years and providing detailed information on sales, consumption and reserves; surveys of alternative aggregates; and annual reports published by each RAWP, or AWP as they are now called following the removal of the regional layer.

- B.12 The National Coordinating Group (NCG) reviews forecasts of total demand in order to undertake a national apportionment process, which allocates the required supply among the nine regions in England. Previously, the relevant regional assembly would have further allocated its share of supply among local MPAs, but MPAs now agree this amongst themselves. The NCG is chaired by a senior DCLG official and is comprised of AWP chairmen, Scottish and Welsh Government officials, and representatives from trade associations and other government or public bodies.
- B.13 Note that since devolution in 1998, Wales has taken a more divergent path from England regarding minerals planning and has been less involved in the econometric forecasting element of the English MASS. Instead, the Welsh Government has issued *Minerals Planning Policy Wales* (December 2000) and *Minerals Technical Advice Note (Wales) 1: Aggregates* in 2004. These documents set out an enhanced role for the Welsh AWPs, such as the production of a five year Regional Technical Statement with additional data and analysis published in 2008, as well as an attempt to place an increased emphasis on monitoring on the use of secondary and recycled materials.

Regional

- B.14 Changes to this tier are described at paragraphs B.20 and B.21. Notwithstanding the removal of the regional tier, the operation of MASS has continued within the existing arrangements whilst DCLG considers how the management of aggregate supply should operate in the longer term.
- B.15 AWPs are funded by DCLG and the Welsh Government and provide technical advice in relation to the supply of, and demand for, construction aggregates to the MPAs and to DCLG. There are nine AWPs in England and two in Wales. Each AWP is chaired by a county

planning officer and comprises representatives of DCLG/Welsh Government, the MPAs and aggregate industry representatives.

- B.16 A main function of the AWP is the collection of data to facilitate planning and forecasting the demand for aggregates by MPAs, national government and the industry. This is done by annual monitoring of aggregates sales and permitted reserves. Every fourth year, AWP contribute to a more detailed Aggregates Minerals survey as previously mentioned, collecting information on the transport and inter-regional flows of aggregates, which allows the levels of consumption by region to be calculated.
- B.17 AWP are also responsible for: assessing reserves of sand, gravel and hard rock; assessing the likely demand for aggregates; indicating if there will be a surplus or shortfall of supply without further planning permissions being granted; considering the potential for synthetic and waste materials in meeting demand for aggregates; considering the potential contribution the region could make toward meeting demand in other parts of the country.
- B.18 AWP generally have a narrow technical remit providing advice to the MPAs within their area on the feasibility of maintaining supply and the apportionment of supply across the local planning area.⁸⁸
- B.19 As previously mentioned, the regional tier has undergone much change recently, and the picture is still uncertain. For example, the Local Democracy, Economic Development and Construction (LDEDC) Act came into force on 1 April 2010. This Act provided for:

⁸⁸ In Wales, AWP have an enhanced role with political endorsement of the Regional Technical Statement.

- the establishment of eight regional local authority Leaders' Boards that will replace the unelected Regional Assemblies, for all regions in England except London where the London Assembly remains in place, and
- the establishment of a single Regional Strategy to support the delivery of sustainable economic growth in each region, for which the RDAs and new local authority Leaders' Boards (referred to as the 'responsible regional authorities') will be jointly responsible.

B.20 Even as the above changes began to be implemented, the change of government in mid-2010 altered the landscape once again. The new coalition government has sought to streamline the planning process in England and abolished RDAs, Regional Strategies, and Regional Leaders' Boards. These changes will be effected in the Localism Bill, which was published in December 2010 and is currently progressing through Parliament.

B.21 Therefore, the eventual structure of the planning system and the future implementation of the MASS are yet to be clarified. In particular, it is unclear how the national supply targets will be distributed in future or whether AWP's will continue to exist (although some indication has been given that they will) and in what role.

Local

B.22 Locally, MASS is implemented by the MPAs, who must agree their apportionment of the regional supply requirement. The apportionment level is based on guidelines, but MPAs make representations regarding the feasibility of fulfilling their allocated supply levels. The proposed figure is subject to sustainability appraisal and further testing at local inquiry to determine robustness.

B.23 The MPA must then ensure that appropriate land is identified and sufficient planning permissions are in place to deliver its agreed apportionment and to meet national guidelines on landbank reserves (as described in footnote 59).

Primary marine aggregates

B.24 New systems of marine planning are being developed within the administrations of the UK. This will mean a change from the current position of no holistic spatial planning to a plan led system with a framework that will guide decision-making and set out factors for consideration by new sub-national Marine Plan areas. The Marine Policy Statement was adopted in March 2011 and a series of sub-national marine plans covering the whole of England's marine area will follow. This is a result of the need to manage the competing pressures on the marine environment and ensure any development is sustainable

B.25 This annexe will look at marine planning and the proposed new systems, including the Marine Policy Statement and Marine Plans, then the process for operators to obtain a dredging licence. The key players in marine aggregates are:⁸⁹

- **Department for the Environment, Food and Rural Affairs (DEFRA):** the UK custodian of the marine and aquatic environment and responsible for a wide range of marine policy. The Secretary of State for the Environment (SoSE) has overall responsibility for the Marine Management Organisation which regulates marine activities. DEFRA and devolved administrations jointly produced the Marine Policy Statement and the SoSE is the Marine Plan

⁸⁹ Arrangements in Northern Ireland and Scotland are discussed separately later.

Authority for England, although most marine planning functions have been delegated to the MMO. The SoSE will approve each plan for consultation and adoption.

- **The Marine Management Organisation (MMO):** a non-departmental public body in existence since April 2010, with powers under the Marine and Coastal Access Act 2009 ('MCA Act') to regulate and manage English marine areas and retained functions for UK offshore marine areas. This includes responsibility for marine planning, by developing Marine Plans for English inshore and offshore waters. The MMO has also taken on responsibilities (previously the remit of the Marine and Fisheries Agency) for issuing dredging licences for aggregates extraction, and for monitoring and enforcing these licences in English inshore and offshore waters.
- **The Welsh Government:** responsible for marine planning in the Welsh inshore and offshore and marine nature conservation and marine licensing (including for aggregates extraction) in the Welsh inshore area.
- **The Crown Estate:** has the rights to develop minerals lying on the sea bed via commercial licensing, and receives royalties from aggregates extracted. It issues commercial licences for extraction.

Marine Planning

- B.26 Previously there has been no spatial planning in England for marine aggregates and no regional apportionment or allocation of supply as exists for land-won aggregates. Whilst MPS1 (published in June

2009)⁹⁰ does state an expectation of overall supply level, permitting for dredging is mainly based around the environmental acceptability of the proposal. Marine Minerals Guidance 1 (MMG1) (published in 2002)⁹¹ is also relevant, which states the Government's policies on the extraction of marine sand and gravel and other minerals from the English seabed. In Wales, the Welsh Government's Interim Marine Aggregates Dredging Policy sets out some spatial planning principles for the Welsh inshore area.⁹²

- B.27 MPS1 and MMG1 provide detailed guidance and policy on marine mineral extraction and will be considered alongside the UK Marine Policy Statement. The same applies in respect of the Welsh Government's Interim Marine Aggregates Dredging Policy. The Marine Policy Statement is the overarching policy guidance but other detailed documents will also be used (insofar as they remain relevant) to guide decision making until Marine Plans are established.
- B.28 The key elements of future marine planning in relation to aggregates are the Marine Policy Statement, Marine Plans and the licensing regime for mineral dredging, each of which is discussed below.

Marine Policy Statement

- B.29 The MCA Act introduced a framework for the development of new marine planning systems across the UK. The UK Marine Policy

⁹⁰ MPS1: www.communities.gov.uk/documents/planningandbuilding/pdf/152993.pdf

⁹¹ The Marine Minerals Guidance 1:
www.communities.gov.uk/documents/planningandbuilding/pdf/156357.pdf

⁹² <http://wales.gov.uk/topics/planning/policy/minerals/interimmarine?lang=en>

Statement⁹³ was published by Government in March 2011, and is the first stage in the new UK Marine Planning System.

- B.30 The Marine Policy Statement is a high-level UK policy statement that applies to all UK waters and provides a strategic framework for preparing Marine Plans, ensuring consistency across the UK, and provides direction for new marine licensing and other authorisation systems in each UK Administration. The Marine Policy Statement sets out the general environmental, social and economic considerations that must be taken into account in marine planning, the policy objectives for key activities, the direction for marine licensing, as well as existing EU⁹⁴ and UK requirements in relation to marine planning. It also provides guidance on the pressures and impacts that decision makers will need to consider. The devolved administrations will (or have) developed their own legislation that fits with the Marine Policy Statement, as detailed in later sub-sections.
- B.31 With regard to marine aggregates, the Marine Policy Statement states that this section does not currently apply to Scotland. The Marine Policy Statement also says that 'the extraction of marine dredged sand and gravel should continue to the extent that this remains consistent with the principles of sustainable development, recognising that marine aggregates are a finite resource and in line with the relevant guidance and legislation.'

⁹³ UK Marine Policy Statement:

<http://archive.defra.gov.uk/environment/marine/documents/interim2/marine-policy-statement.pdf>

⁹⁴ There are various EU legislative provisions that Marine Plans must take into account, including the Marine Strategy Framework Directive (Directive 2008/56/EC), Water Framework Directive (Directive 2000/60/EC), Habitats Directive (Directive 92/43/EEC) and Wild Birds Directive (Directive 2009/147/EC).

- B.32 The Marine Policy Statement instructs MPAs to 'as a minimum, make provision within Marine Plans for a level of supply of marine sand and gravel that ensures that marine aggregates (along with other sources of aggregates, including recyclates) contribute to the overarching Government objective of securing an adequate and continuing supply to the UK for various uses. In doing so, marine plan authorities should consider the potential long-term requirement for marine-won sand and gravel, taking into account trends in construction activity, likely climate change adaptation strategies and major project development.'⁹⁵
- B.33 This suggests a move towards a more managed supply approach, although not as prescriptive as the MASS approach for land-won aggregates.

Marine Plans

- B.34 The MCA Act divides the UK marine area into inshore and offshore regions. In England these have been further divided into 11 Marine Plan areas and a Marine Plan will be developed for each.⁹⁶ In England, the SoS for the Environment is responsible for marine planning for the English inshore and offshore regions, but responsibility for preparing Marine Plans has been delegated to the MMO. In the Devolved Administrations, Scottish Ministers are responsible for the Scottish offshore region, Welsh Ministers for the Welsh inshore and offshore regions and the DOE in Northern Ireland for the Northern Ireland offshore region. The Scottish inshore is covered, and the

⁹⁵ UK Marine Policy Statement pg.39

⁹⁶ The East Inshore and East Offshore areas are the first two Marine Plan areas to be selected in England for marine planning, and should be adopted in 2013. The MMO estimate that each plan will take two – 2.5 years to complete, so the remaining areas will be planned over the next 10 years.

Northern Ireland inshore region will be covered, by respective Scottish and Northern Ireland legislation.⁹⁷

- B.35 The Marine Plans will set out how the Marine Policy Statement will be implemented in specific areas, providing detailed policy and spatial guidance that is locally relevant, to ensure that decisions within that area contribute to delivery of UK policy objectives. The Plans will ensure that different and potentially competing activities are managed in such a way that they promote compatibility and reduce conflict, and will also help developers identify where they are likely to be able to undertake activities and what conditions or restrictions may be placed on what they do. Marine Plans will be drafted over an approximately 10-year period (Plans should be established by about 2021; Scotland and Wales are developing national plans for adoption within the next two to three years) and will provide a 20-year forward look. Each Plan will be reviewed every three years.
- B.36 The Marine Policy Statement and Marine Plans will sit alongside and interact with existing land planning regimes. Marine planning and decisions capable of affecting the marine area are subject to policy set out in the Marine Policy Statement, including the need for appropriate consistency and integration with terrestrial planning. In addition there is a physical overlap; Marine Plan boundaries will extend to the mean high water spring tide level, while terrestrial planning boundaries generally extend to the mean low water spring tide level.

⁹⁷ UK Marine Policy Statement

Dredging Licences

- B.37 The marine licensing system under the MCA Act has been in force since 6 April 2011, and consolidates and replaces some previous statutory controls under the Food and Environment Protection Act 1985, the Coast Protection Act 1949, the Telecommunications Act 1984 and permissions under the Environmental Impact Assessment and Natural Habitats (Extraction of Minerals by Marine Dredging) (England and Northern Ireland) Regulations 2007.
- B.38 The MMO is responsible for most marine licensing in English inshore and offshore waters and for Welsh and Northern Ireland offshore waters.
- B.39 Under the MCA Act, decisions on the licensing of certain activities relating to minerals extraction should be taken in accordance with the Marine Policy Statement and marine plans unless relevant considerations indicate otherwise. The assessment of applications for licences in England is undertaken by the MMO. In Wales, the Marine Consents Unit within the Welsh Government deals with licences in the inshore, liaising with the MMO for cross-border cases and vice-versa.
- B.40 Currently the process⁹⁸ to be followed before aggregate dredging activities commence is⁹⁹
- **Crown Estate tender bid for prospecting rights:** Periodically, the Crown Estate invites expressions of interest for a tender round for the development of areas of seabed as aggregate dredging areas. The Crown Estate decides whether to hold a tender based

⁹⁸ It should be noted that licences issued by the Crown Estate are commercial licences, whilst applications processed by the MMO and other regulators are regulatory licences.

⁹⁹ www.marinemangement.org.uk/licensing/documents/guidance/01.pdf

on the expressions of interest. Interested parties are permitted to undertake non-exclusive sampling of prospective areas prior to the tender process. Operators submit their tender application to the Crown Estate and if successful, operators get a prospecting licence to further investigate potential sites. The Crown Estate is only able to issue commercial licences to extract aggregate.

- **Obtain a marine licence from the MMO, the Welsh Government, the Scottish Executive or DOE:** applicants for a marine licence can seek a screening opinion on whether an Environmental Impact Assessment (EIA) is required¹⁰⁰ and an opinion on the scope of their Environmental Statement. The MMO consults widely and takes several factors into account in reaching any EIA decision and in deciding whether to grant a marine licence. Where an EIA consent decision has been given, there is also provision for measures to avoid, mitigate, or offset the adverse effects of the activity and for related post-approval monitoring.
- **Obtain a commercial aggregates production licence from the Crown Estate:** this can only be obtained once the applicant has a marine licence from the MMO, Welsh Government or the Scottish Executive, and will mirror it in duration and extraction limit. The Crown Estate therefore will issue commercial licences to extract aggregate, but only the regulator (MMO or devolved administrations) can issue statutory consents to operate.

¹⁰⁰ Under the Marine Works (Environmental Impact Assessment) Regulations 2007, as amended in 2011.

Secondary and Recycled Aggregates

Land use planning

- B.41 MASS takes secondary and recycled aggregates into account. The production of secondary and recycled aggregates is, however, classed as a waste activity and thus falls under waste as well as minerals policy planning guidelines.¹⁰¹ Key waste legislation at EC level includes the Waste Framework Directive and the Mining Waste Directive, implemented in England and Wales through a range of environmental regulations.¹⁰² Producers of these aggregates are therefore subject to the planning regime where waste facilities are contemplated and also the environmental permitting regime whereby waste treatment, recovery or disposal operations generally require authorisation.
- B.42 The local authority is referred to as the Minerals and Waste Planning Authority. Operators may need to obtain planning permissions to establish a recycling site, where recycling facilities including screening and crushing plant equipment may be installed. Permits are required to remove material from deposits of industrial by-products and for developments built to produce aggregate from industrial by-products or to store such material, with exceptions made in the latter case where ancillary to the industrial site.

¹⁰¹ Applicable guidelines include PPS 1: Delivering Sustainable Development and PPS 10: Planning for Sustainable Waste Management

¹⁰² Such as the Environmental Protection Act 1990, Part II and the Environmental Protection (Duty of Care) Regulations 1991, as amended, and the Environmental Permitting (England and Wales) Regulations 2010.

Supply management

- B.43 The latest national guidelines target the contribution to aggregates supply in England from secondary and recycled aggregates combined, to be 65 million tonnes per annum by 2015.¹⁰³ However the supply and production of these types of aggregates is not actively managed or monitored to the same extent as land-won aggregates.
- B.44 Many groups of local authorities work together with the Environment Agency to collate data on waste management arising. Some AWP's also conduct analyses of the supply of secondary and recycled aggregates. However, it can be difficult to accurately track such supply as aggregates recycled from construction and demolition waste are often produced using mobile equipment on temporary sites or indeed are re-used on-site as produced.

Planning in Scotland and Northern Ireland

Primary land won aggregates

Land use planning

- B.45 In Scotland, land use planning is governed primarily by the Town and County Planning (Scotland) Act 1997 and the Planning etc (Scotland) Act 2006. The Scottish Government is responsible for maintaining and developing planning legislation and national planning policy, including that for minerals development, within which local authorities are required to operate. Scotland's spatial planning

¹⁰³ Due to limited historical data, this figure is based on assumptions derived from the following data: the Environment Agency Construction and Demolition Waste Survey 2001; data collated by BGS from the AMS survey 1997; and the Arup Economics and Planning report 'Occurrence and Utilisation of Mineral and Construction Wastes 1991'.

strategy is set out in the second National Planning Framework and a single Scottish Planning Policy supported by minerals planning advice notes.

- B.46 Scottish Planning Policy states that an adequate and steady supply of minerals is essential. It makes provision for the maintenance of a landbank of at least 10 years and the identification of suitable land for development within local development plans that are reviewed every five years. The policy is supplemented by some monitoring of supply and demand, with occasional surveys carried out.
- B.47 Locally, national guidance is implemented by the planning authorities including the two National Park Authorities. Additionally, the four city regions, which are the major consumers of aggregates within Scotland, cooperate for their landbank planning.
- B.48 In Northern Ireland, the Planning (Northern Ireland) Order 1991 sets out relevant planning legislation for Northern Ireland. Spatial development strategy and strategic planning guidelines are established by Northern Ireland's Regional Development Strategy 2025 ('RDS'), Planning Policy Statements and technical Development Control Advice Notes (notably, note 10 relating to Environmental Impact Assessment). While no policy statement exists that is specific to minerals, the RDS chapter on rural Northern Ireland includes eight policies relevant to mineral applications.
- B.49 Current planning policy for minerals is however set out in the Planning Strategy for Rural Northern Ireland (September 1993) and are as follows:
- Policy Min 1 Environmental Protection - To assess the need for the mineral resource against the need to protect and conserve the environment

- Policy Min 2 Visual Implications - To have regard to the visual implications of mineral extraction
- Policy Min 3 Areas of Constraint - To identify areas of constraint on mineral development
- Policy Min 4 Valuable Minerals - Applications to exploit minerals, limited in occurrence or with some uncommon or valuable property, will be considered on their merits
- Policy Min 5 Mineral Reserves - Surface development, which would prejudice future exploitation of valuable mineral reserves, will not be permitted
- Policy Min 6 Safety and Amenity - To have particular regard to the safety and amenity of the occupants of developments in close proximity to mineral workings
- Policy Min 7 Traffic - To take account of the safety and convenience of road users and the amenity of persons living on roads close to the site of proposed operations, and
- Policy Min 8 Restoration - To require mineral workings to be restored at the earliest opportunity.

B.50 DOE is responsible for the implementation of Government policies for town and country planning, in consultation with the district councils, and for local development plans which must be taken into account in decision making. A Minerals Unit exists within the Department's Strategic Planning Division which is responsible for minerals planning.

Supply planning

B.51 Neither Scotland nor Northern Ireland has a system equivalent to MASS, nor does either have any AWP's, although Scottish

Government has access to NCG meetings. For both countries, there is less need to manage supply as there is excess or plentiful supply in comparison to the level of demand in most areas.

Primary marine aggregates

- B.52 It should be noted that currently there is no marine aggregates extraction in Scotland or Northern Ireland. However the Scottish Government and Northern Ireland have developed their own legislation to translate the MCA Act, which is briefly described below.
- B.53 In Scotland, Marine Scotland (part of the Scottish Government) is the lead marine management organisation. The Marine (Scotland) Act was passed on 10 March 2010 and provides a framework, via the Marine Policy Statement, which will help balance competing demands on Scotland's seas. The Act's main areas are marine planning, licensing, marine conservation, seal conservation and enforcement. It covers all activities in the marine environment out to 12 nautical miles (nm), except those reserved to the UK Government (oil, gas, telecoms and shipping), which are dealt with by the MMO. Under proposals in the MCA Act, Scottish Ministers have executive devolution of marine planning, licensing, and nature conservation in the Scottish offshore region. This means that Scottish Ministers carry out these activities from 12-200 nm.
- B.54 Whilst the Marine Policy Statement applies to the whole of the UK, the section on aggregates excludes Scotland. Scottish Ministers are the MPA and are responsible for developing a national Marine Plan.¹⁰⁴ The Scottish marine area will then be divided into Scottish Marine

¹⁰⁴ This is currently being developed and Ministers aim to publish a first draft for consultation later in 2011.

Regions, with each region developing its own plan. The consultation on defining marine regions, published in November 2010,¹⁰⁵ states that a Marine Planning Partnership will have delegated regional planning functions and be responsible for developing regional marine plans.

- B.55 As with England and Wales, the dredging and removal of substances such as aggregates requires a licence. The Marine (Scotland) Act brings a single marine licence which replaces the deposit licence under the Food and Environmental Protection Act 1985 (FEPA) and the navigational licence under the Coast Protection Act 1949 (CPA). From 6 April 2011, the new licensing regime has been operated by the Marine Scotland Licensing Operations Team.
- B.56 In Northern Ireland, DOE has the main responsibility for marine policy. The proposed Northern Ireland Marine Bill will fit with the MCA Act and will contain provisions for marine planning and marine nature conservation within Northern Ireland's territorial waters (to 12nm). It is currently anticipated that the Marine Bill will be in place in 2012 and work will then commence on marine plans for both Northern Ireland's inshore and offshore waters.
- B.57 In line with the rest of the UK, from 6 April 2011 Northern Ireland also has a new marine licensing regime to regulate development of the marine environment. This new regime regulates the extraction of marine aggregates previously licensed by DOE, through the Northern Ireland Environment Agency, under the Environmental Impact Assessment and Natural Habitats (Extraction of Minerals by Marine Dredging) (England and Northern Ireland) Regulations 2007 as

¹⁰⁵ Consultation on Scottish Marine Regions – defining their boundaries (Nov 2010): www.scotland.gov.uk/Resource/Doc/332178/0108097.pdf

amended by the Marine Works (Environmental Impact Assessment (Amendment) Regulations 2011, out to 12 nm.

B.58 DOE will be responsible for enforcing conditions attached to licences.

Secondary and recycled aggregates

B.59 In both Scotland and Northern Ireland, operators must obtain the relevant planning permissions for recycling sites and (unless exempt), obtain a licence under the Waste Management Licensing Regulations. Operators may also require a permit under the 1996 EU Directive on International Pollution Prevention and Control.¹⁰⁶

B.60 The Scottish Environment Protection Agency (SEPA) is the waste regulator for Scotland whilst in Northern Ireland it is the Northern Ireland Environment Agency (within DOE).

¹⁰⁶ Council Directive 2008/01/EC

C TERMS OF REFERENCE

1. The OFT, in exercise of its powers under sections 131 and 133 of the Enterprise Act 2002 (the Act), hereby makes a reference to the Competition Commission for an investigation into the supply or acquisition of aggregates, cement and ready-mix concrete.
2. In accordance with section 133(2) and (3)(a) and (b) of the Act, the Competition Commission shall confine its investigation to the effects of features of such market or markets as exist in connection with the supply or acquisition of such goods or services in Great Britain.
3. The OFT has reasonable grounds for suspecting that a feature or combination of features of the market or markets for aggregates, cement and ready-mix concrete in Great Britain prevents, restricts or distorts competition in connection with their supply or acquisition in Great Britain.
4. For the purposes of this reference:
 - aggregates includes primary, secondary and recycled aggregates
 - cement means grey cement
 - ready-mix concrete includes on-site batching (volumetric trucks).



Clive Maxwell
Executive Director
18 January 2012