

## ANTICIPATED CONSTRUCTION MATERIALS JOINT VENTURE BETWEEN ANGLO AMERICAN PLC AND LAFARGE SA

### Statement of issues

11 October 2011

#### The reference

1. On 2 September 2011, the Office of Fair Trading (OFT) referred to the Competition Commission (CC) for investigation and report the anticipated construction materials joint venture between Anglo American PLC (Anglo American) and Lafarge SA (Lafarge).
2. The CC must decide:
  - (a) whether a relevant merger situation would be created if the joint venture was put into effect; and
  - (b) if so, whether the creation of that situation may be expected to result in a substantial lessening of competition (SLC) within any market or markets in the UK for goods or services.

#### Background

3. Anglo American, through the operation of its UK subsidiary Tarmac Limited (Tarmac), and Lafarge propose to combine the bulk<sup>1</sup> of their respective construction materials businesses in the UK in the form of a 50:50 joint venture. The joint venture will bring together the main parties' overlapping activities in the production and supply in the UK of aggregates, asphalt, grey cement<sup>2</sup> and ready-mix concrete (RMX).
4. Aggregates are raw materials used in two general categories of application. Most aggregates (by volume) are used in general construction applications, as the base material in the construction of roads, buildings and other infrastructure, or as an input to the production of RMX and cement. A small proportion of aggregates are used in specialist applications such as rail ballast<sup>3</sup> and high purity limestone.<sup>4</sup> Primary aggregates are quarried from the land or dredged from the sea, and are classified as either crushed rock, or sand and gravel. Secondary aggregates are produced as the

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<sup>1</sup> Tarmac Building Products Limited (TBP), Tarmac's heavy building products business, is excluded from the joint venture. Lafarge's 50 per cent interest in a cement import terminal on the Isle of Man and its 48.32 per cent interest in Carrieres de la Vallee Heureuse, a French company that exports aggregates to the UK, are also excluded from the joint venture, as are its gypsum and plasterboard business (Lafarge Plasterboard Limited), its calcium sulphate screed binder business (Lafarge Gyvlon Limited), and its freehold interests in land at its Medway greenfield site which has potential for development as a cement plant. Lafarge has announced plans to sell Lafarge Plasterboard Limited and Lafarge Gyvlon Limited to Etex Group.

<sup>2</sup> Cement may be grey or white in colour. White cement is similar to grey cement in all respects except for its high degree of whiteness. Obtaining this colour requires substantial modification to the method of manufacture, and because of this, it is somewhat more expensive than the grey product. The CC currently understands that the joint venture does not bring together any Lafarge and Anglo American activities in white cement. References in this document to cement therefore relate to grey cement only.

<sup>3</sup> Rail ballast is a specific type of crushed rock aggregate used as a bedding material underneath railway tracks. Nearly all of the rail ballast produced in the UK is used by Network Rail.

<sup>4</sup> High purity limestone is a specific type of crushed rock aggregate consisting of limestone with low levels of impurities. It is used for chemical applications such as flue gas desulphurization and the production of soda ash.

by-products of other industrial or mining activities. Recycled aggregates are derived from demolition sites and construction waste.<sup>5</sup>

5. Asphalt is produced from aggregates and a viscous binding agent, usually bitumen, and is primarily used in asphalt surfacing (in particular, road building) and maintenance activities.
6. Cement is a fine powder produced from limestone, alumina-silicate and other constituents. It is used as a binder in building materials, including concrete. It can be supplied either in bulk or bagged.
7. RMX is a building material consisting of a mix of aggregates, cement and water supplied in a ready-mixed form that can be poured and that sets in situ.
8. Tarmac and Lafarge are two of the five significant, vertically-integrated producers and suppliers of construction materials in the UK ('the majors'). The others are Hanson (part of HeidelbergCement AG), Aggregate Industries<sup>6</sup> (part of the Holcim Group) and Cemex UK (part of Cemex SAB de CV).

### **The markets in which the parties operate**

9. On the basis of the information reviewed so far, and without prejudice to any further information the CC may receive, the CC considers that the appropriate *product/customer markets* within which to assess the competitive effects of the joint venture are:
  - (a) rail ballast at a national<sup>7</sup> level;
  - (b) high purity limestone (for customers who use this for certain non-construction applications such as flue gas desulphurization and the production of soda ash) at a national level;
  - (c) crushed rock (for customers who use this for asphalt production) at a regional level;
  - (d) primary aggregates (for customers who use these for RMX production) in certain local areas;
  - (e) all aggregates (for customers who use these for general construction applications) in certain local areas;
  - (f) cement (whether bagged or bulk) in the region around Tarmac's Tunstead cement plant<sup>8</sup> and/or at a national level;
  - (g) RMX in certain local areas; and
  - (h) asphalt in certain local areas.
10. The CC does not propose to consider unilateral competitive effects on a national basis for primary aggregates, all aggregates, RMX or asphalt because it believes, on

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<sup>5</sup> In this document, the term 'all aggregates' is used to refer to primary, secondary and recycled aggregates collectively.

<sup>6</sup> Aggregate Industries (Holcim) does not produce cement in the UK, but it is the largest importer of cement into the UK.

<sup>7</sup> The CC's proposed approach to the geographical scope of these markets is set out in paragraphs 13 and 14.

<sup>8</sup> Tunstead is Tarmac's only cement plant in the UK. Therefore, if the geographic scope of the cement market is regional, the only overlap between Tarmac and Lafarge's cement activities will be in the region around Tarmac's Tunstead plant.

the evidence available to date, that local analysis will capture any such competitive effects arising from the joint venture in relation to these products. The CC notes that defining local markets for these products does not preclude the CC considering theories of harm which could have an effect across multiple local markets (or even nationally).

11. The product markets listed in paragraph 9 appear to the CC to be appropriate because the joint venture brings together the activities of Tarmac and Lafarge in these markets, and the most direct competition faced by one supplier of these products seems to come from other suppliers of the same products. We will consider competitive constraints within these markets and from outside them where relevant in our assessment of competition. For example:
  - (a) In relation to aggregates, the CC will consider to what extent customers can substitute across different types/grades of aggregates, and whether the ability of customers to make such substitutions is limited for specific end-uses and applications.
  - (b) In relation to asphalt, the CC will consider the constraints imposed by mobile (ie on-site) asphalt plants and plants that benefit from planning consent for night-time and weekend operation (24/7 plants), used in particular for night-time road surfacing activities.
  - (c) In relation to cement, the CC will consider the possible constraint imposed by imported cement. In relation to cementitious products<sup>9</sup> as alternatives to cement, the CC is particularly concerned to understand whether such products are sufficiently accessible on a commercial basis to act as meaningful constraints on suppliers of cement.
  - (d) In relation to RMX, the CC will consider the constraints imposed by site plants<sup>10</sup> and volumetric trucks.<sup>11</sup>
12. In light of the preliminary analysis carried out by the OFT and the lack of concerns from competitors and customers (and unless further evidence comes to light which indicates that these areas merit further investigation), we do not currently propose to look separately at markets arising from:
  - (a) the supply of high 'polished stone value' (PSV) aggregate materials;<sup>12</sup>
  - (b) overlaps within the joint venture between Lafarge's and Tarmac's asphalt surfacing and maintenance and waste management activities; and
  - (c) overlaps between the joint venture and the residual construction materials activities of Lafarge and Tarmac in the UK that are not subject to the joint venture (see footnote 1).
13. The *geographic scope* of these markets will be analysed as part of the assessment of the competitive effects of the joint venture. The CC currently understands that:

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<sup>9</sup> Cementitious products are any of various building materials which may be mixed with a liquid, such as water, to form a plastic paste, and to which an aggregate may be added. In this context, it is used to refer to alternatives to cement in such applications, for example ground granulated blast furnace slag and pulverized fuel ash.

<sup>10</sup> Site plants produce RMX at the customer location at which it is required, rather than transporting RMX from a fixed plant to that location.

<sup>11</sup> Volumetric trucks are on-site mixed concrete vehicles which carry aggregates, cement and water in separate compartments, to be mixed into concrete at customers' sites.

<sup>12</sup> High PSV aggregates are aggregates used for their anti-skid properties in road surfacing applications.

- (a) The geographic scope of the various markets will largely depend on the magnitude of transport costs relative to the value of the products concerned. It is likely to be more financially attractive to transport high-value products (such as those required for specific applications) over longer distances than low-value products, resulting in wider geographic markets for such products.
  - (b) For asphalt and RMX, perishability also appears to be an important factor in relation to the geographic scope of the relevant markets. Asphalt and RMX are best used a short time after production.
14. As a result, the CC will examine whether it is appropriate to assess competition in local areas on the basis of a radial distance around each of Tarmac and Lafarge's relevant plants, and, if so, what that radial distance should be.

## Theories of harm

15. The CC's initial view is that there are four possible ways in which the joint venture could give rise to an SLC or the expectation of an SLC (referred to as 'theories of harm').
16. *The first theory of harm ('unilateral horizontal effects')* is that loss of competition between Tarmac and Lafarge as a result of the joint venture may enable the joint venture to increase prices, worsen quality or service levels and/or reduce capacity through plant closures (or mothballing) in the markets described in paragraph 9.
17. *The second theory of harm ('coordinated effects')* is that, in relation to any one or more of aggregates, asphalt, cement or RMX, the joint venture may make any pre-existing coordination between the majors more stable or effective, or, in the absence of pre-existing coordination, may create the conditions where such coordination is likely.<sup>13</sup>
18. *The third theory of harm ('vertical effects arising from unilateral market power')* is that the joint venture may create or enhance vertical integration in certain local areas, such that the joint venture has the ability and incentive to engage in partial or full input foreclosure<sup>14</sup> in certain local areas in relation to:
- (a) cement sold to RMX-producing customers;
  - (b) aggregates sold to RMX-producing customers; and/or
  - (c) aggregates sold to asphalt-producing customers.
19. *The fourth theory of harm ('vertical effects arising from coordination')* is that, by making coordination between the majors likely to arise, or by making any such pre-existing coordination more effective,<sup>15</sup> the joint venture may result in partial or full input foreclosure in certain local areas in relation to:
- (a) cement sold to RMX-producing customers;

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<sup>13</sup> Coordinated effects may arise when firms operating in the same market recognize that they are mutually interdependent and that they can reach a more profitable outcome if they coordinate to limit their rivalry. Coordination can be explicit or tacit.

<sup>14</sup> Full input foreclosure occurs when a supplier refuses to supply an input to customers which use that input to compete with it in downstream markets. Partial input foreclosure occurs when a supplier increases (to a greater extent than otherwise might be expected) the prices of an input to customers which use that input to compete with it in downstream markets. Input foreclosure would thus make it harder for rivals in downstream markets to compete.

<sup>15</sup> This theory of harm depends on establishing theory of harm 2, ie that there are coordinated effects as a result of the joint venture.

- (b) aggregates sold to RMX-producing customers; and/or
  - (c) aggregates sold to asphalt-producing customers.
20. The CC may revise its theories of harm as its assessment of the proposed joint venture progresses. The identification of these theories of harm does not preclude an SLC being identified on another basis following further work by the CC and/or the receipt of additional evidence.

### ***Theory of harm 1: unilateral horizontal effects***

21. In assessing this theory of harm, the CC will examine:
- (a) the closeness of competition between Tarmac and Lafarge, compared with other suppliers active in the various markets, including the extent of differentiation between suppliers, whether by product and product type, by geographic location or other relevant characteristics;
  - (b) whether price is the key basis on which suppliers of aggregates, asphalt, cement and RMX compete and the degree to which quality, service levels and/or capacity may also be important;
  - (c) profit margins (eg whether higher variable profit margins<sup>16</sup> increase the scope for unilateral effects<sup>17</sup>); and
  - (d) whether any spare capacity held by alternative suppliers reduces the likelihood of and scope for unilateral effects.
22. The CC will also consider possible constraints from outside the markets concerned, as set out in paragraph 11.

### ***Theory of harm 2: coordinated effects***

23. The CC will examine whether there is evidence that coordination already exists in any of the relevant markets, whether the characteristics of these markets are conducive to coordination and what the effects of the joint venture can be expected to be on the likelihood and/or effectiveness of coordination. Coordination could in principle take place through (among other things) customer sharing and/or price coordination. The following conditions are necessary for coordination to arise: (a) there must be an ability to reach and monitor the terms of coordination; (b) coordination must be internally sustainable; and (c) coordination must be externally sustainable.
24. In assessing whether there is evidence that coordination already exists in these markets, the CC may consider:
- (a) patterns in customer and supplier behaviour (including, in the case of suppliers, expansion and mothballing decisions);
  - (b) parallelism in price levels (not explained by common costs), the rates and/or timing of price increases;

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<sup>16</sup> Variable profit margin is sales revenue less direct costs of sales.

<sup>17</sup> Higher variable profit margins would mean that, if Tarmac and Lafarge were to increase prices following the joint venture, they would together retain a greater value of sales than would have been the case had profit margins been lower. This would make a price rise less costly for them.

- (c) level of and change in variable and total margins on cash costs at plant level, and level of excess capacity;
  - (d) customer complaints in relation to refusal to quote and high level of prices; and
  - (e) the position of Tarmac, and the extent of its differentiation from its competitors in relation to the supply of cement.
25. The issues the CC may examine in determining whether the characteristics of these markets are conducive to coordination include:
- (a) market transparency;
  - (b) number and types of products involved;
  - (c) number of firms and symmetry;
  - (d) multi-market contacts and structural links (eg through buyer/supplier relationships, asset swaps, joint ventures);
  - (e) strength of competitive fringe;
  - (f) barriers to entry; and
  - (g) buyer power.
26. The CC will then consider whether the joint venture increases the likelihood or effectiveness of coordination, in particular by creating greater symmetry and closer alignment of market positions across aggregates, asphalt, cement and RMX between any firms that may potentially be coordinating their behaviour.

***Theories of harm 3 and 4: vertical effects arising from unilateral market power or coordination***

27. The CC will assess whether the joint venture is likely to give rise to vertical effects through input foreclosure of downstream non-integrated rivals. This may arise from unilateral market power in an upstream market (theory of harm 3) or coordination in an upstream market (theory of harm 4). In either case, the CC will analyse the joint venture's (or any coordinating group of companies') ability to engage in input foreclosure (whether partial or full), its incentives to do so and whether the effect of such foreclosure is to harm competition in the downstream markets.
28. In relation to unilateral vertical effects, Tarmac and Lafarge are each already vertically integrated at the national level. However, the joint venture may create a new vertically integrated competitor in certain areas, or may enhance the position of Tarmac and Lafarge in either or both the upstream or downstream markets in certain regions or local areas, thereby enhancing the ability and incentive to foreclose downstream competitors. For example, by combining Lafarge's existing position in cement with Tarmac's existing position in RMX, the joint venture may have the incentives and ability to engage in input foreclosure of cement for RMX in certain local areas (even if there has been no change in upstream or downstream market power as a result of the joint venture).
29. In relation to theory of harm 3, the CC will assess the ability of the joint venture to increase input prices to (or to refuse to supply) its downstream non-integrated rivals. The factors the CC may consider include:

- (a) the degree of market power in the upstream market and the extent to which downstream rivals can switch to alternative suppliers of the input; and
  - (b) the cost of the input relative to all costs of the product.
- 30. As part of its assessment of theory of harm 3, the CC will examine whether the joint venture will have the incentive to increase input prices to (or to refuse to supply) its downstream non-integrated rivals. In particular, we will consider the following factors affecting the profitability of such an increase in the input price:
  - (a) loss of profits in the upstream market;
  - (b) gain in profits in the downstream market; and
  - (c) the relative level of profit margins on the input product and the downstream product.
- 31. A similar assessment to that set out in paragraphs 29 and 30 may be appropriate for theory of harm 4.
- 32. The CC will consider whether the effect of any input foreclosure is to harm competition in the downstream markets. In particular, it will consider whether higher prices to end-customers are likely to arise in the downstream markets.

### **Counterfactual**

- 33. The CC currently considers that, were the joint venture not to take place, the pre-existing competition between Tarmac and Lafarge would be likely to continue largely unchanged. This is known as the counterfactual to the joint venture.
- 34. We note that Tarmac's plans for expansion of its Tunstead cement plant may significantly increase Tarmac's competitive strength in the supply of cement in future. The CC does not currently believe that these plans are sufficiently near-term to form part of the appropriate counterfactual (although they may be relevant to the CC's assessment of the competitive effects of the joint venture).

### **Countervailing factors**

- 35. The CC will consider whether the following countervailing factors would prevent or reduce an SLC:
  - (a) *Efficiencies*. The CC will examine any arguments made in relation to efficiencies arising from the joint venture, and in particular whether these are rivalry-enhancing efficiencies that can be expected to offset any increase in price.
  - (b) *Entry*. The CC will explore whether entry would be timely, likely and sufficient to prevent any SLC that might arise. At this stage, due to what it understands to be considerable existing excess capacity in all the relevant markets, the CC does not consider that entry can be expected to be likely to prevent any SLC that might otherwise arise.
  - (c) *Buyer power*. The CC will assess whether the joint venture's customers have countervailing buyer power, whether any such buyer power possessed by some customers would be sufficient to protect all customers from the effects of an SLC

and what the impact of the joint venture is on any existing countervailing buyer power.

36. The CC is not currently aware of any other countervailing factors.

**Possible remedies and relevant customer benefits**

37. Should the CC conclude that the joint venture may be expected to result in an SLC in one or more markets, it will consider whether, and if so, what, remedies might be appropriate, and will issue a further statement.
38. In any consideration of possible remedies, the CC will take into account whether any relevant customer benefits might be expected to arise as a result of the joint venture and, if so, what these benefits are likely to be and which customers would benefit.