EN



# *Case No COMP/M.7009 – HOLCIM / CEMEX WEST*

Only the EN text is authentic.

## REGULATION (EC) No 139/2004
## MERGER PROCEDURE

Article 8 (1)

Date: 5/6/2014

EUROPEAN COMMISSION

Brussels, 5.6.2014
C(2014) 3649 final

PUBLIC VERSION

# COMMISSION DECISION

**of 5.6.2014**

**addressed to:**
**Holcim Beteiligungs GmbH (Deutschland)**

**declaring a concentration to be compatible with the internal market**
**and the functioning of the EEA Agreement**
**(Case M.7009 – Holcim / Cemex West)**

(Text with EEA relevance)

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THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union,

Having regard to the Agreement on the European Economic Area, and in particular Article 57 thereof,

Having regard to Council Regulation (EC) No 139/2004 of 20 January 2004 on the control of concentrations between undertakings[1], and in particular Article 8(1) thereof,

Having regard to the Commission's decision of 22 October 2013 to initiate proceedings in this case,

Having regard to the opinion of the Advisory Committee on Concentrations[2],

Having regard to the final report of the Hearing Officer in this case[3],

Whereas:

(1) On 3 September 2013, the European Commission received a notification of a proposed transaction by which Holcim Beteiligungs GmbH (Deutschland) (Germany) (the 'Notifying Party') intends to acquire part of Cemex Group's activities in cement, ready-mix concrete, aggregates and cementitious materials in western Germany, including a small number of plants and sites located in France and the Netherlands (together 'Cemex West', Germany).[4] Holcim Beteiligungs GmbH (Deutschland) and Cemex West together are hereinafter referred to as 'the Parties'.

[1] OJ L 24, 29.1.2004, p. 1. With effect from 1 December 2009, the Treaty on the Functioning of the European Union ('TFEU') has introduced certain changes, such as the replacement of 'Community' by 'Union' and 'common market' by 'internal market'. The terminology of the TFEU will be used throughout this Decision.

[2] OJ C ...,...200. , p....

[3] OJ C ...,...200. , p....

[4] Publication in the Official Journal of the European Union, C 262, 11.9.2013, p. 5.

## 1. THE PARTIES

### 1.1. Holcim

(2) Holcim Beteiligungs GmbH (Deutschland) is the holding company of Holcim (Deutschland) AG. Holcim (Deutschland) AG is hereinafter referred to as 'Holcim Germany'. Both companies are established under German law with their registered seat in Hamburg. Holcim Beteiligungs GmbH (Deutschland) is controlled by Holcim Ltd., a joint stock company established under Swiss law, which is the ultimate parent company of the Holcim Group. All companies of the Holcim Group are hereinafter referred to as 'Holcim'.[5]

(3) Holcim is a global supplier of cement, aggregates, ready-mix concrete as well as asphalt and cementitious materials with operations in more than 70 countries.

### 1.2. Cemex West

(4) Cemex West consists of a number of operating entities that are wholly-owned or partially-owned by three companies (Cemex Deutschland AG, Cemex Kies and Split GmbH and Cemex Logistik GmbH). All three companies are subsidiaries of Cemex Central Europe GmbH, a member of the Cemex Group.

(5) The Cemex Group ('Cemex'), headquartered in Mexico with Cemex S.A.B. de C.V. as its ultimate parent company, is a global building materials company active in cement, ready-mix concrete, aggregates and related building materials in the Americas, Europe, Africa, the Middle East and Asia.

(6) Cemex West's assets are located in North Rhine-Westphalia, Rhineland-Palatinate and Saarland in Germany with some assets in France and the Netherlands near the German border. Cemex will retain its activities in the northern, eastern and southern parts of Germany, and in other jurisdictions.

## 2. THE OPERATION AND THE CONCENTRATION

(7) On 12 July 2013, the Parties signed a Memorandum of Understanding ('MoU') concerning a series of transactions by which Holcim will acquire Cemex West whilst Cemex will acquire control of the whole of Holcim's activities in cement, ready-mix concrete and aggregates in the Czech Republic and Spain. According to the terms of the MoU, the transactions are related and inter-dependent.[6]

(8) In order to compensate for the valuation difference between Holcim's Czech business (to be acquired by Cemex) and Cemex West, Holcim will pay Cemex an amount of EUR […][*] million at closing. In consideration for contributing its operations in Spain to Cemex, Holcim will acquire a minority 24.9 % shareholding in Cemex España Operaciones S.L.U. (Spain), a subsidiary of Cemex which will combine the Spanish activities of each of the Parties in cement, mortar, ready-mix concrete and

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[5] On 7 April 2014 Holcim and Lafarge S.A. announced a planned merger. http://www.holcim.com/merger (last retrieved 28.4.2014). As that merger has not yet been notified, the Holcim/Cemex West transaction will be assessed on the basis of the current perimeter of Holcim.

[6] See MoU, section C.2.

[*] **Parts of this text have been edited to ensure that confidential information is not disclosed; those parts are enclosed in square brackets and marked with an asterisk.**

aggregates. Holcim has an exit right that allows it to sell its shareholding in Cemex España Operaciones, S.L.U. after a five-year period.

(9) The transactions subject to the MoU cannot be assessed under Regulation (EC) No 139/2004 as a single concentration as two or more transactions can only be regarded as a single concentration if control is ultimately acquired by the same undertaking.[7] The transaction relating to the acquisition of Cemex West by Holcim has a Union dimension[8] and is the object of this Decision ('the Notified Transaction'). In contrast, the parallel transactions relating to the acquisition by Cemex of Holcim's businesses in Spain and the Czech Republic do not meet the turnover thresholds of Article 1(2) or Article 1(3) of Regulation (EC) No 139/2004.[9]

(10) The assets to be acquired comprise 1 integrated cement plant located in Beckum, 1 cement grinding station and 1 granulator for blast furnace slag located in Duisburg, 1 cement grinding station located in Dortmund, and 101 plants and quarries used for the production and processing of ready-mix concrete and aggregates located mainly in North Rhine-Westphalia, Rhineland-Palatinate and in Saarland. A small number of those 101 plants are located near the German border in France and the Netherlands. The assets to be acquired are indicated in blue in Figure 1:

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7 See paragraph 41 of the Commission Consolidated Jurisdictional Notice under Council Regulation (EC) No 139/2004 on the control of concentrations between undertakings, OJ C 95, 16.4.2008, p. 1.

8 See Section 0.

9 However, following a referral request pursuant to Article 22 of Regulation (EC) No 139/2004 made by Spain on 12 September 2013, the Commission decided to examine the acquisition by Cemex of Holcim's business in Spain on 18 October 2013 (M.7054 – *Cemex/Holcim Assets*). The Commission has identified serious doubts as to the compatibility of the acquisition by Cemex of Holcim's business in Spain with the internal market and adopted a decision pursuant Article 6(1)(c) of Regulation (EC) No 139/2004 initiating proceedings on 23 April 2014. As regards the acquisition by Cemex of Holcim's businesses in the Czech Republic, the Czech Competition Authority cleared the case without conditions after an in-depth investigation on 12 March 2014.

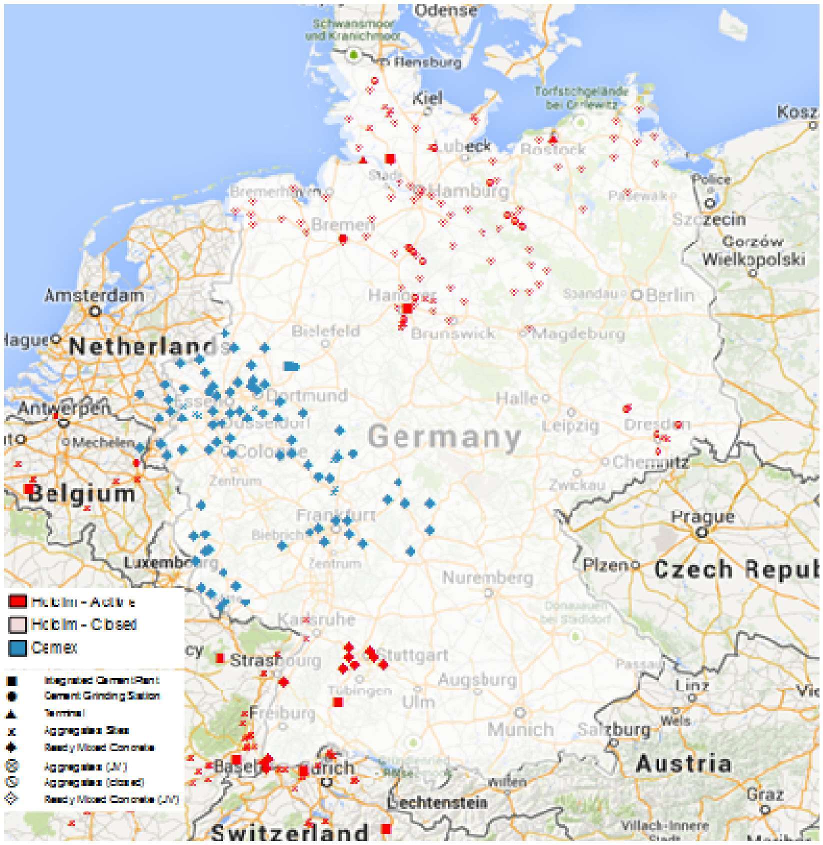


**Figure 1 Assets constituting Cemex West**[10]

(11) The exact structure of Holcim's acquisition of Cemex West is still subject to negotiations but two options are possible: Holcim will either acquire all shares in Cemex Deutschland AG after demerging non-Cemex West assets and shareholdings from Cemex Deutschland AG, or purchase all operating entities comprising Cemex West from Cemex Deutschland AG.

(12) Under both scenarios, Holcim will acquire sole control of the whole of Cemex West. The Notified Transaction therefore constitutes a concentration within the meaning of Article 3(1)(b) of Regulation (EC) No 139/2004.

## 3. UNION DIMENSION

(13) The undertakings concerned have a combined aggregate world-wide turnover of more than EUR 5 000 million in 2012 (Holcim: EUR […]* million; Cemex West: EUR […]* million). Each of them has an EU-wide turnover in excess of EUR 250 million in 2012 (Holcim: EUR […]* million; Cemex West: EUR […]* million). Although Cemex West achieves more than two-thirds of its EU-wide turnover in one Member State (Germany), Holcim does not. The Notified Transaction therefore has a Union dimension within the meaning of Article 1(2) of Regulation (EC) No 139/2004.

[10] Form CO, paragraph 112.

## 4. PROCEDURE

(14) On 3 September 2013, the Notified Transaction was notified to the Commission. On 22 October 2013, the Commission found that the Notified Transaction raised serious doubts as to its compatibility with the internal market and adopted a decision to initiate proceedings pursuant to Article 6(1)(c) of Regulation (EC) No 139/2004 ('the Article 6(1)(c) decision').

(15) On 26 September 2013, the Commission received a request from the Federal Republic of Germany (‘Germany’) to refer the whole of the case to the German Competition Authority ('Bundeskartellamt') pursuant to Article 9(2)(a) of Regulation (EC) No 139/2004. After the initiation of proceedings by means of the Article 6(1)(c) decision, Germany sent a reminder on 20 November 2013. On 3 January 2014, the Commission adopted a decision pursuant to Article 9(3) of Regulation (EC) No 139/2004 refusing the request. The refusal was based on the fact that the criterion of Article 9(2)(a) of Regulation (EC) No 139/2004 was not fulfilled as there are no affected markets for grey cement in this case that present all of the characteristics of distinct markets within Germany and do not exceed the territory of Germany.

(16) On 23 October 2013, the Commission provided non-confidential versions of certain key submissions of third parties collected during the Phase I investigation to the Notifying Party.

(17) On 5 November 2013, the Notifying Party submitted its written response to the Article 6(1)(c) decision ('the original response to the Article 6(1)(c) decision'). On 9 January 2014, the Notifying Party submitted an amended and extended version of its written response ('the amended response to the Article 6(1)(c) decision').

(18) On 6 November 2013, a formal State of Play meeting took place between the Commission and the Parties.

(19) On 14 November 2013, the Commission adopted two decisions pursuant to Article 11(3) of Regulation (EC) No 139/2004 whereby it required Holcim and Cemex to supply information that they had previously been requested to provide on 28 October 2013 by simple requests for information pursuant to Article 11(2) of Regulation (EC) No 139/2004. The time limit fixed by the simple requests for information expired on 11 November 2013. The Commission received the complete and correct information required by the decisions on 1 December 2013. Consequently, pursuant to Article 10(4) of Regulation (EC) No 139/2004 and Article 9 of Commission Regulation (EC) No 802/2004 ('the Implementing Regulation (EC) No 802/2004')[11], the time limits referred to in Article 10 of Regulation (EC) No 139/2004 were suspended from 12 November 2013 until 1 December 2013 inclusive.

(20) On 17 January 2014, at the request of Holcim, the Commission extended by 20 working days the periods set by the first subparagraph of Article 10(3) of Regulation (EC) No 139/2004.

(21) On 22 January 2014, the Commission adopted a decision pursuant to Article 11(3) of Regulation (EC) No 139/2004 whereby it required Holcim to supply information that it had previously been requested to provide on 14 November 2013 by a simple

[11] Commission Regulation (EC) No 802/2004 of 21 April 2004 implementing Council Regulation (EC) No 139/2004 on the control of concentrations between undertakings, OJ L 133, 30.4.2004, p. 1.

request for information.[12] The Commission received the complete and correct information required by the decision on 27 February 2014. Consequently, pursuant to Article 10(4) of Regulation (EC) No 139/2004 and Article 9 of the Implementing Regulation (EC) No 802/2004, the time limits referred to in Article 10 of Regulation (EC) No 139/2004 were suspended between 19 December 2013 and 27 February 2014 inclusive.

(22) The meeting of the Advisory Committee took place on 21 May 2014.

## 5. OVERVIEW OF THE CEMENT INDUSTRY

(23) The Notified Transaction concerns the building materials industry and, in particular, cement, cementitious materials, aggregates and ready-mix concrete.

(24) *Cement* is one of the main input products in modern construction. It is used in the construction and building industry as an intermediary product in the production of ready-mixed concrete, pre-cast concrete products and mortar. Cement is a fine powder and it has the capability to act as a binder and to set after a few hours when mixed with water, hardening later into a solid material.[13] There are two main types of cement: white cement and grey cement.

(25) The main difference between white and grey cement lies in the particular quality of chalk used for the production of white cement.[14] Furthermore, white cement is used for different purposes (in particular reflecting esthetical/optical aspects), is produced in comparably limited quantities and is more expensive than grey cement.[15] Cemex West is not active in white cement.[16]

(26) Cement is produced by grinding *cementitious materials*, typically clinker.[17] In some cases, mineral components and additional cementitious materials, such as blast furnace slag or fly ash, are added to the mixture by either grinding them together with clinker or blending separately ground materials together.

(27) There are three different types of cement production sites: integrated cement plants, grinding stations and blending stations.[18]

(28) An integrated cement plant is a manufacturing facility that covers the entire cement production process from mining raw materials to dispatching cement. The production process involves the following steps: (i) raw material extraction or mining from a quarry; (ii) raw material preparation and blending, (iii) raw feed preparation out of the raw materials in the form of meal; (iv) clinker production, which forms the main process of an integrated plant, that is to say converting raw feed in a thermo-chemical reaction in a cement kiln into the desired calcined mineral ('clinker' that has hydraulic/cementitious properties); (v) grinding and blending of clinker with gypsum

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12 The request for information of 14 November 2013 was subsequently amended on 28 and 29 November 2013.

13 Form CO, paragraph 122.

14 Commission’s decision of 11 November 1998 in Case No COMP/M.1157 – Skanska/Scancem, paragraph 29; see also also the antitrust Commission Decision of 30 November 1994, Cases IV/33.126 and 33.322 – Cement, OJ L 343, 30.12.1994, p. 7.

15 Form CO, paragraph 128.

16 Ibid.

17 See www.cembureau.be/about-cement/cement-manufacturing-process (last retrieved on 4.4.2014).

18 Form CO, paragraph 123.

or other components into the desired cement product; and (vi) storage and handling of cement products, including dispatch.[19]

(29) A grinding station does not include the mining and the thermal process of producing clinker, but only the final grinding, blending and handling steps, with clinker and other raw materials being delivered from a separate plant or sourced elsewhere.[20]

(30) A blending station is typically a silo-type storage installation with a blending and dispatch facility where the ground products can be received, mixed for homogenisation and quality purposes into the final product and ultimately dispatched.[21]

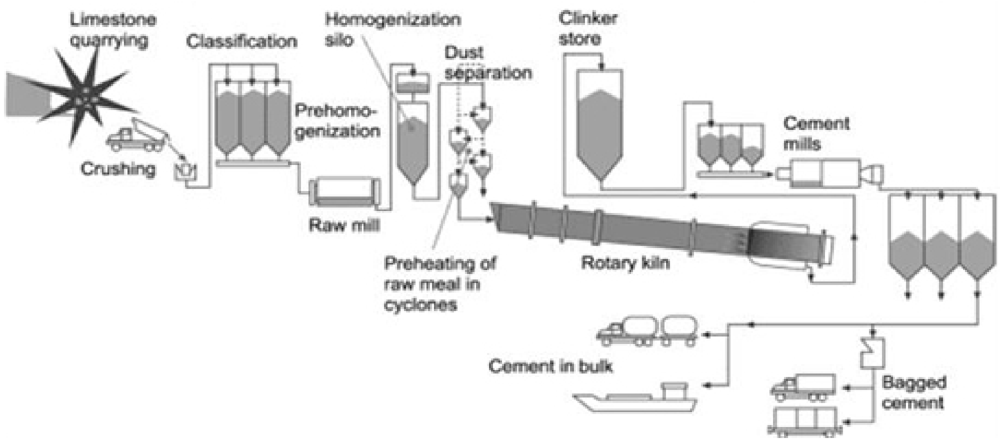


**Figure 2 Cement production process[22]**

(31) *Aggregates* encompass three primary raw materials used in construction and civil engineering: gravel, crushed rock and sand.[23] Due to the impact of transport costs, aggregates are typically sold locally.[24]

(32) *Ready-mix concrete*[25] is produced by mixing cement and aggregates with water. Concrete is mixed either on-site or, more commonly, in a dedicated plant before being subsequently transported to the point of use in specific mixer trucks.[26] Transport time and distance are limited, however, due to the inherent characteristics of ready-mix concrete to set because of cement reacting with water.[27]

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19 Form CO, paragraph 124.

20 Form CO, paragraph 126.

21 Form CO, paragraph 127.

22 http://www.ashokaengineering.com/rotarykilnplant.html (last retrieved on 9.4.2014).

23 Form CO, paragraph 159.

24 In previous decisions, the Commission has considered relevant geographic markets for aggregates to be local (30 miles, that is to say 48 km, Commission's decision of 28 May 2004 in Case No COMP/M.3415 – CRH/SEMAPA/Secil JV) but considered them as national in other cases (Commission's decision of 29 September 2003 in Case No COMP/M.3267 – CRH/CEMENTBOUW).

25 In previous decisions, the European Commission has consistently viewed ready-mix concrete as a single, distinct product market. Cf. Commission's decision of 8 December 2004, Case COMP/M.3572, CEMEX/RMC, para. 12; Commission's decision of 7 August 2007, Case COMP/M.4719, HeidelbergCement/Hanson, para. 21.

26 Form CO, paragraph 216.

27 The relevant geographic markets for ready-mixed concrete are determined by road connections and the time span during which the material can be safely transported before hardening. Previous Commission decisions

(33) The Notified Transaction gives rise to affected markets only with regard to grey cement and blast-furnace slag derived cementitious materials.

(34) As the Notified Transaction does not give rise to affected markets with regard to white cement, ready-mix concrete[28] and aggregates[29], these markets will not be discussed further in this Decision.

## 6. GREY CEMENT

### 6.1. Relevant product market

#### *6.1.1. Previous decisional practice*

(35) As mentioned in recital (24), there are two main types of cement: white cement and grey cement. In past decisions, the Commission has defined distinct product markets for those two types of cement.[30]

(36) Within grey cement, there are a large number of different classes available, and further grades can be produced. Cement classes are defined by strength development and setting times, which in turn are determined by the proportions and nature of the different raw cementitious products used to make that particular cement type.[31] The EU standard EN 197-1 defines five classes of common cement.

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suggested a radius of approximately 15-40 km around a production site (Commission's decision of 1 March 2001 in Case No COMP/M.2317 – Lafarge/Blue Circle (II), paragraph. 11; Commission's decision of 8 December 2004 in Case No COMP/M.3572 – Cemex/RMC, paragraph 24; Commission's decision of 7 August 2007 in Case No COMP/M.4719 – HeidelbergCement/Hanson, paragraphs 21 and 29), whereas the Bundeskartellamt recently established a 25 km radius to define geographic markets, see Federal Cartel Office, B1-133/10, B1-134/10, Decision of 20 December 2010, case report of 10 January 2011.

28 The only overlaps in the Parties' activities lie between the areas served by the Cemex West plant at Schoeneck (France) and the Holcim plant at Faulquemont (France), which are at a distance of approximately 40 km. The combined market share of the Parties in 2012 was, however, only [10-20]* %.

29 The only overlaps between Holcim's and Cemex West's plants are situated in the southern part of Lower Saxony and in Baden-Wuerttemberg near the French border. In both areas, however, the Parties' shares in aggregates in 2012 were [5-10]* % and [10-20]* % respectively. The markets at national level would not be affected either since the combined market shares are [0-5]* % in Luxembourg, [0-5]* % in France, [5-10]* % in Germany, [5-10]* % in the Netherlands and [10-20]* % in Belgium. Finally, even if a distinction between sand and gravel and crushed rock was made (see Commission's decision of 10 June 2010 in Case No COMP/M.5803 – Eurovia/Tarmac, paragraph 12), the assessment would not change since the Parties are not active in crushed rock aggregates in the overlapping areas.

30 Commission's decision of 14 March 2005 in Case No COMP/M.3713 – Holcim/Aggregate Industries, paragraph 7; Commission's decision of 8 December 2004 in Case No COMP/M.3572 – Cemex/RMC, paragraph 11; Commission's decision of 28 May 2004 in Case No COMP/M.3415 – CRH/SEMAPA/Secil JV, paragraph 10; Commission's decision of 1 March 2001 in Case No COMP/M.2317 – Lafarge/Blue Circle (II), paragraph 9; and Commission's decision of 11 November 1998 in Case COMP/M.1157 – Skanska/Scancem, paragraph 31.

31 See UK Competition Commission report of 14.1.2014 - A report on the aggregates, cement and ready-mix concrete market investigation, paragraph 2.50.

**Table 1: Classes of common cement according to EN 197-1**[32]

| | | |
|---|---|---|
| CEM I | Portland cement | Comprising Portland cement and up to 5 % of minor additional constituents |
| CEM II | Portland-composite cement | Portland cement and up to 35 % of other single constituents |
| CEM III | Blast furnace cement | Portland cement and high percentages of blast furnace slag |
| CEM IV | Pozzolanic cement | Portland cement and up to 55 % of pozzolanic constituents (volcanic ash) |
| CEM V | Composite cement | Portland cement, blast furnace slag or fly ash and pozzolana |

(37) CEM I has the highest content of clinker. The 'clinker factor' is the amount of clinker needed to produce a certain cement output. It is possible to substitute clinker in the cement production process by other materials such as blast furnace slag, which decreases the clinker factor and thereby increases the total cement production capacity.[33]

(38) Cement plants that have milling, blending and storage facilities for additives can produce different types of cement. As an alternative to buying bulk CEM II and CEM III, which are blended at the production site, certain customers buy CEM I and cementitious materials separately and mix these directly at their own sites (either using their own blending and storage facilities, or by using their ready-mix concrete plants to mix together the required quantities of materials to produce the ready-mix concrete specification desired).[34]

(39) Moreover, grey cement is sold both bulk and bagged.[35] Bags typically containing 25kilogrammes of grey cement are sold through do-it-yourself stores and building material retailers whereas bulk grey cement particularly answers the demand of ready-mix-concrete plants, plants for concrete products and large building sites.[36]

*6.1.2. The Notifying Party's arguments*

(40) The Notifying Party submits that there is a distinct, overall market for the manufacture and sale of grey cement, regardless of its grade and packaging.[37]

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32 See http://www.vdz-online.de/fileadmin/gruppen/vdz/3LiteraturRecherche/KompendiumZementBeton/1-2_Zementarten.pdf (last retrieved on 4.4.2014) and http://www.vdz-online.de/fileadmin/gruppen/vdz/3LiteraturRecherche/Zementmerkblaetter/B1.pdf (last retrieved on 4.4.2014).

33 An economic study submitted by the Notifying Party on 24 February 2014 ('the economic study of 24 February 2014'), page 4.

34 UK Competition Commission, Anglo American PLC and Lafarge S.A. - A report on the anticipated construction materials joint venture between Anglo American PLC and Lafarge S.A., paragraph 2.10.

35 Commission's decision of 16 May 2011 in Case No COMP/M.6153 – ANGLO AMERICAN/LAFARGE/JV, paragraph 25 and Commission's decision of 4 March 2008 in Case No COMP/M.4898 – Compagnie De Saint-Gobain /Maxit, paragraph 210.

36 Form CO, paragraph 130.

37 Form CO, paragraph 131.

#### 6.1.3. *The Commission's assessment*

##### 6.1.3.1. White versus grey cement

(41) The market investigation in this case has supported the Commission's earlier findings and the Notifying Party's view that the two main types of cement constitute separate product markets.

(42) The majority of customers and competitors that responded to the market investigation distinguished between white cement and grey cement. One customer in particular said: *'White cement has […] a different purpose and customers that are using white cement will never switch to grey cement, as white cement has different optical characteristics.*'[38]

(43) Moreover, competitors explained that it is difficult to produce grey and white cement at the same production site due to technical reasons given that if white cement is 'contaminated' by grey cement, it loses its whiteness which is unacceptable for customers. Substantial investments are needed to produce grey cement and white cement in the same plant.[39]

(44) As Cemex West is not active in white cement, that product will not be considered further in this Decision.

##### 6.1.3.2. Classes

(45) For the reasons set out in recitals (46) to (48), the Commission considers that the market for grey cement should not be further segmented according to grades or classes (CEM I to CEM V).

(46) First, there is a large degree of supply-side substitutability among different grades. In particular, according to a large majority of competitors that responded to the market investigation, cement producers are able to switch between the production of different cement classes (for instance from CEM I to CEM III) at short notice and without incurring significant costs, although there may some constraints with regard to specific raw materials for certain classes of cement. As one competitor indicated, '*[t]he production technology and machinery is usually the same. Most plants use the same machinery for different classes so switching back and forth is common.*'[40] Another competitor indicated that producers also *'tend to have the range of cement types for all typical cement applications available*'.[41]

(47) Second, in the event of a small but permanent increase of 5–10 % in the price of a certain class of cement, a large majority of competitors that responded to the market investigation indicated that they would switch all or some of their production to that type within a 6 to 12 month period, assuming that prices of other cement remained constant.[42] A large majority of these competitors also indicated that different classes of cement are substitutable from the point of view of customers.[43]

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[38] See replies to question 6 - Phase I questionnaire to competitors and replies to question 7 - Phase I questionnaire to customers.

[39] See Heidelberg's reply to the Commission's request for information of 25.2.2014, Questions 6 and 7. Agreed minutes of the call with a competitor, 25.2.2014.

[40] See replies to question 11 – Phase II questionnaire to competitors – cement.

[41] See replies to question 12 – Phase II questionnaire to competitors – cement.

[42] See replies to question 13 – Phase II questionnaire to competitors – cement.

[43] See replies to question 14 – Phase II questionnaire to competitors – cement.

(48) Third, according to a majority of customers that responded to the market investigation, although for some applications, changing cement classes is not possible, different classes of cement are to a certain extent substitutable and concrete recipes can be adapted over time and thus different classes of cement can be used as an input.[44] Moreover, in the event of a small but permanent increase of 5–10 % in the price of a certain class of cement, the majority of customers that responded to the market investigation indicated that they would switch away all or some of their purchases from that type to another class within a 6 to 12 month period assuming that prices of other cement remained constant. As one customer put it, '*[a] certain percentage of our purchases would be switched to other classes of cement*'.[45]

6.1.3.3. Bagged versus bulk

(49) For the reasons set out in recitals (50) to (53), the Commission considers that the market for grey cement could be further segmented according to whether grey cement is sold bulk or bagged.

(50) First, such segmentation would be in line with the Commission's findings in past cases.[46]

(51) Second, a majority of customers and competitors that responded to the market investigation indicated that although producers of the bulk and bagged cement are usually the same, producers of bulk cement are unable to switch to the production of bagged cement without lead times to significantly adjust production process and incurring a significant investment.[47]

(52) Third, in the area comprising Germany, Belgium and the Netherlands, Holcim sells less than […]* % of its volumes as bagged cement,[48] whereas in Germany only approximately […]* % of Holcim's cement sales are of bagged cement.[49] Moreover, Cemex West does not manufacture or sell bagged grey cement.[50]

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44 See replies to question 11 – Phase II questionnaire to customers – cement.

45 See replies to question 9 – Phase II questionnaire to customers – cement, including also the following statements by other customers: *'Price increases for CEM III would lead us to switch about 50 % of our demand to CEM II'* and *'A price increase by 5-10% could make a switch from CEM I to CEM II economically sensible';* the German original of that last statement reads: *'Eine Preiserhöhung um 5-10 % könnte einen Wechsel von CEM I zu CEM II wirtschaftlich sinnvoll werden lassen*'.

46 See, for instance Commission's decision of 16 May 2011 in Case No COMP/M.6153 – ANGLO AMERICAN/LAFARGE/JV, paragraph 27; Commission's decision of 15 December 1999 in Case No COMP/M.1759 – RMC/RUGBY, paragraph 6; Commission's decision of 1 March 2001 in Case No COMP/M.2317 – Lafarge Blue Circle (II), paragraph 8.

47 According to competitors, '*switching requires investment*' and '*the production of bagged cement [requires] additional machinery like sagging equipment, a palletizing line and a dispatch facility as well as additional storage space, additional personnel and separate logistics*'; the German original of that last statement reads: '*die Sackzementherstellung [erfordert] zusätzliche maschinelle Einrichtungen wie Absack-, Palettier- und Versandanlagen, sowie zusätzliche Lagerräume, zusätzliches Personal und eine gesonderte Logistik*', see replies to question 7 - Phase I questionnaire to competitors. According to a customer a '*bagging line is costing several millions*', see replies to question 8 - Phase I questionnaire to customers.

48 Form CO, paragraph 130.

49 Holcim Southern Germany no longer sells bagged cement. See the original response to the Article 6(1)(c) decision.

50 Form CO, paragraph 130.

(53) Given, however, the absence of any overlap in bagged cement and the relative minor size of this segment (bagged cement represents no more than 7.5 % of the total amount of cement used in Germany[51]), it is not necessary to conclude on this point.

*6.1.4. Conclusion*

(54) For the purpose of the assessment of the Notified Transaction, the Commission considers that the relevant product market is the overall market for grey cement. As, however, the competitive assessment would not change even if a narrower market for bulk cement were considered, the exact product market definition can be left open.

## 6.2. Relevant geographic market

*6.2.1. Previous decisional practice*

(55) In past decisions, the Commission has considered that the grey cement market consists of a group of geographic markets centred on different cement plants, overlapping one another.[52]

(56) The scope of the relevant geographic markets was determined by the distance from the factory at which cement may be sold and that this distance may extend beyond national borders. For example, in one past case, the Commission defined the relevant geographic market to include the North-East of France, half of the northern Rhône-Alpes region, Belgium and the German regions bordering France.[53] In other decisions, the Commission found that the relevant geographic markets were most likely wider than national in scope while ultimately leaving this question open.[54]

*6.2.2. The Notifying Party's arguments*

(57) The Notifying Party submits that the relevant geographic markets for grey cement in this case should be defined as a cluster of overlapping circles defined by a 150 km or 250 km[55] radius around the Duisburg, Dortmund and Beckum plants of Cemex West.

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51 See Holcim’s reply to the Commission's request for information dated 28.10.2013, Question 22. This was supported by a customer that responded to the market investigation, which indicated that bagged cement accounts for only approximately 7 % of all cement sales. Agreed minutes of the call with a customer, 17.9.2013. This ratio is estimated to be higher in the neighbouring countries: 11 % in Belgium and 19.8 % in France. Holcim does not have information in this regard for the Netherlands. See Holcim’s reply to the Commission's request for information dated 28.10.2013, Question 22.

52 Commission’s decision of 6 July 1994 in Case No IV/M.460 – Holdercim/Cedest, paragraph 16; Commission’s decision of 16 December 1997 in Case No COMP/M.1030 – Lafarge/Redland, paragraph 16; Commission’s decision of 11 November 1998 in Case No COMP/M.1157 – Skanska/Scancem, paragraph 56; Commission’s decision of 1 March 2001 in Case No COMP/M.2317 – Lafarge/Blue Circle (II), paragraph 8; Commission’s decision of 8 December 2004 in Case No COMP/M.3572 – Cemex/RMC, paragraph 20; see also the antitrust Commission Decision of 30 November 1994, Cases IV/33.126 and 33.322 – Cement, OJ L 343, 30.12.1994, p. 11.

53 Commission’s decision of 6 July 1994 in Case No IV/M.460 - Holdercim/Cedest, paragraph 19.

54 Commission’s decision of 28 May 2004 in Case No COMP/M.3415 – CRH/SEMAPA/Secil JV, paragraph 17; Commission’s decision of 14 March 2005 in Case No COMP/M.3713 – Holcim/Aggregate Industries, paragraph 7; Commission’s decision of 7 August 2007 in Case No COMP/M.4719 – Heidelberg Cement/Hanson, paragraph 28; Commission’s decision of 15 February 2010 in Case No COMP/M.5771 – CSN/CIMPOR, paragraph 13; Commission’s decision of 16 May 2011 in Case No COMP/M.6153 – Anglo American/Lafarge/JV, paragraph 29.

55 Unless specified otherwise, all distances referred to in this Decision are geodesic distances or ‘as the crow flies.’

Both radii of circles include adjacent regions in the Netherlands and Belgium,[56] and in the case of the 250 km circles, also Luxembourg and parts of France.

(58) The Notifying Party puts forward the following elements in this respect.

(59) First, transportation costs play an important role, given that cement is a heavy product. In consequence, cement manufacturers try to sell as much volume as close as possible to their plants.[57] Transportation costs usually reduce the radius of supplies to 200–300 km around a plant in case of truck deliveries while longer distances may be commercially attractive in times of significant overcapacities of cement, reduced demand, or if a railway or water connection is available.[58]

(60) Second, defining the relevant geographic markets on the basis of radii of 150 km or 250 km is supported by the fact that Cemex West sells approximately [60-70]* % of its bulk grey cement within a radius of 150 km around its plants and approximately [90-100]* % within a 250 km radius around its plants.[59]

(61) In any event, the Notifying Party submits that the relevant geographic market can be left open in this case as no competitive concerns arise irrespective of the market definition applied.[60]

(62) The Notifying Party also submits that as Cemex West does not currently supply into all areas covered by circles drawn with those radii but only into certain parts of the circles,[61] a radius approach can serve only as a rough indicator of the competitive potential of a cement player around its own plant in the absence of more concrete data on actual supply areas around its plants.[62]

*6.2.3. The Commission's assessment*

(63) The Commission considers that the relevant geographic markets in this case should be defined as circular areas around the relevant cement plants, reflecting the distance up to which cement suppliers can economically sell cement. These markets should not be limited by national borders, in light of the significant cross-border trade flows, European cement standards and the views of respondents to the market investigation.

6.2.3.1. Appropriate radius of the circles

(64) For the reasons set out in recitals (65) to (70), the Commission considers that 150 or 250 km are the appropriate radii of the circles around Cemex West's and Holcim's plants in Germany, Belgium and north-eastern France.

(65) As a preliminary point, the distance to which grey cement can be economically shipped depends on the contribution margin before transport costs. The higher the contribution margin before transport costs (defined as the delivered price minus variable production costs), the longer the distance that cement can economically be shipped. Conversely, the higher the transport costs per km, the shorter the distances. Respondents to the market investigation indicated that transport costs are significant

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56 Form CO, paragraph 136.
57 Form CO, paragraph 430.
58 Form CO, paragraph 431.
59 Form CO, paragraph 138.
60 Form CO, paragraphs 141 and 142.
61 The original response to the Article 6(1)(c) decision, page 7.
62 The amended response to the Article 6(1)(c) decision, page 15.

in the sale of grey cement. The transport costs depend on a variety of factors, including the availability of transport infrastructure (such as highways, shipping routes, railways or storage terminals) and the landscape of the respective region.[63] The contribution margins before transport costs generally depend on the intensity of competition, in particular on the amount of overcapacities and whether firms set prices competitively or coordinate.

(66) First, Cemex West sells approximately [60-70]* % of its bulk grey cement within a distance of 150 km around its plants and approximately [90-100]* % within a distance of 250 km around its plants.

(67) Second, according to the study submitted by the Notifying Party on 27 January 2014 ('the economic study of 27 January 2014'), Holcim sells [90-100]* % of the aggregate grey cement volumes produced at its plants in Höver, Lägerdorf, Haccourt and Obourg over a distance of up to 170 km by road around the plants, equivalent to approximately 125 to 135 km linear distance.[64] The economic study of 27 January 2014 further indicated that transport costs for each additional road km are approximately [less than 10 EUR cent]* per tonne.[65] As discussed in detail in section 6.6.3.2, the level of the Parties' contribution margins suggests, however, that the distance up to which cement could economically be sold is likely higher than the actual transport distances observed.

(68) Third, respondents to the market investigation indicated that most volumes are sold at a distance of up to 150 km from the cement plant and that grey cement can also be economically transported over greater distances up to 250–300 km.[66]

(69) The Commission acknowledges that defining the relevant geographic markets as circles around a grey cement supplier's plant may lead to the inclusion of customers facing differing supply conditions, in particular a differing number of close-by supply alternatives.[67] For example, customers located in the southern part of a circle may face a higher number of suppliers than customers located in the northern part of that circle. Grouping together only customers facing similar supply conditions would, however, lead to the definition of many different geographic markets.

(70) The Commission therefore uses the approach of drawing circles around the Parties' plants which include the customers for which the respective plant is a potential source of supply. In any case, the fact that, within a given circle, customers may face differing supply conditions will be taken into account in the ensuing competitive

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63 See replies to question 9 – Phase I questionnaire to competitors and replies to question 8 – Phase I questionnaire to customers.

64 The economic study of 27 January 2014, page 29; the distances vary by plant: while [90-100]* % of the Höver volumes are sold over a distance of up to 210 km by road, [90-100]* % of the Obourg volumes are sold over a distance of up to 145 km by road. [90-100]* % of the Lägerdorf and Haccourt volumes are sold over a distance of up to 160 km by road, pages 29-33.

65 The economic study of 27 January 2014, page 34.

66 See replies to questions 9, 11 and 13 – Phase I questionnaire to competitors and replies to questions 10, 12 and 16 – Phase I questionnaire to customers; see also the more detailed information on supply sources and delivery areas in the replies to questions 15 and 16 – Phase II questionnaire to competitors – cement and the replies to questions 14 and 15 – Phase II questionnaire to customers – cement.

67 Due to transport costs, the supply alternatives of a grey cement customer depend on its location in relation to plants. Moreover, individual price negotiations with customers seem to be common in the grey cement markets. In such situations, cement suppliers can enter into price competition for each individual customer's business.

assessment. The Commission considers it pertinent to assess circles with different sizes, in particular circles with radii which include most actual customers of the respective plants (150 km in this case) as well as circles with larger radii which also include most potential customers (250 km in this case).

6.2.3.2. Role of national borders

(71) The Commission considers that relevant geographic markets should not be defined according to national borders in this case. There are a number of reasons why the relevant geographic markets for grey cement in this case are not confined to a particular national territory.

(72) First, there are significant trade flows of grey cement across the German, Dutch and Belgian borders in the regions under investigation, in particular from Germany into the western neighbouring Member States as well as from Belgium into the Netherlands and France.[68] Favoured by the availability and quality of raw materials[69] and the fact that production capacity exceeds local demand[70], grey cement suppliers in Germany and Belgium look for sales opportunities beyond their respective borders.

(73) Second, cross-border trade flows are facilitated by the fact that the grey cement used and sold within the Union is produced on the basis of the EU standard EN 197-1. The existing differences in national building regulations do not appear to play a significant role in preventing cross-border trade flows of grey cement.[71]

(74) Third, respondents to market investigation indicated that grey cement producers consider the entire circle around their plants as their actual and potential customer base, regardless of national borders.[72] For example, one competitor explained that '*Belgium, the Netherlands and North Rhine Westphalia can be considered as one market.*'[73]

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68 See the publications of the German industry association Verein Deutscher Zementwerke ('VDZ') according to which 21 % of German grey cement production was exported while 4.5 % of German grey cement consumption was imported in 2012, see http://www.vdz-online.de (data last retrieved on 4.4.2014); see also the publications of the Belgian industry association Febelcem, according to which 26 % of Belgian grey cement production was exported and 27 % of Belgian grey cement consumption was imported in 2012, see http://www.febelcem.be/ (data last retrieved on 4.4.2014).

69 According to the Notifying Party, there is a high number of grey cement producers in North Rhine-Westphalia due to the amount of raw material available, but also due to the geological quality of these raw materials. Form CO, paragraph 323.

70 The Notifying Party estimates the total installed grey cement capacity at 40 to 42 million tonnes ('mt') in Germany in 2012 compared with a grey cement consumption of 26.7 mt in 2012, see http://www.vdz-online.de/publikationen-branchendaten/zahlen-und-daten/tabellen/a3-zementabsatz-export-import-verbrauch/ (last retrieved on 4.4.2014); the Notifying Party estimates the total installed grey cement capacity in North Rhine-Westphalia at 11 mt in 2012 compared with a cement consumption of 4.6 mt in 2012, the amended response to the Article 6(1)(c) decision, page 47; Febelcem estimates Belgium's theoretical cement production capacity at 10 mt compared with Belgian cement consumption of 6.4 mt in 2012, http://www.febelcem.be/index.php?id=presentation-du-secteur&L=1 (last retrieved on 4.4.2014).

71 See replies to question 14 – Phase I questionnaire to competitors and replies to question 16 – Phase I questionnaire to customers; see replies to question 20 – Phase II questionnaire to competitors – cement and replies to question 19 – Phase II questionnaire to customers – cement.

72 See replies to question 9 – Phase I questionnaire to competitors and replies to question 15 – Phase II questionnaire to competitors – cement.

73 Agreed minutes of the call with a competitor, 25.2.2014.

(75) Fourth, this is also reflected in the Parties' internal documents. For example, the minutes of a 2011 meeting of the chief executive officers of Holcim subsidiaries from the so-called Western Europe area comment on the findings of a study undertaken by a consulting company: '*Europe Strategy Roadmap much uses country as basic unit analysis […] but strategy design should of course analyze more at regional level (e.g. [North Rhine-Westphalia + Benelux] as single market)*'.[74] Similarly, Cemex states in one of its internal documents of 2012: '*Market [North Rhine-Westphalia] and Benelux are to be considered as one unit*'[75] and illustrates its view on the relevant markets for its Cemex West plants in the following way:


**Figure 3 Description of cement markets in a Cemex' internal document**[76]

*6.2.4. Conclusion on the geographic market definition*

(76) Therefore the Commission concludes that the relevant geographic markets for grey cement should in this case be defined as areas of radii of 150 or 250 km around the Parties' plants in Germany, Belgium and north-eastern France.

(77) The 150 km cluster around the Cemex West plants roughly corresponds to the territory of North Rhine-Westphalia, stretching into some neighbouring territories (such as neighbouring Federal German States, eastern Belgium and south-eastern Netherlands).

(78) The 250 km cluster around the Cemex West plants roughly corresponds to the territory of the Federal German States of North Rhine-Westphalia, Lower Saxony,

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74 Holcim internal document 'Minutes: Area DO CEO Meeting 4.5.2011'.

75 The German original reads '*Markt [Nordrhein-Westfalen] und Benelux ist als Einheit zu sehen'*, Cemex internal document entitled 'Vertriebstagung Zement', 22–23.11.2012, page 39.

76 Cemex' internal document entitled 'Commercial supply chain & logistics', 12.9.2012, slide 5.

Hesse, Saarland and Rhineland-Palatinate, as well as Belgium, Luxembourg, and the Netherlands and, to a limited extent, Northern France.

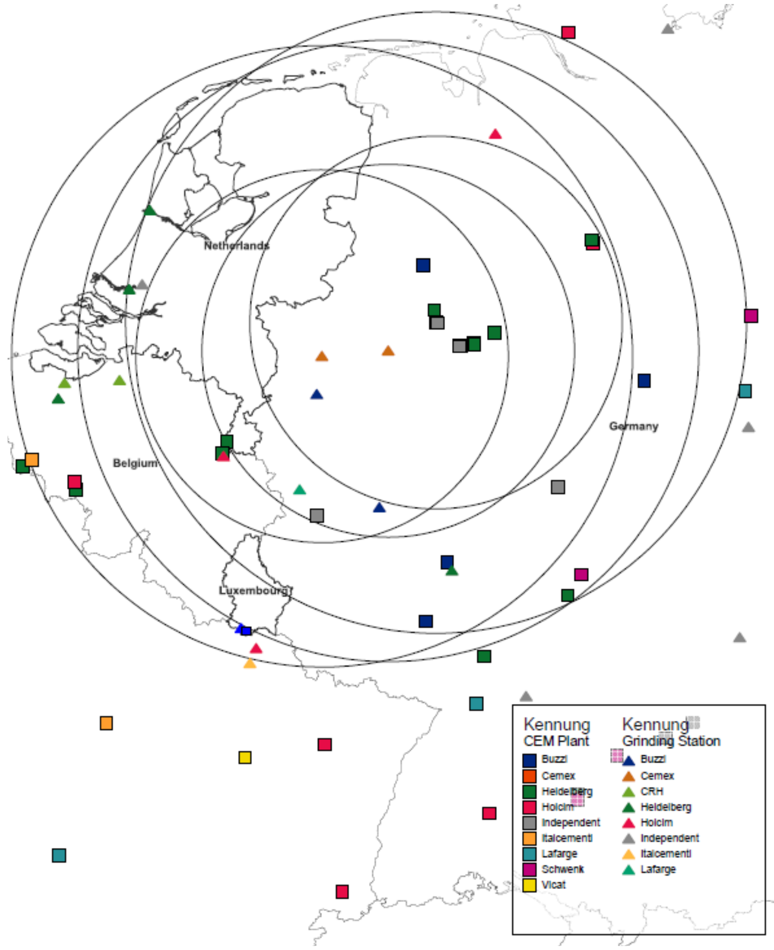


**Figure 4 The 150 km and 250 km clusters around Cemex West**[77]

## 6.3. The competitive landscape

### *6.3.1. The Parties' activities*

(79) Both Parties are active in the production and supply of grey cement.

(80) The grey cement production facilities of Cemex West are concentrated in North Rhine-Westphalia where it operates an integrated cement plant in Beckum and two grinding stations in Duisburg/Schwelgern and Dortmund.

(81) The Holcim grey cement production facilities closest to those of Cemex West are located in northern Germany and in Belgium.[78] Holcim operates two integrated

[77] Form CO, Annex 12.

[78] As regards Holcim's business in France, the Notifying Party submits that as Holcim does not import grey cement into North Rhine-Westphalia from its plant at Héming (France), there is no direct overlap with Cemex West. Holcim does supply some customers in the centre and south of Germany from Heming in an area that could partially overlap with the southern part of the 250 km cluster. The Heming sales into Germany amounted only to […]* kilo tonnes ('kt') in 2012. The Commission notes that even if one were to hypothetically allocate this volume fully to the 250 km cluster, only an additional [0-

cement plants in Lower Saxony (in Lägerdorf and Höver) and one in Belgium (in Obourg). In addition it operates one grinding station in Bremen and one blending station in Belgium (in Antwerp).[79]

(82) Holcim is also active in southern Germany through its integrated plant in Dotternhausen. Its activities in southern Germany are, however, mostly confined to Baden-Wuerttemberg.[80]

*6.3.2. Other suppliers and their production facilities*

(83) In addition to the Parties, several competitors are active in the production and supply of grey cement close to the Cemex West production facilities in Germany, in the 150 km and 250 km clusters.

(84) In North Rhine-Westphalia, these include 'international' players such as HeidelbergCement Group ('Heidelberg') and Dyckerhoff GmbH ('Dyckerhoff', belonging to the Buzzi Unicem group) with integrated plants.[81] In addition, 'regional' players[82] such as Spenner Zement GmbH & Co. KG ('Spenner'), Portlandzementwerk Wittekind Hugo Miebach Söhne KG ('Miebach'), Portland-Zementwerke Seibel & Söhne GmbH & Co. KG ('Seibel & Söhne'), Phoenix Zementwerke Krogbeumker GmbH & Co. KG ('Phoenix') and Portland-Zementwerke Gebrüder Seibel GmbH & Co. KG ('Gebrüder Seibel') also operate out of North Rhine-Westphalia. Portlandzementwerk Wotan H. Schneider KG ('Wotan'), another regional supplier, is located in Rhineland-Palatinate, just to the south of North Rhine-Westphalia and as such within the 150 and 250 km clusters.

(85) Some of the competitors' plants are within 60 km by road of Cemex West's clinker plant in Beckum and not much further away from the grinding station in Dortmund. In particular, the integrated plant of Phoenix is located in Beckum and Heidelberg operates from Ennigerloh, near Beckum.[83] There are also four integrated plants (Spenner, Miebach, Seibel & Söhne, Gebrüder Seibel) clustered in Erwitte.[84] Two plants are in Geseke (Dyckerhoff, Heidelberg),[85] and one is in Paderborn (Heidelberg).[86]

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5]* % market share would result. Flows from France to Belgium are also marginal (roughly […]* kt of bulk cement and […]* kt of bagged cement) and therefore irrelevant.

79 Holcim also previously operated a grinding station in Haccourt, Belgium. The facility was, however, closed in January 2014. See Form CO, paragraph 144 and Holcim's reply to question 4 of the Commission's request for information of 25.4.2014,

80 Holcim's German business has traditionally been split between a northern region (Holcim Germany, mostly covering Schleswig-Holstein, Lower Saxony, Mecklenburg-Western Pomerania as well as Bremen and Hamburg) and a southern region ('Holcim Southern Germany') mostly confined to Baden-Wuerttemberg. These businesses are currently run by separate legal entities – Holcim (Deutschland) AG and Holcim (Süddeutschland) GmbH respectively. They also have independent management structures reporting directly to Holcim Ltd. Form CO, paragraphs 107-108.

81 Another international player, Lafarge is also present in Germany. In North Rhine-Westphalia, however, Lafarge does not have an integrated cement plant, only a grinding station in Sötenich.

82 Regional suppliers which are usually mid-sized family firms not belonging to a larger international group. Regional players are sometimes called 'independents' by market players.

83 Ennigerloh is ca. 13 road km from Beckum.

84 Erwitte is ca. 37 road km from Beckum.

85 Geseke is ca. 43 road km from Beckum.

86 Paderborn is ca. 78 road km from Beckum.

(86) In the Netherlands, Heidelberg operates an integrated cement plant through its subsidiary ENCI in Maastricht.[87]

(87) In the whole of Belgium there are only two integrated grey cement plants in addition to Holcim's: the first operated by Cimenteries CBR (Heidelberg) in Lixhe, close to Liège[88] and the second operated by CCB (Italcementi group) in Gaurain (close to Tournai). In addition, VVM NV (part of the CRH group)[89] ('VVM/CRH') runs two grinding station in Belgium, one in Ghent and one in Antwerp. Cimalux (a subsidiary of Dyckerhoff) runs a 'quasi' integrated plant in Luxembourg, that is to say Cimalux produces clinker in Rumelange and grey cement in Esch-sur-Alzette which are only ca. 7 road km away from each other.[90]

(88) The locations of cement production facilities in and around North Rhine-Westphalia are shown in Figure 5.

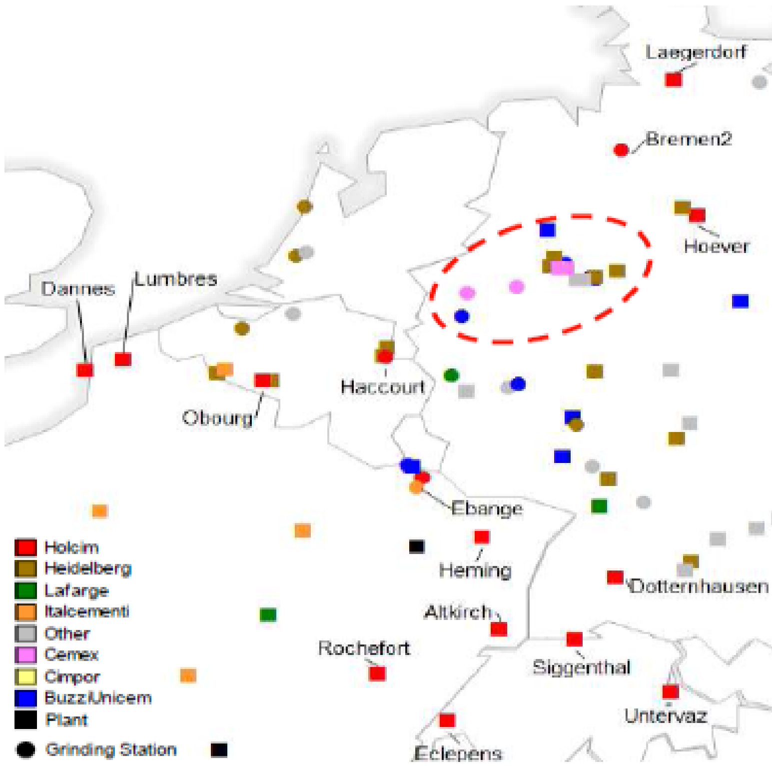


**Figure 5 Grey cement production facilities. The cement facilities of Cemex West are within the dotted line.**[91]

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87 Maastricht is approximately 230 road km from Beckum. ENCI will cease clinker production in 2019; see http://www.heidelbergcement.com/benelux/nl/enci/ about_us/plant+maastricht/index.htm (last retrieved on 4.4.2014).

88 CBR also runs a clinker kiln in Antoing and a grinding station in Ghent. CBR's Harmignies plant produces only white cement.

89 VVM NV belongs to the Irish group CRH and operates two cement grinding stations in Belgium, one in Ghent and one in Antwerp, as well as a cement importation terminal in Ghent. Agreed minutes of the call with a competitor, 25.2.2014.

90 http://www.cimalux.lu/online/fr/Accueil/Entreprise.html (last retrieved on 4.4.2014).

91 The Notifying Party's internal document entitled 'Value creative portfolio adjustments in Europe', 25.9.2013, slide 5.

### 6.4. Market shares and market structure

(89) The market shares of the Parties and their main competitors for the 150 km and 250 km clusters are set out in the Tables 2 and 3.

**Table 2: Market shares for grey cement (2012 figures) 150 km cluster**[92]

| Suppliers | Overall Sales[93] (tonnes) | Overall Share (%) | Market Sales[94] (tonnes) | Market Share (%) |
|---|---|---|---|---|
| Holcim | […]* | [5-10]* | […]* | [5-10]* |
| Cemex West | […]* | [10-20]* | […]* | [10-20]* |
| **Combined** | **[…]*** | **[20-30]*** | **[…]*** | **[10-20]*** |
| Heidelberg | **[…]*** | [10-20]* | **[…]*** | [10-20]* |
| Miebach | **[…]*** | [10-20]* | **[…]*** | [10-20]* |
| Spenner | **[…]*** | [10-20]* | **[…]*** | [5-10]* |
| Dyckerhoff | **[…]*** | [5-10]* | **[…]*** | [5-10]* |
| Seibel & Söhne | **[…]*** | [5-10]* | **[…]*** | [5-10]* |
| Gebrüder Seibel | **[…]*** | [5-10]* | **[…]*** | [5-10]* |
| Phoenix | **[…]*** | [0-5]* | **[…]*** | [5-10]* |
| Lafarge | **[…]*** | [0-5]* | **[…]*** | [0-5]* |
| Schwenk | **[…]*** | [0-5]* | **[…]*** | [0-5]* |
| Italcementi | **[…]*** | [0-5]* | **[…]*** | [0-5]* |
| Other | **[…]*** | [10-20]* | **[…]*** | [0-5]* |
| *Total* | *9 138 820* | *100* | *6 291 547* | *100* |

**Table 3: Market shares for grey cement (2012 figures) 250 km cluster**[95]

| Suppliers | Overall Sales (tonnes) | Share (%) | Market Sales | Share (%) |
|---|---|---|---|---|
| Holcim | […]* | [10-20]* | […]* | [10-20]* |
| Cemex West | […]* | [5-10]* | […]* | [5-10]* |
| **Combined** | **[…]*** | **[20-30]*** | **[…]*** | **[20-30]*** |
| Heidelberg | **[…]*** | [10-20]* | **[…]*** | [10-20]* |
| Dyckerhoff | **[…]*** | [5-10]* | **[…]*** | [5-10]* |
| Miebach | **[…]*** | [0-5]* | **[…]*** | [5-10]* |
| Spenner | **[…]*** | [0-5]* | **[…]*** | [0-5]* |
| Schwenk | **[…]*** | [0-5]* | **[…]*** | [0-5]* |
| Seibel & Söhne | **[…]*** | [0-5]* | **[…]*** | [0-5]* |
| Gebrüder Seibel | **[…]*** | [0-5]* | **[…]*** | [0-5]* |
| Phoenix | **[…]*** | [0-5]* | **[…]*** | [0-5]* |
| Italcementi | **[…]*** | [0-5]* | **[…]*** | [0-5]* |
| Lafarge | **[…]*** | [0-5]* | **[…]*** | [0-5]* |
| VVM | **[…]*** | [0-5]* | **[…]*** | [0-5]* |
| Espabel | **[…]*** | [0-5]* | **[…]*** | [0-5]* |
| Cemex East | **[…]*** | [0-5]* | **[…]*** | [0-5]* |
| Other | **[…]*** | [20-30]* | **[…]*** | [10-20]* |
| *Total* | *20 842 524* | *100* | *13 895 016* | *100* |

92 Form CO, paragraph 317.
93 Overall sales: market shares based on total 'consumption'
94 Market sales: sales to third parties
95 Form CO, paragraph 317.

## 6.5. Competitive assessment - non-coordinated effects

### *6.5.1. Analytical framework*

(90) Effective competition brings benefits to consumers, such as low prices, high quality products, a wide selection of goods and services, and innovation. Through its control of mergers, the Commission prevents mergers that would be likely to deprive customers of these benefits by significantly increasing the market power of firms.[96]

(91) Eliminating a potential competitor can have similar anti-competitive effects as eliminating an actual competitor, in particular if the potential competitor significantly constrains the behaviour of the firms active in the market by possessing assets that could easily be used to enter the market without incurring significant sunk costs. Two basic conditions must be fulfilled for a merger with a potential competitor to have significant anti-competitive effects. First, the potential competitor must already exert a significant constraining influence or there must be a significant likelihood that it would grow into an effective competitive force, for instance by having plans to enter a market. Second, there must not be a sufficient number of other potential competitors, which could maintain sufficient competitive pressure after the merger.[97]

### *6.5.2. The Notifying Party's arguments*

(92) The Notifying Party submits that the Notified Transaction will not significantly impede effective competition in the markets for grey cement within the 150 and 250 km clusters around the Parties' cement production facilities in Germany, Belgium and north-eastern France due to non-coordinated effects.

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96 Guidelines on the assessment of horizontal mergers under the Council Regulation on the control of concentrations between undertakings, OJ C 31, 5.2.2004, p. 5, ('Horizontal Merger Guidelines'), paragraph 8.

97 Horizontal Merger Guidelines, paragraphs 58-60.


**Figure 6 Overlaps between Cemex West and Holcim plants (150 km and 250 km circles)**[98]

(93) First, the activities of the Parties are geographically complementary. Holcim's sales into the 150 km cluster around Cemex West are limited and mainly concentrate on the peripheries of the cluster. With regard to the 250km cluster, Holcim's sales were not directed into Cemex West's core markets (North Rhine-Westphalia and the Netherlands).

(94) Second, the Notifying Party submits that there are more than 22 cement suppliers operating 54 cement plants in Germany, with the result that the Parties face numerous national and international competitors as well as a significant number of regional suppliers. International players include Holcim, Heidelberg, Dyckerhoff, Lafarge, Schwenk and Cemex (including both its western German assets and its residual German business which is not part of the Notified Transaction, hereinafter 'Cemex East'). In addition, the Parties compete with regional suppliers active in western Germany (and thus in the 150 km and 250 km clusters) including Spenner, Miebach, Seibel & Söhne, Phoenix, Wotan and Gebrüder Seibel.

[98] Form CO, Annex 12.

(95) Therefore, in both the 150 km and the 250 km clusters, the Parties will, post-transaction, continue to compete with some of the largest international grey cement suppliers as well as with a number of '*particularly active entrepreneurial*' regional players. The competitive pressure exercised by the regional players operating out of North Rhine-Westphalia is comparable to that of the international players.[99]

(96) In support of both these claims, the Notifying Party relies on the economic study of 27 January 2014 which purports to show only a limited overlap between the Parties' plants in terms of geographic area and that a sufficient number of alternative suppliers will remain post-transaction.

(97) The study defines circles, so-called isochrones, around Cemex West's (Beckum and Schwelgern in this case) and Holcim's (Bremen, Haccourt[100], Höver, Lägerdorf and Obourg) plants of a road distance of 170 km, which is argued to correspond to a geodesic distance of approximately 125–130 km. According to the economic study of 27 January 2014, [90-100]* % of Holcim customers are located within the isochrones around the Holcim plants.

(98) Those isochrones result in essentially two overlap areas between Cemex West and the relevant Holcim plants:

(1) Overlap with Holcim's Belgian plants.[101]

(2) Overlap with Holcim's Höver and Bremen[102] plants.[103]

(99) The economic study of 27 January 2014 argues first that overall only [10-20% – 30-40%]* (depending on the year) of sales of the relevant Holcim and Cemex West plants were sold in the overlapping areas.

(100) Second, the economic study of 27 January 2014 investigated the number of available suppliers for customers within these overlapping areas on the basis of 'representative customers'.[104] In doing so, suppliers within a road distance of 170 km, or correspondingly geodesic distance of approximately 125-130 km, were assumed to be available suppliers. According to the study, on the basis of the isochrones approach, the number of suppliers would be reduced to three or four post-transaction for only a limited number of customers.[105] All other 'representative customers' would have at least six suppliers remaining post-transaction.

(101) Third, the economic study of 27 January 2014 analysed how much further away the next closest supplier is from the isochrones and computed the associated additional transport cost to a potential price increase in response to the Notified Transaction. As an alternative test, it analysed the additional distance, and thus potential price increase, of reaching the next closest supplier within the 170 km road distance radius

99 Form CO, paragraph 342.

100 The Commission notes, though, that production at Haccourt ceased in January 2014. Cf. footnote 79.

101 The overlap area includes essentially the German territories west of the Rhine downstream from Koblenz as well as the neighbouring Belgian-Dutch territories east of the Liege-Tilburg-Nijmegen line.

102 Under the approach of the economic study of 27 January 2014, there is no overlap with Lägerdorf.

103 It mainly consists of the Ostwestfalen-Lippe region and the neighbouring western/north-western territories in Lower Saxony. (Ostwestfalen-Lippe is a region in the German state of North Rhine-Westphalia.)

104 The economic study of 27 January 2014 uses customers from the centre, north, south, west and east of the overlap regions as representative customers.

105 Out of the representative customers, only those in Meppen and Vechta, both in Southern Lower Saxony.

when a plant of the Parties is eliminated as a supplier. The study argues that for most customers, the price increase implied by the additional transport cost to reach a more distant supplier would be small under both tests.

(102) Fourth, the economic study of 27 January 2014 analysed the relationship between price and concentration based on the Parties' transaction data between 2009 and 2012. The economic study of 27 January 2014 draws from that data that a customer's price would not change significantly in response to the elimination of one supplier as long as there are more than five alternative suppliers within a road distance of 170 km from the customer. Moreover, as most customers covered by the economic study of 27 January 2014 would have at least six suppliers post-transaction, no significant price effect is likely overall.

(103) The economic study of 27 January 2014 concludes that there is only a limited regional overlap between the actual sales of the Cemex West and Holcim plants. Most customers in the overlap regions would have so many alternative suppliers post-transaction that on balance the potential unilateral price increases due to the Notified Transaction are expected to be insignificant.

*6.5.3. The Commission's assessment*

(104) For the reasons set out in recitals (105) to (124), the Notified Transaction is unlikely to significantly impede effective competition in the markets for grey cement within the 150 km and 250 km clusters around the Cemex West plants due to non-coordinated effects.

6.5.3.1. Assessment within the 150 km and 250 km clusters around the Cemex West plants

(105) For the reasons set out in recitals (106) to (113), the merged entity will, post-transaction, face competition from a number of competitors within the 150 km and 250 km clusters around the Cemex West plants.

(106) First, in the 150 km cluster, the Parties' combined 2012 market share was [10-20]* %, followed by Heidelberg ([10-20]* %) and Miebach ([10-20]* %). As can be seen from Table 2, several other competitors (Spenner, Dyckerhoff, Seibel & Söhne, Gebrüder Seibel and Phoenix) are active in the cluster, each with a 2012 share in excess of 5 %.

(107) Second, in the 250 km cluster, the Parties' combined 2012 market share was [20-30]* %, followed by Heidelberg ([10-20]* %) and Dyckerhoff ([5-10]* %). Moreover, as can be seen from Table 3, several other competitors (Miebach, Spenner, Schwenk, Seibel & Söhne, Gebrüder Seibel and Phoenix) are active in this area with appreciable market shares. Moreover, there are additional plants, partly owned by different players supplying this market (see recitals (83)–(88)).

(108) Third, in North Rhine-Westphalia, the centre of the 150 km and 250 km clusters, competitors operate a total of ten integrated cement plants. Both competitors and customers responding to the market investigation confirmed that a number of grey cement suppliers compete out of North Rhine-Westphalia.[106] For instance, according to a competitor, *'[i]n North-Rhine-Westphalia, competition is more severe than elsewhere due to the relatively large number of small and medium sized cement*

[106] See replies to question 20 - Phase II questionnaire to customers – cement.

*producers*.'[107] Similarly, another customer indicated that there are '*many producers in the region*'.[108] Of the competitors, a number are located in the immediate vicinity of Cemex West's integrated plant in Beckum. Therefore, those competitors have comparable transport costs and could thus exercise a comparable competitive pressure.[109]

(109) Fourth, the fact that the merged entity will, post-transaction, continue to face competition from a number of competitors within the 150 km and 250 km clusters around the Cemex West plants was confirmed by internal documents of the Parties. For example, a Holcim strategy document describes North Rhine-Westphalia as *'a highly fragmented area with 4 major players and several independents*'[110] As regards the grey cement market in the area comprising the Benelux countries and North Rhine-Westphalia, Holcim refers to a *'structural overcapacity […] and a large number of actors (among which independent actors)*'.[111] Cemex describes its 'core market' (that is to say North Rhine-Westphalia plus the Netherlands) as having '*high competitive dynamics*'.[112]

(110) Fifth, several suppliers have recently entered the 150 km and 250 km clusters around the Cemex West plants or have added capacity. Respondents to the market investigation identified Espabel NV ('Espabel')[113], VVM/CRH and Lagan Cement B.V. ('Lagan')[114] as recent entrants.[115] Holcim's internal documents also refer to

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107 Agreed minutes of the call with a competitor, 26.9.2013. According to another competitor, '*[I]n the North-Rhine Westphalia region there are many players present*.' Agreed minutes of the call with a competitor, 17.9.2013. '*The competition in the cement market in [North Rhine-Westphalia is very strong*', the German original reads: '*Der Wettbewerb im Zementmarkt in [Nordrhein-Westfalen] ist sehr stark*.', agreed minutes of the call with a competitor, 12.2.2013. '*The competition in the cement market in [North Rhine-Westphalia] is to be considered as particularly strong*', the German original reads: *'Der Wettbewerb im Zementmarkt in [Nordrhein-Westfalen] ist als besonders stark zu bezeichnen*.', agreed minutes of the call with a competitor, 11.2.2014.

108 See replies to question 50.3 - Phase II questionnaire to customers – cement. A third customer indicated that: ‚*In western Germany there are the most cement production plants in Germany with an established market position*', the German original reads: '*In Westdeutschland gibt es die meisten Zementwerke in Deutschland, mit einer gestandenen Marktposition.*', see replies to question 50.3 - Phase II questionnaire to customers – cement.A fourth customer said that *'competition in the cement business historically used to be fierce in Western Germany,*' agreed minutes of the call with an anonymous customer, 20.10.2013.

109 See recital (85).

110 Holcim internal document 'Western Europe' page 15.

111 Holcim internal document 'Holcim Belgium – Netherlands, Strategic Plan 2010 - 2014', page x. Also: Holcim internal document 'Vertical Integration Strategy Belgium, Seering Committee Meeting 1, 4.9 2009' page 52: '*It is estimated that the cement production suffers an overcapacity of approximately 40 % in the area North Rhine-Westphalia - Benelux. This situation is exacerbated by the presence of small independent actors*'.

112 Cemex internal document 'Commercial, supply chain & logistics', 8 May 2013.

113 Espabel is a Spanish-Belgian joint-venture which opened its grinding station at the port of Gent in 2012. Agreed minutes of the call with a competitor, 24.9.2013. On 22 January 2014, Heidelberg announced its intention to acquire Espabel.

114 Lagan imports cement from the Lagan Group 's cement plant in Ireland to its terminal in Terneuzen, the Netherlands. From the terminal, it sells cement mostly to Belgium and also to the Netherlands and Northern France. Agreed minutes of the call with a competitor, 28.2.2014.

115 *'Espabel is a recent entrant to the Belgian cement market'* and *'a new competitor called Lagan has also started operations in Belgium and is selling cement imported from Ireland via the Terneuzen harbour that is located very close to the Belgian border in the Netherlands.'* agreed minutes of the call with a competitor, 25.2.2014.

*'soaring pressure*' from those '*new coastal market players*'.[116] Furthermore, Spenner, a competitor in North Rhine-Westphalia, recently added capacity with the opening of a grinding station in Duisburg[117] with an initial capacity of 200 000 tonnes of granulated blast furnace slag, to be expanded to 300 000 tonnes as from 2015.[118]

(111) Sixth, customers do not see any major difference between Holcim and Cemex West on the one hand and regional competitors on the other hand in terms of quality, reliability and prices.[119]

(112) Seventh, respondents to the market investigation indicated that effective competition is unlikely to be significantly impeded by the Notified Transaction, in particular because Holcim has so far been present only to a limited extent in North Rhine-Westphalia.[120] According to one competitor, the Notified Transaction will mean '*[j]ust a [different] name on the door*' and it '*would remain of little effect, as one big player would simply be replaced by another*'.[121] According to a customer, '*We do not see any risk through Holcim's acquisition of the Cemex West plants (ready-mix, cement etc.) of a dominant position of Holcim in Western Germany or in Germany in general*'.[122]

(113) Eighth, while the economic study of 27 January 2014 is based on several assumptions that appear to be unrealistic,[123] on balance, the results appear plausible and do not point to likely unilateral price increases as a result of the Notified Transaction.

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116 Holcim internal document 'Strategy options France/ Benelux' slide 8.

117 Production in the new grinding station started in 2014. http://www.spenner-zement.de/news (last retrieved 25.4.2014).

118 *'In addition to new market entrants, Spenner is presently constructing a grinding station at the steel works of HKM in Germany. The new facility will have an effect on the cement market in the Benelux countries, and VVM has already noticed that Spenner has started to look for new customers and more volume for their CEM III that contains slag.'* Agreed minutes of the call with a competitor, 25.2.2014.

119 See replies to question 21 - Phase I questionnaire to customers.

120 '*[I]n spite of the disappearance of another independent competitor [there are] still a number of regional competitors present [in North Rhine-Westphalia]*', the German original reads: '*[T]rotz des Wegfalls eines weiteren unabhängigen Wettbewerbers [sind in Nordrhein-Westfalen] immer noch einige mittelständische Anbieter vorhanden.*', agreed minutes of the call with a customer, 4.12.2013. '*Holcim is hardly active there, only an insignificant change to the competitive situation in a limited region*', the German original reads: *'Holcim ist dort kaum aktiv, nur unwesentliche Änderung der Wettbewerbssituation in einer begrenzten Region'*; *'one producer and supplier is replaced by another one'*,see replies to question 50.3 - Phase II questionnaire to customers – cement.

121 See replies to question 41 - Phase II questionnaire to competitors – cement and agreed minutes of the call with an anonymous competitor, 1.10.2013. One competitor indicated that it was '*not much concerned about the proposed transaction. The existing plants in western Germany would simply change owner. An impact on supply volumes seems rather unlikely*.' Agreed minutes of the call with a competitor, 26.9.2013.

122 See comments by a customer, email of 9.1.2014; the German original reads: *'Wir sehen im Erwerb der Cemex Werke (Transportbeton, Zement etc.) in Westdeutschland durch Holcim keine Gefahr einer marktbeherrschender Position von Holcim in Westdeutschland oder Deutschland im Allgemeinen.*'

123 For example, representative customers are identified only within overlapping regions of 130 km of the Parties' plants. Although this cut-off is based on the distribution of actual sales, it is not necessarily appropriate as potential customers located further away may nevertheless benefit from the competitive constraints imposed by the plants of the Parties.

6.5.3.2. Assessment within the 150 km and 250 km clusters around Holcim's northern German plants

(114) Holcim has a relatively strong position in the clusters around Holcim's northern German plants in Bremen, Höver and Lägerdorf.[124]

(1) Under the 150 km radius geographic market definition, Holcim's 2012 market share was [40-50]* % around Bremen, [50-60]* % around Lägerdorf and [20-30]* % around Höver.

(2) Under the 250 km radius geographic market definition, Holcim's 2012 market share was [20-30]* % around Bremen, [30-40]* % around Lägerdorf and [10-20]* % around Höver.

(115) For the reasons set out in recitals (116) to (119), however, it is unlikely that the Notified Transaction will lead to the elimination of an important actual or potential competitor in those clusters.[125]

(116) First, with regard to the current sale overlaps of the Parties, these are mainly in the areas in northern and eastern North Rhine-Westphalia (Cemex West) and in Bremen and southern Lower Saxony (Holcim). In those regions the combined market share remains low and a number of alternative suppliers exist.[126]

(117) Second, the majority of customers located in the areas of northern Germany where the activities of the Parties overlap and which responded to the market investigation did not indicate that the Notified Transaction would eliminate an important potential competitor.[127] Those customers also indicated that, in addition to larger competitors such as Heidelberg and Dyckerhoff, a number of regional competitors are active in those areas, including companies such as Spenner, Seibel & Söhne and Miebach.[128]

(118) Third, Cemex West is not a strong actual or potential competitor in Lower Saxony.[129] Cemex West currently supplies less than […]* kilo tonnes ('kt') into the area comprising Lower Saxony and Bremen and Hamburg.[130] Moreover, in its review of internal Cemex West documents, the Commission did not find any indication that Cemex West had any specific plans to increase its activities in northern Germany.

(119) Finally, with regard to other areas of northern Germany, namely Schleswig-Holstein and Mecklenburg-West Pomerania, these are outside the 250 km cluster around the Cemex West plants. Customers located in those areas are supplied from […]* in order to fully use the capacity available there and because of better transport possibilities. According to Cemex, that will […]*. That view on the competitive

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[124] See Holcim's reply to the Commission's request for information of 6.2.2014, Annex 14.1.

[125] There are also overlapping areas with regard to Holcim Southern Germany's Dotternhausen plant in Baden-Wuerttemberg and Holcim's Heming plants in France. Holcim Southern Germany sells, however only to Baden-Wuerttemberg and Bavaria, where Cemex West's sales are negligible. Cemex West was also not identified as a potential competitor for southern Germany customers. Moreover, as regards Holcim's Heming plants in France, there are no deliveries from there to any parts of Germany where Cemex is active (Cf. footnote 78). French customers also did not identify Cemex West as a current or potential competitor for deliveries into France.

[126] Dyckerhoff and Heidelberg have plants in the area and essentially wherever Cemex West is active, also the nearby Mittelständler Miebach, Seibel & Söhne, Gebrüder Seibel, Spenner, Phoenix are.

[127] See replies to question 50 - Phase II questionnaire to customers – cement.

[128] See replies to question 20 - Phase II questionnaire to customers – cement.

[129] Cemex internal document 'Commercial, supply chain & logisics', 8.5.2013.

[130] See Cemex' reply to the Commission's request for information dated 28.10.2013.

situation in those areas was broadly confirmed by competitors responding to the market investigation.[131] A number of northern German customers that responded to the market investigation also explained that they are currently buying, or are considering buying, grey cement from […]* rather than from […]*.[132] In addition, those customers identified only Dyckerhoff as a recent entrant in those areas and did not identify Cemex West as a potential entrant.

6.5.3.3. Assessment within the 150 km and 250 clusters around Holcim's Obourg plant in Belgium

(120) Holcim has a [10-20]* % market share in the 150 km cluster around its Belgian Obourg plant. The market leader in this cluster is Heidelberg with [30-40]* %. Although Holcim did not supply market share data with regard to the 250 km cluster around Obourg, the Commission notes that within this cluster, apart from western North Rhine-Westphalia the main overlaps concern the territories of Belgium[133], the southern parts of the Netherlands[134] and Luxembourg[135]. In addition, there are also some limited overlaps with France's north-eastern border region.[136]

(121) For the reasons set out in recitals (122) to (124), it is unlikely that the Notified Transaction will lead to the elimination of an important actual or potential competitor in the 150 km and 250 clusters around Holcim's Obourg plant in Belgium.

(122) First, Cemex West has limited sales into Belgium (approximately […]* kt per annum), and Cemex West does not have any sales to France or Luxembourg.

(123) Second, as regards potential competition, in its review of internal Cemex West documents, the Commission did not find any indication that Cemex West had any specific plans to increase its activities in Belgium, France or Luxembourg. Moreover, the majority of customers responding to the market investigation did not indicate that the Notified Transaction would eliminate an important potential competitor.[137]

(124) Third, Holcim's internal documents assessing the competitive landscape in those areas do not identify Cemex West as a competitive force. Rather, they highlight other competitors, including recent entrants in Belgium, such as Lagan and Espabel as challengers in those areas.[138] Certain competitors responding to the market

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131 *'With the acquisition of Cemex West, Holcim does not eliminate a potential competitor for northern Germany because Cemex is currently supplying the North from its eastern German plant (Eisenhüttenstadt and Rüdersdorf).'* Agreed minutes of the call with an anonymous competitor, 1.10.2013.

132 See replies to questions 14, 20, 35 - Phase II questionnaire to customers – cement.

133 With regard to Belgium, the Parties’ combined 2012 market share was [20-30]* %, with Heidelberg as the market leader with [30-40]* %. CCB/Italcementi had [10-20]* % and VVM [5-10]* %.

134 The Parties’ combined 2012 market share was [10-20]* % in the Netherlands, with Heidelberg as the market leader. Other players such as Dyckerhoff are also active in the Netherlands.

135 Only Holcim is active in Luxembourg with 2012 [0-5]* % market share.

136 While Holcim is the main player in this area with a market share of [40-50]* % in the three regions bordering Switzerland, Germany and Luxembourg (Alsace, Lorraine and Franche-Comté), Cemex West has no sales in France.

137 This view was shared by competitors that responded to the market investigation: *'the proposed transaction between Holcim and Cemex is not likely to result in significant market changes in the Benelux countries'*, Agreed minutes of the call with a competitor, 25.2.2014.

138 See recital (110).

investigation also pointed to the fact that future pressure from coastal players importing clinker or cement cannot be excluded.[139]

*6.5.4. Conclusion on non-coordinated effects*

(125) It is unlikely that the Notified Transaction will significantly impede effective competition in the various geographic markets for grey cement defined by circles with radii of 150 km or 250 km drawn around the Parties' cement production facilities in Germany, Belgium and north-eastern France due to non-coordinated effects.

## 6.6. Competitive assessment - Coordinated effects

*6.6.1. Framework of assessment*

(126) According to the Horizontal Merger Guidelines[140], horizontal mergers may significantly impede effective competition, in particular by creating or strengthening a dominant position by changing the nature of competition in such a way that firms that previously were not coordinating their behaviour, are now significantly more likely to coordinate and raise prices or otherwise harm effective competition. A merger may also make coordination easier, more stable or more effective for firms which were coordinating prior to the merger (coordinated effects).[141]

(127) In some markets the structure may be such that firms would consider it possible, economically rational, and hence preferable, to adopt on a sustainable basis a course of action on the market aimed at selling at increased prices through a coordination of their behaviour.[142] Coordination may take various forms, such as setting prices above the competitive level, limiting production or capacity, or dividing the market, for instance by geographic area or other customer characteristics, or by allocating contracts in bidding markets.[143]

(128) Coordination is more likely to emerge in markets where it is relatively simple to reach a common understanding on the terms of coordination. In addition, three conditions are necessary for coordination to be sustainable. First, the coordinating firms must be able to monitor to a sufficient degree whether the terms of coordination are being adhered to. Second, discipline requires that there is some form of credible deterrence mechanism that can be activated if deviation from

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139 '*[F]easibility of cement imports through three major seaports that can handle Panamax-size cargo ships*.' Agreed minutes of the call with a competitor, 25.2.2014. *'Lagan's and Espabel's examples show that market entry to the Benelux is possible by importing cement or clinker*.' Agreed minutes of the call with a competitor, 28.2.2014; '*There is also a concern that there will be strong competition from the coast in the future, that is to say that – similar to the way Espabel is operating already – cement will be imported by sea*.', the German original reads: *'Es gibt auch eine Befürchtung, dass es in der Zukunft zu starkem Wettbewerb von der Küste kommt, d.h. dass – ähnlich wie dies Espabel bereits macht – Zement über den Seeweg importiert wird.',* agreed minutes of the call with a competitor, 11.2.2014; *'a decline in supply [could] be cushioned by non-European competition (e.g. through a terminal in Rotterdam with subsequent river transport on the Rhine',* the German original reads: *'ein Angebotsrückgang [könnte] vom außereuropäischen Wettbewerb abgefedert werden (bspw. über ein Terminal in Rotterdam mit anschließendem Schiffstransport über den Rhein)',* agreed minutes of the call with a competitor, 12.2.2014.

140 See Guidelines on the assessment of horizontal mergers under the Council Regulation on the control of concentrations between undertakings ("Horizontal Merger Guidelines"), OJ C 31, 5.2.2004, p. 5.

141 Horizontal Merger Guidelines, paragraph 22.

142 Horizontal Merger Guidelines, paragraph 39.

143 Horizontal Merger Guidelines, paragraph 40.

coordination is detected. Third, the reactions of outsiders, such as current and future competitors not participating in the coordination, as well as customers, should not be able to jeopardise the results expected from the coordination.[144] According to the case law, in applying those criteria, it is necessary to avoid a mechanical approach involving the separate verification of each of those criteria taken in isolation, while taking no account of the overall economic mechanism of a hypothetical tacit coordination.[145]

(129) For competitors to reach a common perception as to how the coordination should work coordinating firms should have similar views regarding which actions would be considered to be in accordance with the aligned behaviour and which actions would not.[146] In particular, coordination by way of market division will be easier if customers have simple characteristics that allow the coordinating firms to readily allocate them. Such characteristics may be based on geography, on customer type or simply on the existence of customers that typically buy from one specific firm. Coordination by way of market division may be relatively straightforward if it is easy to identify each customer's supplier and the coordination device is the allocation of existing customers to their incumbent supplier.[147]

(130) Publicly available key information, exchange of information through trade associations, or information received through cross-shareholdings or participation in joint ventures may also help firms reach terms of coordination.[148]

(131) Firms may find it easier to reach a common understanding on the terms of coordination if they are relatively symmetric, especially in terms of cost structures, market shares, capacity levels and levels of vertical integration. Structural links such as cross-shareholdings or participation in joint ventures may also help in aligning incentives among the coordinating firms.[149]

(132) Coordinating firms are often tempted to increase their share of the market by deviating from the terms of coordination, for instance by lowering prices, offering secret discounts, increasing product quality or capacity or trying to win new customers. Only the credible threat of timely and sufficient retaliation keeps firms from deviating. Markets therefore require sufficient transparency to allow the coordinating firms to monitor to a sufficient degree whether other firms are deviating, and thus know when to retaliate. Transparency in the market is often higher, the lower the number of active participants in the market. Further, the degree of transparency often depends on how market transactions take place in a particular market.[150]

(133) In some markets where the general conditions may seem to make monitoring of deviations from coordination difficult, firms may nevertheless engage in practices

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[144] Case T-342/99 *Airtours v Commission*, ECLI:EU:T:2002:146, paragraph 62 ; Case C-413/06 P *Bertelsmann and Sony Corporation of America v Impala*, ECLI:EU:C:2008:392, paragraph 123; Horizontal Merger Guidelines, paragraph 41.

[145] Case C-413/06 P *Bertelsmann and Sony Corporation of America v Impala*, ECLI:EU:C:2008:392, paragraph 125.

[146] Horizontal Merger Guidelines, paragraph 44.

[147] Horizontal Merger Guidelines, paragraph 46.

[148] Horizontal Merger Guidelines, paragraph 47.

[149] Horizontal Merger Guidelines, paragraph 48.

[150] Horizontal Merger Guidelines, paragraphs 49 and 50.

which have the effect of easing the monitoring task, even when these practices are not necessarily entered into for such purposes. These practices, such as meeting-competition or most-favoured-customer clauses, voluntary publication of information, announcements, or exchange of information through trade associations, may increase transparency or help competitors interpret the choices made. Cross-directorships, participation in joint ventures and similar arrangements may also make monitoring easier.[151]

(134) The possibility of retaliation is important for the stability of coordination. Coordination is not sustainable unless the consequences of deviation are sufficiently severe to convince coordinating firms that it is in their best interest to adhere to the terms of coordination. It is thus the threat of future retaliation that can keep the coordination sustainable. However the threat is only credible if, where deviation by one of the firms is detected, there is sufficient certainty that some deterrence mechanism will be activated.[152]

(135) Retaliation need not necessarily take place in the same market as the deviation. If the coordinating firms have commercial interaction in other markets, these may offer various methods of retaliation.[153]

(136) As regards the specific effects of a merger, a merger may increase the likelihood that firms are able to coordinate their behaviour and raise prices, even without entering into an agreement or resorting to a concerted practice within the meaning of Article 101 TFEU. A merger may also make coordination easier, more stable or more effective for firms that were already coordinating before the merger, either by making the coordination more robust or by permitting firms to coordinate on even higher prices,[154] for example by facilitating the detection of deviation, limiting the ability and incentives of some market players to deviate and allowing more efficient retaliation.[155]

(137) After summarizing the Notifying Party's arguments, the Commission will assess whether it is likely that the Notified Transaction will significantly impede effective competition in the various geographic markets for grey cement defined by circles with radii of 150 km or 250 km drawn around the Parties' cement production facilities in Germany, Belgium and north-eastern France by making pre-existing coordination easier, more stable or more effective (section 6.6.3.1) or by making coordination significantly more likely (section 6.6.3.2).

### *6.6.2. The Notifying Party's arguments*

(138) The Notifying Party submits that the manufacture and supply of cement in Belgium and Germany does not lend itself to coordination, in particular due to the existing market structure. According to the Notifying Party, 22 cement producers are operating in Germany, many of which have sizeable market shares, and 12 cement

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151 Horizontal Merger Guidelines, paragraph 51.
152 Horizontal Merger Guidelines, paragraph 52.
153 Horizontal Merger Guidelines, paragraph 55.
154 Case C-413/06 P *Bertelsmann and Sony Corporation of America v Impala*, ECLI:EU:C:2008:392, paragraph 122; Horizontal Merger Guidelines, paragraph 39.
155 Horizontal Merger Guidelines, paragraph 42.

producers are operating in the regional clusters around Cemex West's plants, which would render any coordination difficult.[156]

(139) The Notifying Party argues further that the competitors' market shares are not symmetric and that these players differ significantly in terms of vertical integration, geographic footprint and cost structures.[157]

(140) According to the Notifying Party, the market does not allow for sufficient monitoring of competitors' conduct. Individual competitor's prices and sales volumes are not publicly available as they are determined by way of individual negotiations. Although competitors may announce price developments by way of price announcement letters, the final negotiated price developments deviate significantly from the announcements.[158] The Notifying Party submits that information on prices and sales volumes is only available to competitors ex-post on an occasional and anecdotal basis. Therefore, cement manufacturers would not be able to detect their competitors' price decreases or output increases immediately and quickly enough to make effective use of any deterrence mechanism.[159]

(141) The Notifying Party submits that the Parties are not aware of any kind of effective retaliation mechanism. In particular, neither Holcim nor Cemex West are, with limited exceptions, parties to joint ventures involving cement competitors. Swap agreements[160] are rare and not relevant in size and number. According to the Notifying Party, the Parties thus do not have sufficient links with their competitors that could expose them to retaliation or enable them to exert deterrence pressure.[161]

(142) According to the Notifying Party, potential reactions of outsiders would likely neutralise any attempt of lasting co-ordination. In particular, co-ordination on the overall cement volume available in the market would not be sustainable due to the presence of a large number of competitors. Furthermore, the Notifying Party submits that smaller competitors with only one kiln cannot adapt production and limit output because the kiln cannot be run at lower production levels. In addition, the Notifying Party argues that customers are usually able to exert a significant degree of buyer power because they are able to multi-source and to switch cement suppliers easily.[162]

(143) As regards the change brought about by the Notified Transaction, the Notifying Party submits that the change in market share is too small to increase any likelihood of coordinated effects. Given the limited addition of market share from Cemex West's

[156] Form CO, Paragraph 335; the original response to the Article 6(1)(c) decision, pages 10 and 15; the amended response to the Article 6(1)(c) decision, page 46.

[157] Ibid.

[158] The amended response to the Article 6(1)(c) decision, page 54.

[159] Form CO, paragraph 336.

[160] Parties to such swap contracts agree to sell and deliver to certain ready-mix concrete sites of another cement producer at a price agreed in advance for the duration of the agreement, which is usually one year without tacit renewal. The buying party agrees to sell and deliver the same volume at the same price vice versa. According to the Notifying Party, swap agreements are concluded by cement suppliers in order to avoid having to transport cement over long distances from their own cement plant to their ready-mix concrete plants. Form CO, paragraph 574.

[161] Form CO, paragraph 337.

[162] Form CO, paragraph 339.

activities, the Notified Transaction would not increase or otherwise alter the ability or incentives of the main players to create a collective dominant position.[163]

(144) The Notifying Party submitted a further study ('the economic study of 1 April 2014') which in particular focuses on whether there are indications of coordination. It addresses the evolution of cement prices over time, the level of absolute contribution margins, the overall profitability of the cement business, and the relationship between cement prices and concentration.

(145) With respect to the evolution of cement prices over time, it is argued in that study that prices in Germany increased to a lesser extent than in a set of neighbouring countries between 2001 and 2012, when accounting for the effect of the cement cartel in Germany up to 2002. This evolution would speak against current coordination in the cement sector in Germany.

(146) Regarding the level of absolute contribution margins it is argued that they are on balance not above competitive levels when taking into account opportunity costs.

(147) Moreover, it is argued in the economic study of 1 April 2014 that the overall profitability of the affected cement business is low and therefore would speak against effective coordination, which would result in high profits.

(148) Also, a price concentration regression analysis has been conducted in that study to show that there are positive correlations between cement prices and indicators of concentration.[164] Such positive correlations would speak against coordination.

*6.6.3. The Commission's assessment*

(149) The Commission has analysed whether the Notified Transaction will make pre-existing coordination easier, more stable or more effective or make coordination significantly more likely in the various geographic markets for grey cement defined by circles with radii of 150 km or 250 km drawn around the Parties' cement production facilities in Germany, Belgium and north-eastern France. Due to multi-market contacts between the Parties and their competitors, customers in other product or geographic markets can also be indirectly affected by the Notified Transaction if it strengthens coordination in those other product or geographic markets as well. However, if coordinated effects can be ruled out in the various geographic markets as defined in recital (76), coordinated effects on customers in other product or geographic markets through multi-market contacts are unlikely.

(150) For the reasons set out in recitals (153) to (289), it is unlikely that the Notified Transaction will significantly impede effective competition in the markets for grey cement within the 150 km and 250 km clusters around the Parties' plants due to coordinated effects.

(151) While certain features of the grey cement markets under investigation make them prone to coordination and there are indications of pre-existing coordination (in particular the gross margins and competitors' expectations of targeted reactions to aggressive competition), the Commission concludes that, on balance, it is unlikely that the Notified Transaction will make coordination easier, more stable or more

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163 Form CO, Paragraph 370.

164 The economic study of 1 April 2014 uses the inverse HHI based on sales or capacity shares and the actual number of suppliers in a radius of 130 km around the analysed customers.

effective to a degree that could be considered to constitute a significant impediment to effective competition (see section 6.6.3.1).

(152) Similarly, the Commission concludes that it is unlikely that competitors that were previously not coordinating will be significantly more likely to engage in coordination as a result of the Notified Transaction and, thus, that the Notified Transaction will lead to a significant impediment to effective competition due to the creation of coordination (see section 6.6.3.2).

6.6.3.1. Assessment of a potential strengthening of coordination

(153) This section outlines the results of the Commission's competitive assessment of coordinated effects by way of a potential strengthening of current coordination.

(154) The first part of this section presents the Commission's findings on the existence of potential current coordination (section 6.6.3.1(a)). It presents relevant past evidence of coordination in the markets under investigation (section 6.6.3.1(a)(i)), followed by an overview of the evidence on potential current coordination (section 6.6.3.1(a)(ii)).[165] Finally, the last part examines the facilitating factors for a potential coordinative scheme (section 6.6.3.1(a)(iii)) such as competitors' ability to reach the terms of coordination, of monitoring deviations and of activating effective deterrence mechanisms as well as outsiders' ability to jeopardise the coordination's expected outcome.

(155) The second part of this section describes the Commission's findings on the merger-specific effects of the Notified Transaction with regard to strengthening potential current coordination (section 6.6.3.1(b)).

(a) Assessment of potential current coordination

(i) Relevance of past coordination

(156) In line with the Horizontal Merger Guidelines, evidence of past coordination is important in the assessment of coordinated effects if the relevant market characteristics have not changed appreciably or are not likely to do so in the near future.[166]

(157) The Commission[167] and national competition authorities[168] in several Member States found that in the past there had been anti-competitive coordination in the cement industry. The Commission is also currently conducting an investigation into

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[165] Horizontal Merger Guidelines, paragraph 39.

[166] Horizontal Merger Guidelines, paragraph 43.

[167] In 1994 the Commission fined a number of cement producers, including the predecessors of Holcim and Cemex, for adhering to an EU-wide agreement to compartmentalise national markets and restrict intra-community trade. Joined Cases T-25/95 et al. *Cimenteries CBR and Others* v *Commission*, ECLI:EU:T:2000:77, upheld on appeal in Joined Cases C-204/00 P et al. *Aalborg Portland and Others* v *Commission*, ECLI:EU:C:2004:6.

[168] For example, as regards national competition proceedings in Belgium, in August 2013, the Belgian competition authority found that between May 2000 and October 2003, the three cement companies active in Belgium (including Holcim), the Belgian cement association and the national standardisation body CRIC/OCCN colluded to delay the adoption of standards that would permit the use of slag as a component of ready-mix concrete as a substitute of cement. See the press release of the Belgian competition authority at http://statbel.fgov.be/fr/ binaries/20130830_communiqu%C3%A9 _presse_tcm326-231282.pdf (last retrieved on 8.4.2014).

suspected anti-competitive practices by a number of manufacturers of cement and related products (including the Parties) in several Member States, including Germany.[169]

(158) As regards national competition proceedings in Germany, in 2003, the Bundeskartellamt found that from 1997 to 2002 six cement producers[170] had engaged in a market-sharing agreement in Germany for grey cement.[171]

(159) In 2001, Readymix decided to end the cartel, announced its decision to its competitors and deviated, resulting in a break-down of the cartel and in a national price war.[172] The price war was reflected in a decline in cement prices between 2001 and 2003 of approximately 20 to 40 %.[173]

(160) In its judgment on the Bundeskartellamt's 2003 decision referred to in recital (158), the Higher Regional Court Düsseldorf ('Oberlandesgericht Düsseldorf', or 'OLG Düsseldorf') established that in 1990 the most important cement companies active in Germany generally agreed to limit competition and to keep their market shares stable.[174] According to that general agreement, faced with market share losses affected competitors were supposed to try to reach an understanding.[175]

(161) Although that general agreement was deemed to be too vague to constitute a cartel infringement,[176] it constituted the background for a number of cartel agreements across Germany from 1991 to 2002 (the 'German cartel agreements').[177] As regards western Germany, Dyckerhoff and several other cement producers agreed on cartel quotas from 1991 onwards assigning each competitor a specific market share.[178] As

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169 The Commission is investigating indications that cement companies may have acted in restricting trade flows and engaging into market sharing, price coordination and connected anticompetitive practices in the markets for cement and related products. See further information at http://europa.eu/rapid/press-release_MEMO-08-676_en.htm?locale=en and at http://europa.eu/rapid/press-release_MEMO-09-409_en.htm?locale=en (both last retrieved on 9.4.2014) and http://europa.eu/rapid/press-release_IP-10-1696_en.htm (last retrieved on 9.4.2014)

170 Dyckerhoff, Lafarge, Schwenk, Heidelberg, Readymix (a legal predecessor of Cemex Deutschland AG) and Alsen (a legal predecessor of Holcim).

171 Bußgeldbescheide B 1 - 100/02 of March 2003 of the Bundeskartellamt, see the press release of the Bundeskartellamt at http://www.bundeskartellamt.de/SharedDocs/Meldung/DE/Pressemitteilungen/2003/14_04_2003_Bu%C3%9Fgeld_Zementkartell.html (last retrieved on 9.4.2014); see also the Bußgeldbescheid B 1 – 100/02-3, Annex 3 to Holcim's reply to the Commission request for information of 28 October 2013.

172 Judgment of the Higher Regional Court Düsseldorf, VI-2a Kart 2 – 6/08, 6 June 2009 ('Judgment of the OLG Düsseldorf'), pages 32 and 207ff, see Holcim's reply to question 10 of the Commission's request for information of 7 October 2013, submitted on 17 October 2013.

173 Depending on the data source. Holcim internal document, entitled 'TOP 3b: Cementitious materials (Sales)', 29.6.2011, Appendix 1.10 to Holcim's reply to the Commission's request for information of 3 October 2013, slide 10; Commission own calculation based on revenue and quantity figures of the VDZ (http://www.vdz-online.de/publikationen-branchendaten/ - last retrieved on 4.4.2014).

174 The Judgment of the OLG Düsseldorf was in turn upheld by the Federal Court of Justice ('Bundesgerichtshof'), KRB 20/12, 26.2.2013 ('Decision of the BGH'), see Holcim's reply to question 10 of the Commission's request for information of 7 October 2013, submitted on 17 October 2013.

175 Judgment of the OLG Düsseldorf, page 27ff.

176 Decision of the BGH, paragraph 12.

177 For example, as regards northern Germany in particular, Holcim's legal predecessor Alsen, Dyckerhoff and a number of regional competitors in Westphalia agreed on sales quotas following the entry of cement producers from North Rhine-Westphalia into certain northern German regions. Judgment of the OLG Düsseldorf, pages 32–33.

178 Judgment of the OLG Düsseldorf, page 35 and the following pages.

regards eastern Germany, Holcim's legal predecessor entered into a market share quota agreement with the four other large cement suppliers following Holcim's expansion attempts into that market. In addition to the regional quota mechanisms, it was agreed to acquire certain other competitors such as importers and share the acquisition costs.[179]

(162) The OLG Düsseldorf stated that there had been traditional market leaders in the German regions.[180] Overall, the OLG Düsseldorf considered that the German cartel agreements aimed at restraining competitive behaviour and at not competing aggressively.[181]

(163) In its judgment, the OLG Düsseldorf also found that aggressive competition can generally be risky in the marketing of homogeneous goods such as cement. An undertaking moving aggressively and trying to win new customers risks that its competitors will resort to countermeasures through decreasing prices which could ultimately result in the same market shares but at a lower price level. However, the OLG Düsseldorf also acknowledged that companies may nevertheless decide to pursue an aggressive marketing strategy through selective measures in the long run which are unlikely to prompt countermeasures and ultimately a price war.[182]

(164) The Notifying Party considers that evidence of past coordination is not relevant in the case at hand. In particular, it considers that the Commission has not provided a single indication that any anti-competitive behaviour of the cement manufacturers until 2001 could have been continued afterwards.[183]

(165) The Commission considers that past cartel behaviour can nonetheless provide useful insights as to possible mechanisms of coordination in the cement markets under investigation in this case. Although the events surrounding the German cartel agreements date back more than 10 years, the nature and duration of the infringements might provide useful indications of the competitive interactions prevailing in the relevant markets for grey cement today.

(166) In that regard, evidence of past explicit as well as tacit coordination is relevant, in particular in so far as it provides factual information about the mechanism, stability and profitability of past coordination. Although the parties to the German cartel agreements deemed it expedient to enter into explicit coordination, their common understanding on the terms of coordination in the past could still be useful for tacit coordination today. This is particularly the case for coordination through market division, which can provide a stable focal point for competitors over time.

(ii) Evidence of potential current coordination

(167) The Commission considers that the most likely focal point for coordination in the cement markets under investigation would be customer allocation whereby competitors refrain from approaching rivals' customers with low prices. Under such

179 For example see Judgment of the OLG Düsseldorf, pages 37, 52ff.

180 With Holcim and its legal predecessors holding a market leader position in northern Germany, Dyckerhoff in western Germany and Heidelberg in southern Germany; Judgment of the OLG Düsseldorf, page 19.

181 Judgment of the OLG Düsseldorf, page 19.

182 Judgment of the OLG Düsseldorf, page 193.

183 The amended response to the Article 6(1)(c) decision, page 69.

a coordination scenario, the sizable transport costs for cement would lead to a general allocation of customers based on proximity to a given plant. For customers at locations where it is equally economical for competitors to supply, customers would be allocated on the basis of historical supply patterns.

(168) The Commission has thus investigated the hypothesis that cement competitors might face limited incentives to enter significantly into competitors' geographic strongholds or, more generally, to address new customers aggressively. Under such a scenario, competitors would benefit from a coordination scheme through increased margins and therefore profits.

(169) In this regard, Holcim could be considered to have a geographic stronghold in northern Germany and significant position in certain parts of Belgium. As outlined in recital (114), Holcim has market shares of [50-60]* % in a 150 km radius and of [30-40]* % in a 250 km radius around its northern German plant in Lägerdorf as well as market shares of [40-50]* % in a 150 km radius and of [20-30]* % in a 250 km radius around its northern German plant in Bremen.[184] Moreover, as outlined in recital (120), Holcim has a market share of [10-20]* % in a 150 km radius around its Belgian cement plant in Obourg, and a significant market share in certain micro-regions in Belgium.[185]

### (1) The Commission's margin analysis

(170) The Commission carried out a margin analysis on the sales of Holcim Germany and Cemex West for the period 2001–2012. It is based on data submitted by Holcim and Cemex on regional sales by plant as well as production and cost data by plant in Germany in areas where both companies sell to customers. That margin analysis shows that ex-works prices dropped between 2001, when a cartel was still in place in Germany, and 2003, when major cement suppliers engaged in a price war following the breakdown of the cartel. Ex-works prices recovered in the following years, moving up again to the cartel level (or even above […]*). The relative gross margins (calculated as the difference between price and variable cost divided by price) also declined after the cartel breakdown before partially recovering as costs, in particular variable costs, have also increased.

(171) The Commission considers that the evolution of margins as set out in recital (170) is consistent with potential current coordination, although that by itself is not enough to prove current coordination.

(172) The analysis of the regional sales and transaction as well as cost data also shows that Cemex' and Holcim's absolute gross margins (ex-works price minus variable production costs) in the affected cement markets were on average well above EUR […]* per tonne in 2012. In particular, the margins in North-Rhine Westphalia

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184 Holcim's market shares are higher on a micro-regional level in northern Germany, for example [60-70]* % in Hamburg, [50-60]* % in Elbe-Weser, [40-50]* % in Hannover and [30-40]* % in West Lower Saxony in 2012, see Holcim's reply to the Commission's request for information of 6.2.2014, Annex 14.2.

185 Holcim's market shares are higher at a micro-regional level in Belgium, for example with market shares above or approximately [30-40]* % in the areas of Brussels, Ghent, Charleroi, Obourg and Namur as well as in the coastal area, see Holcim internal document, entitled 'Cement market Belgium & Netherlands. Intro to cement market BeNe for new CEO', 19.9.2013, slide 18.

ranged between EUR […]*.[186] Those margins are equivalent to approximately […]* % of the respective ex-works prices.[187]

(173) In a hypothetical scenario where producers individually maximise profits without coordinating, share the same cost structures, sell homogeneous products, do not face capacity limits and sell to customers that do not face any costs of switching suppliers, economic theory implies that the resulting competitive prices should be at or close to the marginal production costs. Significant positive contribution margins in such a stylised setting could thus be an indication of coordination among suppliers to achieve supra-competitive profits. To judge whether the actually observed contribution margins are consistent with competition or rather with coordination, it has to be evaluated how far the industry under consideration departs from that hypothetical scenario.[188]

(174) The Commission notes that cement is a rather homogeneous product, but also that it is relatively costly to transport. Thus, a major source of differentiation among producers is plant location. As a consequence, competitive margins should be related to transport cost differences. In this case, cement suppliers, especially in North Rhine-Westphalia, have plants that are located sufficiently close to each other to impose significant competitive constraints on each other.[189] Therefore, for various suppliers in North Rhine-Westphalia, the additional transport cost compared to those

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186 In the economic study submitted by the Notifying Party on 6 March 2014 ('the economic study of 6 March 2014') gross margins were computed at a comparable magnitude for Cemex West and Holcim Northern Germany, that is to say of EUR […]* per tonne for 2012 (classification 2 with employment and maintenance costs treated as fixed costs), in its submission of 6 March 2014. In its response to the Commission's request for information of 8.04.2014, Holcim argues that the variable production costs could be higher than average variable costs in case of high capacity utilisation because storage and maintenance costs tend to be higher in such a case. The Commission notes that, although this relation cannot be generally excluded, it used rather conservative figures of effective capacity utilization which account for substantial maintenance time. The Commission considers that the average variable costs are a thus reasonable approximation of the relevant variable costs when the effective capacity is not fully utilized.

187 The Commission asked cement competitors for their variable costs margins (see replies to question 26c – Phase I questionnaire to competitors). Most of the respondents with quantitative responses stated margins for their North Rhine-Westphalian plants comparable to those of Holcim and Cemex West.

188 These considerations are in line with Friederiszick and Röller (2002) who argued that, in particular in North Rhine-Westphalia, there was limited locational differentiation and that ready-mix concrete customers had a high willingness to switching suppliers. In case of overcapacities, prices at marginal costs of production would thus be the likely competitive outcome, but 'dynamic stabilisation' of prices could be expected by international cement producers with multi-market contacts. H. W. Friederiszick and L.-H. Röller (2002). 'Lokale Märkte unter Globalisierungsdruck. Eine industrieökonomische Studie zur deutschen Zementindustrie' (on behalf of the German Ministry of Economics and Labour), RACR studie 01.

189 For instance, the grinding station of Cemex West in Dortmund is only approximately (i) 58 road km from Beckum where the regional cement supplier Phoenix as well as Cemex West's clinker plant are located, (ii) 69 road km from Erwitte where four regional cement suppliers with significant capacity are located (Spenner, Miebach, Seibel & Söhne and Gebrüder Seibel), (iii) 82 road km from Geseke where Heidelberg and Dyckerhoff have cement facilities, and (iv) 102 km from Lengerich where Dyckerhoff operates a cement plant. The economic consultancy commissioned to carry out the economic study of 27 January 2014 estimated that the transport cost for each additional road km is approximately [less than 10 EUR cent]* per tonne, see the economic study of 27 January 2014, page 34.

of Cemex West (and compared to each other) should be limited (that is to say below [less than 10 EUR cent]* per tonne).[190]

(175) The information obtained by the Commission in its market investigation indicates that some customers attach some value to reliability, which partly consists of supply security. Other things equal, nearby plants are seen as more reliable as less distortions to supply are likely with shorter transport distances. However, there is no indication that the reliability factor is nearly as important as the transport costs.

(176) As regards switching costs[191], the Commission acknowledges that different types of customers, for example ready-mix concrete and pre-cast producers, may need to incur different efforts when switching suppliers. Overall, however, switching costs seem rather limited for the majority of bulk cement customers because of the standardised nature of the product.[192] As far as capacity is concerned, the Commission's capacity reconstruction[193] indicates that there was unutilised capacity in western Germany and Belgium in 2012.[194]

(177) Considering the limited switching costs faced by customers, and the small transport cost differentials across suppliers within North Rhine-Westphalia, gross margins in the range of EUR […]* per tonne appear difficult to reconcile with the observed level of overcapacity.[195]

(178) On balance, taking into account the various factors examined in recitals (170) to (177), the Commission concludes that, given the low level of differentiation across suppliers and the existing overcapacities, it is difficult to explain the observed level of gross margins as being the result of competitive interaction between cement suppliers.

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190 Suppose that there are two plants A and B at a distance of, say, 100 km. The maximum additional transport cost to supply customers of plant A is the cost of transport from plant A to B, that is approximately [less than 10 EUR cent]* per tonne km times 100 km = EUR [less than 10]* per tonne. The average difference can be much lower, for example if most customers are located between the plants. Note that costs of loading and unloading are incurred anyway and thus not part of the transport cost difference.

191 Those are the costs a customer incurs when switching to a new supplier, for instance because it has to coordinate the production formula, logistics, billing. In order to gain a new customer, it is conservatively assumed that a supplier would have to lower the initial price in order to 'compensate' for these costs.

192 Moreover, if Holcim or Cemex acquired new customers competitively in 2012, the associated price discounts to compensate customers for switching costs and potential price increases due to lock-in in the following years reduce the 2012 margins. This consideration speaks in tendency in favour of a lower benchmark for the observed margins to be competitive.

193 In the Phase II investigation, the Commission requested data from competitors regarding their total and effective capacity of clinker and grinding, as well as their actual production. The data used in this Decision are aggregated.

194 According to the information obtained in the course of the Commission's market investigation, in North Rhine-Westphalia approximately 9.2 mt of cement were produced in 2012, leaving approximately 1.4 mt or approximately 15 % of capacity unutilised. The production in Belgium in 2012 amounted to approximately 6 mt, leaving unutilised capacity of approximately 1.4 mt of the capacity (approximately 20 % of unutilised capacity).

195 A model of capacity-constrained price competition (that is to say a "Bertrand-Edgeworth" model, as employed in a related version by the Commission in past cases, like M.6471 *Outokumpu/Inoxum*) with inelastic demand, six symmetric competitors (corresponding approximately to the inverse capacity based HHI in North Rhine-Westphalia), constant marginal costs and uniform pricing yields average gross margins that are only a small fraction of the monopoly gross margin. This indicates that even with uniform pricing, low gross margins can result in such a setting.

(179) In view of that evidence, the Commission concludes that the observed gross margins may be the result of a dynamic profit optimisation by cement suppliers, which takes into account the fact that additional short term profits from increased sales might result in reactions by competitors and thus a lower price level and, in turn, lower profits in the future.[196] Such a rather long-term profit maximising behaviour may in turn be indicative of the existence of some form of coordination between cement competitors.

(180) The Commission has also assessed the counter-arguments put forward by Holcim with respect to indications of coordination as summarised in the economic study of 27 January 2014 and in the economic study of1 April 2014.

(181) Regarding the level of absolute contribution margins, the economic study of 1 April 2014 argues that they are on balance not above competitive levels when taking into account opportunity costs of $CO_2$ emission rights, of using limited raw materials and of not selling to other customers in case of full capacity utilisation.

(182) As regards the argument on the opportunity costs for $CO_2$ emission rights, on 28 October 2013, the Commission addressed a request for information to the Parties on how their actual and/or opportunity costs and pricing decisions of grey cement are affected by the EU Emissions Trading System (ETS).[197]

(183) Cemex West replied to the request for information that the ETS does not have any impact on its calculation of production costs.[198] Holcim replied that cement pricing decisions are not based on $CO_2$ developments and that it does not account for costs of emission rights at plant level. Holcim generally stated, however, that this would not mean that $CO_2$ is not an important production cost factor.[199]

(184) The Parties' replies thus do not indicate that the actual costs or opportunity costs of $CO_2$ emissions are accounted for in their variable costs and pricing decisions.

(185) The Commission also asked cement competitors in the Phase II market investigation to '*explain how the $CO_2$ ETS affects [their] actual costs and/or opportunity costs and pricing decisions of grey cement*'. The majority of competitors did not indicate that they considered $CO_2$ emission rights as relevant variable cement production costs that affect their cement pricing decisions. Some stated that they were unable to pass on costs related to $CO_2$ emission rights. One cement producer in particular stated: '*So far (ETS 2005- 2012) the ETS has had little effects on our costs or pricing decisions because the quotas were delivered free. […] If we have to buy $CO_2$ quotas at some*

196 The economic study submitted by the Notifying Party on 6 March 2014 states that '*Cement companies therefore, while having in theory a short term incentive to sell more cement as long as variable costs are covered, also take total costs into account in their pricing decision*'. This may be a common industry behaviour which facilitates a cooperative outcome.

197 The ETS required cement producers in the EU in 2012 to hold sufficient emission certificates when emitting $CO_2$. The rights are tradable so that, in principle, a company could consider the costs of buying emission rights necessary for producing an additional tonne of cement as additional variable production costs. Similarly, it could consider not selling an otherwise not needed right on the market when producing another tonne of cement as an equivalent opportunity cost. Thus in both cases, when a producer has either insufficient or excessive emission rights, it could perceive the same increase in its variable costs. See http://ec.europa.eu/clima/publications/docs/factsheet_ets_en.pdf for further information about the ETS.

198 Cemex' reply to the Commission request for information of 28 October 2013. Question 4.

199 Holcim's reply to the Commission request for information of 28 October 2013. Question 5.

*point during this period, we will see our costs increase, we will try to pass on this increase to our customers if the competitive conditions in the markets allow it.'*[200]

(186) The Commission requested Holcim on 8 April 2014 to reconcile the remarks in the economic study of 1 April 2014 with its previous statements on the actual business treatment of $CO_2$ costs and opportunity costs. Holcim indicated that its plants consider $CO_2$ opportunity costs when making their production decisions. The costs of emitting more or less $CO_2$ would be clear to the local cement operations and thus would influence the local production planning. With respect to Cemex, Holcim argued that once the hurdle rate necessary to receive its $CO_2$ emission allocation is attained, $CO_2$ opportunity costs become relevant. Those costs would have played a role in the decision-making on production volumes when the price of $CO_2$ emission rights were higher, although admittedly less so at current prices.[201]

(187) In view of these apparently diverging answers submitted by the Parties and in view of the results of the market investigation, the Commission is not convinced that accounting for $CO_2$ opportunity costs best resembles the business perspective on contribution margins in this case. Thus, it considers that not accounting for $CO_2$ opportunity costs in the margin analysis remains plausible. In any event, the Commission notes that the $CO_2$ opportunity costs in 2012 were low and do not qualitatively change the results of the Commission's margin analysis.[202]

(188) As regards opportunity costs of using limited raw materials, the Commission acknowledges that, if a producer uses its limited natural resources, an opportunity cost arises from using a unit of the natural resources today because this unit can no longer be used in the future. However, that opportunity cost will be quite low if the depletion of limited raw materials is far off in the future.[203] Moreover, selling additional volumes today may require that investments to maintain access to further resources need to be made earlier. Spending money earlier leads to additional costs due to the time value of money. However, there are no indications that those opportunity costs due to resource depletion are an important consideration when setting cement prices for the cement suppliers in the markets under investigation.[204]

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200 See replies to question 37 – Phase II questionnaire to competitors – cement.

201 See Holcim's reply to the Commission request for information of 8 April 2014.

202 The fraction of CO2 emissions according to the publication "Emissionshandelspflichtige Anlagen in Deutschland 2008-2012" of the Umweltbundesamt and cement production according to the Parties information for Cemex West and Holcim Northern Germany multiplied with a certificate price of approximately EUR 6 (http://www.boerse.de/rohstoffe/Co2-Emissionsrechte/XC000A0C4KJ2) yields (opportunity) costs of approximately EUR 2 to 4 per tonne.

203 For instance, if depletion is expected 30 years in the future and no other sources will be available, assuming that the same contribution margin can be earned today and in 30 years and applying a discount factor of 10 % to account for risk adjusted capital costs, a company selling one more unit today has a marginal opportunity cost of only 6 % of the contribution margin earned today. Assuming that the margin grows at 2 % p.a. (for instance due to inflation), the opportunity cost amount to approximately 10 % of today's margin. Hence for a current gross margin of EUR 40 per tonne, respectively EUR 2.4 or 4 of opportunity costs would need to be deducted.

204 For instance, if a maintenance investment due to resource depletion of EUR 1 000 000 is necessary 10 years in the future at forecasted output levels, selling now an additional volume which amounts to 1/12 of the annual production necessitates making the investment 1 month earlier. Assuming that annual production is 500 000 tonnes and using a discount factor of 10 %, the opportunity cost for the additional sales volume amounts to
EUR 1 000 000 * ((1/(1+10 %)^10)-(1/(1+10 %)^(10+1/12))) /(500 000 t /12) = EUR 0.07 per tonne.

(189) Regarding opportunity costs of not selling to other customers in case of full capacity utilisation, the Commission notes that this factor is already taken into account when considering the level of unutilised capacity. The relevance of opportunity costs of not selling to other customers in case of full capacity utilisation increases with the degree of capacity utilisation of the relevant cement suppliers.

(190) The economic study of 1 April 2014 argues that the Commission's margin analysis regarding sales in northern Germany does not sufficiently reflect intra-firm externalities before the Notified Transaction between Cemex West and the residual parts of Cemex in Brandenburg that are not part of the Notified Transaction. According to that study a cement supplier with an interregional plant network may decide not to serve a region from a specific plant location despite temporary, opportunistic sales opportunities, but to serve it from its alternative plant location. Accordingly, it is argued in that study that intra-firm externalities can explain why Cemex West is not delivering into northern Germany and why cement suppliers do not price more aggressively close to their home plant.

(191) The Commission notes in this respect that it is reasonable to assume that Cemex West and the residual parts of Cemex in Brandenburg coordinate their sales strategies before the Notified Transaction. Hence, Cemex West is, before the Notified Transaction, not expected to compete for customers of Cemex East (which would cause a so-called intra-firm externality). However, while current customers of Holcim could be profitably served at current prices with an individual offer by *either* Cemex West *or* Cemex East or, by analogy, a comparable competitor, they are not. That fact cannot easily be explained by intra-firm externalities of Cemex.

(192) Furthermore, the economic study of 1 April 2014 conducted a price concentration regression analysis to show the positive correlations between cement prices and indicators of concentration[205]. Such positive correlations would speak against coordination.

(193) The Commission notes that the positive correlations argument may hold in case of a 'perfect' collusion scenario. However, if coordination is not stable at very high prices as deviations from coordination are too attractive, cement suppliers may need to account for this by coordinating on lower prices in regions with more suppliers. That can yield prices that increase with concentration, which by itself does not speak against imperfect coordination.

(194) With respect to the evolution of cement prices over time, the economic study of 27 January 2014 argues that prices in Germany increased to a lesser extent than in a set of neighbouring countries between 2001 and 2012, when accounting for the effect of the cement cartel in Germany up to 2002. That evolution would speak against current coordination in the cement sector in Germany.

(195) The Commission notes on a conceptual level that the computation in the economic study of 27 January 2014 implicitly uses approximate cement prices for the years 2005-2008 in Germany as a competitive benchmark. In that study, a cartel overcharge[206], as estimated for the Judgment of the OLG Düsseldorf[207], was

[205] The study uses the inverse HHI based on sales or capacity shares and the actual number of suppliers in a radius of 130 km around the analysed customers.

[206] Cartel overcharge means the difference between the observed cartel price and the price that would have been charged but for the cartel.

subtracted from the cement prices charged in Germany in 2001–2002. That overcharge was apparently calculated as the difference in prices between the years 2005-2008 and the cartel years up to 2002, corrected for confounding factors such as different costs and demand levels. On that basis, the economic study of 27 January 2014 finds that the so adjusted prices in Germany increased by approximately EUR 2 less in the two periods 2001-2002 and 2010–2012 than in a set of neighbouring countries.[208]

(196) The Commission notes that, because that calculation is apparently based on prices from approximately 2005-2008, it is at best informative about the difference in the intensity of competition in Germany in the years 2010–2012 as compared to the years 2005-2008. However, the calculation is not useful for comparing the margin level between 2001 and 2012 and, thus, not helpful for indicating whether there is renewed coordination in comparison to 2001.[209]

(197) As regards the conclusion on coordination, the Commission notes that the fact that the current level of contribution margins is below the previous cartel level does not imply that there is currently no coordination at all. In particular, tacit coordination is likely to be less effective than explicit agreements among competitors. Hence, it is likely that, other things equal, gross margins resulting from tacit coordination are lower than gross margins resulting from a cartel.

(198) Moreover, the economic study of 1 April 2014 argues that the overall profitability of the affected cement business is low and therefore would speak against effective coordination, which would result in high profits.

(199) The Commission notes that the relationship between the intensity of competition and profitability is more complex than suggested by that argument.

(200) In general, cement production capacity has a long life time span when compared to the cyclical and not easily predictable cement demand, which depends strongly on construction activity and, thus, the overall economic cycle. Rational decision-makers will only invest in additional cement capacity if they expect to cover their cost of capital. However, with uncertain demand, ex-post overinvestment is possible. Moreover, if supra-competitive margins can be earned because a cartel is in place, overinvestment may occur if the cartel is expected to last. Following an *unexpected* cartel breakdown, as was possibly the case in Germany in 2002, there may be too much capacity in the market such that the costs of capital cannot be covered. Against that background, imperfect coordination is not inconsistent with not covering the cost of capital.

(201) The economic study of 1 April 2014 states that the competitive price would be higher because cement suppliers need to cover their fixed costs. The Commission notes that a company in a competitive environment achieves the highest possible fixed cost coverage by maximizing its profits before fixed costs, namely the sales volume multiplied by the contribution margin. There may be a dynamic rationale not to acquire new customers as the incumbent suppliers of those customers may respond by poaching the new supplier’s customers, leading to a lower overall price level and

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207 See footnote 172.

208 The economic study of 27 January 2014, slide 95.

209 This question has been addressed by the Commission's margin analysis discussed in section 6.6.3.1(a)(ii)(1).

thus a lower coverage of fixed costs as a second round effect. Yet, the fact that sales are not expanded in anticipation of such a reaction is in itself an indication of successful coordination rather than a justification of high prices to cover fixed costs.

(2) Further investigative elements

(202) In the course of its market investigation, the Commission has obtained information in support of the margin analysis as set out in section 6.6.3.1(a)(ii)(1).

(203) In particular, the market investigation gave indications that customers do not appear to switch suppliers often in the cement markets under investigation.[210] Several competitors estimated that more than 80–90 % of their customer base has remained stable from year to year in recent years.[211]

(204) The Commission also observes that the market shares, albeit at a national level, with regard to countries affected by the relevant markets under investigation, appear to be stable and that they even showed only slight variations after the beginning of the financial crisis in 2008. That is reflected in Holcim's internal documents concerning Belgium and Germany, which show a stable historic market share development and market shares that are projected to remain stable:

**[…]***

**Figure 7 Description of market shares in Holcim's internal documents. The market shares for Belgium are shown on the left, the market shares for Germany are shown on the right.[212]**

(205) Holcim observes in its internal documents concerning the German cement producers that '*All players in Germany seem to strive for stable market shares*' and '*No changes of market shares in Business Plan period expected*'.[213] The Commission also notes that Cemex identifies a '*[…]**' for its market share in Germany.[214]

(206) Some customers contacted in the market investigation observed a lack of aggressive competition in the relevant cement markets. For example, one customer said: '*Overall the German cement market is behaving calm and passive, because the main players on the market do not change their pricing models considerably. […] Moreover, the competitive strategy of the cement suppliers is directed at long-term customer relationships. […] An aggressive targeting of new customers could not be felt over the last years*.'[215]

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210 Question 22 of Phase I questionnaire to customers asked 'Have you ever switched your cement supplier in the last five years?'. 45 % of the 20 responding customers stated no. This corresponds to an average yearly probability of not switching of (45 % )^(1/5) = 85 %.

211 Agreed minutes of the call with a competitor, 11.2.2014; agreed minutes of the call with a competitor, 7.2.2014; agreed minutes of the call with a competitor, 7.2.2014; agreed minutes of the call with a competitor, 12.2.2014.

212 Sources: Holcim internal document, entitled 'Cement market Belgium & Netherlands, Intro to cement market BeNe for New CEO', 19.9.2013, slide 16, and Holcim internal document entitled 'Holcim N-Germany. Business Plan 2013-2017', slide 31 (See Holcim's reply to the Commission's request for information of 20 September 2013, Annex 3).

213 See Holcim's reply to the Commission's request for information of 20 September 2013, Annex 3, slide 31.

214 Cemex internal document 'Vertriebstagung', 21–22.5.2013, slides 5–6.

215 The German original reads: '*Der deutsche Zementmarkt verhält sich insgesamt ruhig und passiv, da die Hauptakteure auf dem Markt die Preismodelle nicht wesentlich verändern. […] Auch zielt die*

(207) In contrast, the majority of the cement suppliers described competition as strong due to existing overcapacities, in particular in North Rhine-Westphalia.[216] For instance, according to a cement supplier, '*[i]n North-Rhine-Westphalia, competition is more severe than elsewhere due to the relatively large number of small and medium sized cement producers*.'[217]

(208) In addition, the Commission also notes that certain of the Parties' comments on the competitive situation in their internal documents militate against a possible coordinated behaviour. According to Holcim '*[t]he strategy and approach of the individual German cement players differs more than ever before*',[218] whereas Cemex observes that the regional competitors pursue a rather '*volume driven*' strategy.[219]

(iii) Possible facilitating factors of potential current coordination

(1) Reaching terms of coordination

(209) For competitors to reach a common perception as to how coordination should work, coordinating firms should have similar views regarding which actions would be considered to be in accordance with the aligned behaviour and which actions would not.[220] Coordination is more likely to emerge in markets where it is relatively simple to reach a common understanding on the terms of coordination.

(210) There are certain market characteristics that make it relatively simple to reach a common understanding on the terms of coordination. A stable economic environment, a small number of competitors, a homogeneous product, inelasticity of demand and a relative symmetry of competitors are factors that can make it easier for competitors to reach terms of coordination.[221]

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*Wettbewerbsstrategie der Zementanbieter auf den Bestand einer langen Kundenbindung ab. […] Eine aggressive Kundengewinnung war in den letzten Jahren nicht spürbar*.', agreed minutes of the call with a customer, 4.12.2013. Other examples include: '*Generally there is the impression that cement producers act reserved and make offers carefully.*' The German original reads: ‚*Allgemein besteht der Eindruck, dass Zementhersteller eher zurückhaltend auftreten und Angebote sehr bedacht abgeben.*', agreed minutes of the conference call with a customer, 4.12.2013. '*Competition in cement supply is not that heavy. Producers of cement seem to be either a bit lazy or very hesitating in their commercial approach.'* Agreed minutes of the call with a customer, 19.9.2013.

216 Agreed minutes of the call with a competitor, 11.2.2014, agreed minutes of the call with a competitor, 7.2.2014; Agreed minutes of the call with a competitor, 7.2.2014; Agreed minutes of the call with a competitor, 12.2.2014; see also replies to question 27 – Phase I questionnaire to competitors and question 40 - Phase II questionnaire to competitors – cement.

217 Agreed minutes of the call with a competitor, 26.9.2013. According to another competitor, '*[I]n the North-Rhine Westphalia region there are many players present.*', agreed minutes of the call with a competitor, 17.9.2013. '*Competition in the cement market [in North Rhine-Westphalia] is very strong*', the German original reads: '*Der Wettbewerb im Zementmarkt in [Nordrhein-Westfalen] ist sehr stark*,' agreed minutes of the call with a competitor, 12.2.2013. '*The competition in the cement market [in North Rhine Westphalia] can be characterised as particularly strong*', the German original reads: *'Der Wettbewerb im Zementmarkt in [Nordrhein-Westfalen] ist als besonders stark zu bezeichnen*.', agreed minutes of the call with a competitor, 11.2.2013.

218 Holcim internal document entitled '1st Commercial Turntable C & WE. Characteristics/Challenges/ Trends in country Northern Germany', 25.2.2013, slide 2.

219 See also recital (244) and Figure 9.

220 Horizontal Merger Guidelines, paragraph 44.

221 Horizontal Merger Guidelines, paragraph 45.

(211) The Commission considers that the various geographic markets for grey cement defined by circles with radii of 150 km or 250 km drawn around the Parties' cement production facilities in Germany, Belgium and north-eastern France show a number of structural features which may facilitate reaching a common understanding on coordination in the form of customer allocation.

(212) The Commission notes that the economic environment has been relatively stable over the past years, at least in the German parts of the markets under investigation.

(213) As regards the number of cement suppliers, the facilitating factor of 'few players' as set out in the Horizontal Merger Guidelines in the current case is not present since there are quite a number of competitors active in the cement markets under investigation, in particular cement suppliers from North Rhine-Westphalia (see recital (83) as well as Table 2 and Table 3). As already set out in recitals (108)-(109) and (207), competition in North Rhine-Westphalia is often described by respondents to the market investigation as a an area where a large number of small and medium sized cement producers are active[222] and it was also confirmed that there are '*many producers in the region*'.[223] The Parties also describe North Rhine-Westphalia as *'a highly fragmented area with 4 major players and several independents*'.[224]

(214) The Commission notes, however, that many of the international cement suppliers compete in a number of different geographic markets, and not only in the sale of cement, but also in the sale of concrete and aggregates. Multi-market contacts between a limited number of international competitors are thus common in the building materials industry.

(215) The Commission also considers that cement is a largely homogeneous product with a high degree of standardisation due to the existence of national and European standards as outlined in recital (36), in particular with respect to cement sales for the production of ready-mix-concrete. The homogeneity of cement products was acknowledged by respondents to the market investigation. According to one competitor, '*Cement is a DIN-normed, entirely interchangeable homogeneous mass product. The only differentiation opportunities are price and service*'.[225] Although Holcim has explained that continuous innovations have been made in the past[226], it has also stated that research and development ('R&D') expenditure for grey cement would be included in the general R&D spending, which tends to indicate that R&D does not play a decisive role regarding grey cement.[227] Moreover, a White Paper prepared for Holcim in May 2013 entitled 'The Risk of Market Liquidity in Cement'

222 See footnote 217.

223 Another example includes: ''*In western Germany there is the largest number of cement plants in Germany with an established market position.*', the German original reads: ‚*In Westdeutschland gibt es die meisten Zementwerke in Deutschland, mit einer gestandenen Marktposition.*' See replies to question 50.3 - Phase II questionnaire to customers – cement. Another customer said: *'competition in the cement business historically used to be fierce in Western Germany*' Agreed minutes of the call with an anonymous customer, 20.10.2013.

224 Holcim internal document 'Western Europe' page 15.

225 Agreed minutes of the call with a competitor, 7.2.2014, the German original reads '*Bei Zement handelt es sich um ein DIN-genormtes, völlig austauschbares, homogenes Massengut. Die einzige Differenzierungsmöglichkeit bieten der Preis und der Service*'.

226 The amended response to the Article 6(1)(c) decision, page 67.

227 See reply to Commission's request for information of 28.10.2013, pages 4-5.

found that there was a '*high level of product standardization (limited number of relevant specs)*'.[228]

(216) According to economic theory, concerns regarding coordination are more serious when industry demand is inelastic, as it becomes more profitable to coordinate and to pass on the price increase to consumers. The Commission considers that there are few products which can substitute cement to any appreciable extent, making cement a necessary input product for a wide range of construction activities. Furthermore, cement prices have a relatively low impact on the overall cost of a construction work.[229] Those factors taken together indicate that cement demand is relatively inelastic.

(217) As regards symmetry of cement suppliers, the Commission finds that the technology used to produce cement has reached a mature stage. Accordingly, cement producers share similar cost components in terms of costs for raw materials and operations. The Commission notes that Holcim, in its internal documents, seems to suggest that competitors have similar cost structures.[230]

(2) Monitoring deviations - Transparency

(218) As regards the potential to monitor deviations from coordination, the Commission considers that there seems to be a high degree of transparency in the markets under investigation and that competitors seem to be well aware of each other's capacities, production costs and volumes, market shares as well as prices and customers. The Commission notes that in general the cement markets under investigation are characterised by the existence of commercial links, such as supplies of cement[231] between the international cement suppliers that could render the cement market more transparent.

(219) Whereas transparency regarding each other's prices and customers directly enables the market players to monitor potential deviations, extensive information on competitors' capacities, costs, production volumes and market shares could enhance the transparency on competitive strategies and make a potential coordinated scheme more stable. As also acknowledged by the Notifying Party, observing the market and

[228] Holcim internal document, entitled 'The Risk of Market Liquidity in Cement', White Paper, May 2013, document number 000465358, page 11, submitted on 18 December 2013; the study explains: '*Further, cement has already undergone some regional product standardization over the past decades. In the 1970s, Europe introduced the CEM I-V categories, with similar developments in the US around 2000 (ASTM standards) and China in 2008 (GB175-2007). In contrast, clinker standards have not yet been developed. Yet, variations in clinker are smaller than in cement and can typically be normalized through grinding.*', page 12.

[229] For a similar reasoning, see for example Judgment of the OLG Düsseldorf, page 214f.

[230] For instance, in certain documents where cost structures by North Rhine-Westphalian players are assessed, while there are certain plants/competitors whose cost structure is slightly lower/higher than the average, the majority of plants/competitors have clinker cash costs (without $CO_2$) in the range of EUR […]* per tonne; see Holcim internal document, entitled 'Strategy Northern-Germany. Holcim Northern-Germany. Final documentation', 9.5.2012, page 9.

[231] For instance, Cemex is among Holcim's top 10 cement customers in Germany, (Form CO Annex 38); whereas Holcim and Lafarge are among Cemex West's top 10 cement customers in Germany, (Form CO Annex 39). Heidelberg is an important cement customer of Holcim (reply to Commission's request for information of 28.10.2013, Annex 37.1).

building market intelligence, including the pricing behaviour of competitors, is an important task of suppliers in the cement industry.[232]

(220) With regard to the specific elements of transparency it appears that, first, the cost structures of cement suppliers are rather transparent for their competitors. This is supported by evidence from the Parties' internal documents. For example, a letter of engagement for a study commissioned by Holcim in March 2012, notes in relation to the cement producers active in Germany that '*cost positions and profitability per tonne for each player/region/production facility*' are '*largely available*' for the purposes of the commissioned study, not specifying further whether such information is only available at Holcim or for all competitors.[233] Other Holcim internal documents also show detailed competitors' cost structures, although Holcim argued that these elements are only best estimates.[234]

(221) Second, as regards transparency on market shares, capacities and output, competitors appear to be able to track their regional market shares based on the data provided by trade associations.[235] For example, in its internal strategic documents, Holcim analyses detailed data on total '*cement dispatch*' by region in Germany, and compares its output performance relative to that of the market as a whole.[236] Holcim seems to have a fairly good overview of its competitors' capacities, even at plant level.[237] Holcim is also able to closely track the evolution of its market share, even at regional/micro-regional level.[238] The Commission also found evidence that $CO_2$ allocations within the ETS are a good indication for cement producers to calculate competitors' clinker capacities, whereas $CO_2$ usage enables them to deduce clinker capacity utilisation per plant.[239]

(222) Third, as regards prices, respondents to the market investigation indicated that the international cement competitors inform their customer base by letters on a regular basis of future price increases.[240] Some customers pointed towards a mechanism by

232 The amended response to the Article 6(1)(c) decision, page 54.

233 Letter of engagement of 12 March 2012, page 2; the German original reads: '*Kostenposition und Profitabilität je Spieler/Region/Werk (größtenteils vorhanden)*'.

234 Holcim internal document, entitled 'Strategy Northern-Germany. Holcim Northern-Germany. Final documentation', 9.5.2012, page 9.

235 The German association VDZ publishes monthly aggregated data on domestic cement deliveries on its website, https://www.vdz-online.de/en/publications/cement-deliveries/ (last retrieved 8.4.2014). Holcim's internal documents also show that data are available at macro-regional level and on *Bundesland* (Federal German State) level; see 'Top8.4.a Segment Bindemittel – Markt', 'TOP X.Y Segment Bindemittel – Markt – Mgmt Cycle OpCo Meeting 1-2013'. The Dutch association Cement&BetonCentrum (C&BC) distributes monthly aggregated production data, see for example 'Members Data May 2012', slide 5.

236 See for example Annexes 2.2 and 2.5 of the response to the Commission's request for information of 3.10.2013.

237 Holcim internal document entitled 'Cement market Belgium & Netherlands', 19.9.2013, slide 14.

238 See Annexes 1.10 and 2.5 of the response to the Commission's request for information of 3.10.2013; see for example Holcim internal document entitled 'Holcim N-Germany - Business Plan 2013 – 2017', slide 32.

239 See Holcim internal document entitled 'Meeting • •', 1.7.2011. Further evidence on what exact information Holcim has on its competitors' planned capacities per plants is also illustrated in a Holcim internal document entitled 'Cement market Belgium & Netherlands', 19.9.2013, slide 14.

240 This has been confirmed for Germany, western Germany, Belgium and the 150 and 250 km clusters around Cemex West.

which price increases by the market leader[241] appear to be announced by means of price letters towards the end of each year.[242] Subsequently, the market leader's price letters would usually be followed by price letters from its competitors announcing similar price increases. As several cement suppliers (mainly the international cement suppliers) are vertically integrated and, as such, customers of each other,[243] by informing their customer base, the announced price increases of their competitors are common knowledge to cement suppliers.

(223) Holcim's internal strategy documents contain numerous references to the price increases announced by competitors (mainly the international cement suppliers), suggesting a degree of transparency on the future evolution of prices.[244] Internal documents of Cemex show that monitoring its competitors' price announcements and price developments are part of its business intelligence and decision-making.[245] The Commission also found evidence in Cemex' internal documents of comparing price announcements of competitors, which turn out to be of the same magnitude between 2011 and 2013. [246]

(224) However, there are also indications in the Parties' internal documents that price increase announcements are not generally followed through by all competitors. For example, according to one competitor: '*According to the experience of [competitor], price announcements seldom have the desired effect of a price increase, but are probably used by the large cement suppliers to signal the desired price development to competitors.*'[247] Moreover, the letters are not binding and the final price is ultimately determined by bilateral negotiation as well as by rebates and credit notes.[248] According to Cemex, announced price increases are only partially achieved.[249] Nonetheless, there have been indications in Holcim's internal documents that as a general rule half of

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241 Agreed minutes of the call with a customer, 19.9.2013.

242 The Parties also confirmed that they are sending out price letters to all customers, including the vertically integrated competitors.

243 Replies to the Commission's questionnaire to competitors, Question 26.

244 For example, a February 2012 strategy document on cementitious materials, states as follows on slide 3: '*According to customers/traders some competitors have already started discussions about price increases in December 2011 (their price letter announcements: EUR 5,00-5,50 per tonne for 2012)*' (Annex 2.2 of the response to the Commission's request for information of 3.10.2013). Further references to prices increases by competitors are found in Annex 1.5 and Annex 2.3. '*According to our customers Heidelberg, Dyckerhoff and most of the independent producers ask for no or minimum price increase only*'. See slide 15 Annex 1.5 of the response to the Commission's request for information of 3.10.2013.

245 For instance Pages 2 and 55 of the Cemex internal document, entitled 'BUDGET 2011 Germany' dated November 2010, submitted on 24.9.2013.

246 See Cemex internal presentation 'Vertriebstagung Zement' of 18-19.11.2013, slide 19.

247 The German original reads: '*Preisankündigungen haben nach Erfahrung von [Wettbewerber] selten den gewünschten Effekt einer Preissteigerung, werden jedoch vermutlich von den großen Zementkonzernen genutzt, um Wettbewerbern die gewünschte Preisentwicklung zu signalisieren.*', agreed minutes of the call with a competitor, 7.2.2014. See also: '*The effect of price announcements depends on market situation'*. The German original reads: '*Die Wirkung von Preisankündigungen ist abhängig von der Marktsituation*', agreed minutes of the call with a competitor, 7.2.2014.

248 For instance '*The final price, however, usually is the outcome of personal negotiations.*' Minutes of the call with a customer, 20.9.2013. Cf. also agreed minutes of the call with a customer, 17.9.2013.

249 Achievement rate (that is to say price increase as a percentage of the announced price increase) of […]* % in 2009, […]* % in 2012, whereas in 2010 and 2011 prices […]*; see Cemex presentation at the technical meeting of 6.11.2014.

the announced price increase is usually implemented in northern and western Germany.[250]

(225) Fourth, as regards transparency of competitors' <u>customer base</u>, overall it generally seems feasible for a cement producer to identify to which competitor a customer was lost, as described in recital (226) below. To the extent producers coordinate not to poach each other's customers, monitoring deviations appears to be possible with sufficient precision. This could be also facilitated by the fact that there seems to be little customer switching as a large part of competitors' customer base (more than 80-90 % of the weighted average) does not change from year to year.[251] That is in line with the results of the market investigation.[252]

(226) Holcim's internal documents show that Holcim appears to track regularly (at least) its most important customer gains and losses. Internal documents from Cemex also show that there is regular reporting internally on actual or potential customer gains and losses, including identifying the competitor who succeeded in winning those customers.[253] Furthermore, the Commission found indications both from the market investigation as well as from the Parties' internal documents that it is not uncommon for cement customers in Germany to communicate the specific offers received from one cement supplier to another and that grey cement suppliers often inquire about competitors' prices and volumes supplied.[254] This makes competitors' customer contacts, potential expansions and aggressive competition transparent to other competitors.

(3) Deterrence mechanism

(227) The possibility of retaliation is important for the stability of coordination. Coordination is not sustainable unless the consequences of deviation are sufficiently severe to convince coordinating firms that it is in their best interest to adhere to the terms of coordination. It is thus the threat of future retaliation that can keep the coordination sustainable. However, that threat is only credible if, where deviation by one of the firms is detected, there is sufficient certainty that some deterrence mechanism will be activated.[255]

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250 See Holcim internal email von […]* of 28.9.2012.

251 Agreed minutes of the call with a competitor, 11.2.2014; agreed minutes of the call with a competitor, 7.2.2014; agreed minutes of the call with a competitor, 7.2.2014; agreed minutes of the call with a competitor, 12.2.2014.

252 Question 22 of the phase I questionnaire to customers investigation asked 'Have you ever switched your cement supplier in the last five years?'. 45 % of the 20 responding customers stated no. This corresponds to an average yearly probability of not switching of (45 % )^(1/5) = 85 %.

253 Cemex internal documents, entitled 'Vertriebsmeeting Ost/West', 26.6.2012, slide 10; and 'Gegenmaßnahmen 2013'; 'Vertriebstagung', slide 10, 21–22.5.2013.

254 *'It is also a common practice that customers come and tell [us] that they have been visited by a competitor who undercutting [our] prices. Sometimes the customer may tell the exact price offered, sometimes not*.' Agreed minutes of the call with a competitor, 28.2.2014; '*Zementhersteller bemühen sich um eine große Transparenz und fragen ihre Kunden häufig, wer von wem beliefert wird'*; agreed minutes of the conference call with a customer, 4.12.2013. Both Parties document their client visits in so-called 'Besuchprotokolle' with indications that information on competitors and their prices as well as volumes are passed on.

255 Horizontal Merger Guidelines, paragraph 52.

(228) Retaliation need not necessarily take place in the same market as the deviation. If the coordinating firms have commercial interaction in other markets, these may offer various mechanisms of retaliation.[256]

(229) The Commission has found indications in the Parties' internal documents that Holcim tends to react to 'expansions' by competitors (that is to say to actual and potential customer losses) by using targeted counter measures which could be interpreted as deterrence mechanisms in a scheme of tacit coordination.

(230) For instance, in a 2011 meeting with the European Forum, a consultative and informative body for Holcim employees in Europe, the Holcim executive responsible for the 'Western Europe' area at that time explained his view on Holcim's strategy vis-à-vis aggressive competitors in Belgium, France, Germany and Switzerland in the following terms:[257]

> *'Holcim's strategy is one of reaction to aggression by competitors that invade our markets. These are delicate situations that must be handled with care there also being legal antitrust issues that must not be underestimated. Holcim is seeking to react to such invasions by competitors in France, Luxembourg, Germany and Switzerland through retaliation and the establishment of new plants. It will take time to adapt the reactive measures to the entity of the problem, while the important thing is that the competitors get the clear message that Holcim is reacting and not passively accepting their attacks. These strategies are costly for example the plant under construction in Luxembourg is costly and will take about two years to set up while in the meantime we have to react by other means.'*
>
> *'[…] market balance is important. Action needs to be taken in relation to these situations, […]. Holcim's reaction is to retaliate where its competitors are important. In any case it takes time to respond effectively and it is not something that can be easily carried out, but Holcim will do everything it can.'*

(231) Holcim argues that the term 'retaliation' in the quote is an obvious misinterpretation and its original aim was to signal strength to employees. Moreover, Holcim also argues that the draft minutes have been revised by the executive concerned and the original wording used in the meeting was very likely different from what the final document actually states.[258]

(232) Those arguments cannot be accepted. The Holcim executive set out in these statements how Holcim perceives a need to defend its sales territories by way of targeted actions against aggressive competitors. Those statements can be attributed to Holcim since the executive spoke in his function as a Holcim representative and approved the final version of the minutes.

(233) Cemex' internal documents also appear to indicate that Cemex considers targeted reactions to competitors' behaviour as part of its strategic behaviour intended to alleviate competitive pressure. For example, the documents show that Cemex considers '*countermeasures*' ('*Gegenmaßnahmen*') against customer losses and also

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256 Horizontal Merger Guidelines, paragraph 55.

257 Holcim internal document, entitled 'Holcim European Forum. Minutes of the meeting held in Milan on 16.11.2011', pages 7 and 8.

258 Holcim's reply to the Commission's request for information of 9 January 2014, question 10.

states: ‘*if necessary counter-acquisition of customers to prompt changes in behaviour.*’[259]

(234) Some of the Parties' competitors confirmed in the market investigation that winning new customers can prompt targeted actions against the expanding company by the incumbent supplier. Thus, a typical reaction to a cement competitor taking away one's customers is to poach its customers. According to one competitor '*[a] typical reaction to losing a customer to competitor A would be to try to win over another customer of competitor A, as long as it is economical. (“Nobody just lets his customers be taken away.”). This occurs in order to defend one’s own market position. However, this is conditional upon the sales conditions and, for example, won’t happen in case of very large transport distances.*'[260]

(235) The competitors described the retaliation scheme in general terms and did not give concrete examples of such behaviour in the recent past. That is not necessarily conclusive evidence that the potential deterrence mechanism is not effective. A lack of concrete examples could also mean that the deterrence mechanism as such is sufficient and does not need to be activated regularly.

(236) Furthermore, customers have pointed to the example of specific competitive interactions between Holcim and its competitor Dyckerhoff.[261] In support of the customers’ submissions, the Parties' internal documents provide evidence of targeted actions between Holcim and Dyckerhoff in Germany, Luxembourg and France (‘the dispute’).

(237) According to Cemex’ interpretation, the dispute started around 2009 when Dyckerhoff increased its grinding capacity in Luxembourg and started selling cement volumes into eastern France and to the Paris region. Holcim subsequently reacted by delivering cement from its French operations into south-western Germany and North Rhine-Westphalia. Dyckerhoff then decided to set up a cement terminal in Hamburg.

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[259] The German original reads: ‘*falls notwendig Gegenakquisen, um Verhaltensänderung zu erreichen*‘, Cemex internal document, entitled Vertriebstagung Zement’, 22–23.11.2012, pages 5 and 59.

[260] Translated from the German original, agreed minutes of the conference call with a competitor, 11.2.2014. Other examples include: ‘*[Competitor] has noticed that when it has won over a customer from another cement manufacturer, [competitor’s] own customers have been approached with notably low price quotes. This could be interpreted as a direct response with the intention to signal that taking away customers is costly, but [competitor] has not had any direct contact with competitors and does not know if they are “signalling” anything.*’ Agreed minutes of the conference call with a competitor, 28.2.2014. ‘*If a cement supplier risks losing a customer to a competitor because of a more advantageous price, that supplier will try to match the sales conditions of his competitor or try to win over another customer of that competitor to win back the lost volumes. […] The latter strategy of targeted winning over of a competitor’s customers can lead to unprofitable individual sales but constitutes an important signal to the attacking competitor.*’ Translated form the German original, agreed minutes of the conference call with a competitor, 7.2.2014. ‘*If [competitor] loses a customer due to the aggressive behavior of a competitor, the normal reaction would be to win back the lost volumes from other customers of that competitor*’ Translated form the German original, agreed minutes of the conference call with a competitor, 12.2.2014.

[261] Agreed minutes of the call with a customer, 20.9.2013; agreed minutes of the call with a customer, 17.9.2013.

In reaction, Holcim decided to set up a terminal in Wiesbaden/Hesse in Germany[262], close to Dyckerhoff's German headquarters.[263]

(238) In 2011, Cemex summarised the interactions as follows:

**[…]***

**Figure 8 Summary of interactions between Holcim and Dyckerhoff in Cemex' internal document[264]**

(239) That interpretation of the dispute is supported by certain statements from Holcim's internal documents. For example, Holcim discusses in several instances Dyckerhoff's expansion in Hamburg in conjunction with its own expansion in Wiesbaden.[265] Moreover, in 2013 Holcim France comments on its recent ready-mix concrete expansion into Luxembourg: *'We settle […]* and the objective is to […]*. This means several tons of cement that we will steal from […]*. As they are coming to us we are going to them. […]*.'* Holcim France adds with respect to Holcim's construction of the terminal in Wiesbaden: '*You need to know that our colleagues, cousins of Germany, have set up a terminal in the neighbourhood of Frankfurt to ship cement […]*, to this market where the targeted competitor is the one that hurts us once again, […]* or the […]* you name it. So we go to their place too.*'[266] Holcim explained in that regard that even if Holcim hoped to see less activity on the part of Dyckerhoff in Hamburg or higher prices in some areas where Dyckerhoff offers very low prices, it considers that there are no measures that would lead to that result with a reasonable chance of success.[267]

(241) Holcim disputes that these interactions with Dyckerhoff would be part of a deterrence mechanism in particular, because in Holcim's view a credible deterrence mechanism would require a certain 'success', that is to say it would have to lead to the expected results. According to Holcim, however, the interactions with Dyckerhoff rather led to more competition than less.[268]

262 Ginsheim-Gustavsburg was selected as the terminal's location.

263 See internal Cemex email of 12 July 2012; the German original reads: '*Die Holcim baut eine Siloanlage in/bei Wiesbaden. Unser TB wird wohl den Beton für das Fundament liefern. Das ist eine Reaktion auf den Bau einer Siloanlage durch Dyckerhoff in Hamburg. Teil des seit 3 Jahren dauernden Konfliktes zwischen Dyckerhoff und Holcim. Expansion durch Dyckerhoff nach Frankreich über Dyckerhoff Luxembourg und nach Hamburg/Schleswig-Holstein über Lengerich. Die Reaktion von Holcim waren Einlieferungen aus Frankreich ins Saarland, nach Hessen bis in den südlichen Teil von Nordrhein-Westfalen. Jetzt werden eben zur logistischen Absicherung noch Umschlaganlagen gebaut […]**'.

264 Cemex internal document, entitled 'Northern Europe Region – Appendix. Steering Team Meeting', 20.7.2011.

265 See Holcim internal document 'M1 Northern Germany' of 13.2.2011, slide 18; 'Minutes: Area DO CEO Meeting' of 4.5.2011, page 5; 'Triangle Sitzung' of 26.3.2013, slide 8.

266 The French original reads: '*On a pris position sur le […]* et notre velléité est de […]*. Ce qui entraînera quelques tonnes de ciment que nous irons récupérer agressivement sur […]*. Puisqu'ils viennent chez nous on va chez eux. […]*. […]* Il faut savoir que nos collègues, cousins d'Allemagne, ont mis en place un dépôt sur la banlieue de Francfort pour expédier du ciment soit […]*, vers ce marché où le concurrent le plus visé est celui qui nous fait souffrir encore une fois, […]* ou […]* si on veut. Donc on entre dans leur dispositif aussi.*', Holcim internal document, entitled 'Holcim France. Comité Central d'entreprise', 18.6.2013, page 28.

267 The amended response to the Article 6(1)(c) decision, page 57.

268 The amended response to the Article 6(1)(c) decision, pages 56-57.

(242) The targeted actions and reactions of Holcim and Dyckerhoff have, however, been going on for several years. Dyckerhoff's market behaviour could be interpreted as deviations from a coordinated outcome potentially envisaged by Holcim. Such an interpretation could possibly call into question the effectiveness of Holcim's deterrence mechanisms and therefore the sustainability of coordination with Dyckerhoff. Moreover, Dyckerhoff did not indicate that those actions were part of a retaliatory scheme.[269] In that sense, there is no conclusive evidence that that interaction led to a sustainable stabilisation of the market dynamics.

(4) Reactions of outsiders and market entry

(243) For coordination to be successful, the actions of non-coordinating firms and potential competitors, as well as customers, should not be able to jeopardise the outcome expected from coordination.[270] As regards the countervailing buyer power of customers, by concentrating a large amount of its requirements with one supplier or by offering long-term contracts, a large buyer may make coordination unstable by successfully tempting one of the coordinating firms to deviate in order to gain substantial new business.[271]

(244) As regards reactions from competitors,[272] as stated in recitals (110) and (124), certain respondents to the market investigation regard in particular the Belgian and Dutch cement suppliers importing clinker or cement by sea as challengers.[273] Those cement suppliers are also seen by the Parties as a competitive force '*putting pressure on volumes and prices*'.[274] In addition, as also discussed in recital (110), Spenner, a competitor from North Rhine-Westphalia, has added cement capacity in North Rhine-Westphalia recently. Moreover, there are also indications in the Parties' internal documents that the regional players are pursuing a 'volume driven strategy', as shown in Figure 9:

**[…]***

**Figure 9: Note in Cemex' internal documents on regional players pursuing a volume driven strategy[275]**

(245) Holcim sees Dyckerhoff and in general the Buzzi Group as pursuing a 'price-aggressive' strategy,[276] which could be in itself interpreted as a deviation from a possible coordinated behaviour. However, such a price-aggressive strategy might also be seen as part of a retaliatory scheme within a coordinated scheme as discussed in section (226) above.

[269] See Dyckerhoff's reply to questions 5, 6 and 10 to the Commission's request for information of 5.12.2013.
[270] Horizontal Merger Guidelines, paragraph 56.
[271] Horizontal Merger Guidelines, paragraph 57.
[272] As regards customers, the Commission did not find any indication of countervailing buyer power through which they would be able to destabilise a possible coordinated scheme.
[273] Agreed minutes of the call with a competitor, 28.2.2014; agreed minutes of the conference call with a competitor, 11.2.2014.
[274] 'Gent market is strongly pressurised by new players Espabel & CRH', slide 17. 'Lagan market study'.
[275] Cemex internal document entitled 'Commercial, supply chain & logistics', 12.9.2012, slide 5.
[276] '*German-Luxemburg border MM under siege of Buzzi*', slide 17.

(246) Entry barriers in the cement markets also need to be taken into account. Not only do those seem to be high but entering the market by building an integrated cement plant is largely irreversible. The Notifying Party estimates the investment necessary for a greenfield investment with a capacity of 2 million tonnes ('mt') per year to be at least EUR […]* million.[277] Factors inhibiting such entry include both the large-scale investments necessary to set up a cement plant and the need to have access to a limestone quarry to manufacture cement, and the need to comply with environmental regulations.

(247) Setting up a grinding station only and shipping clinker from within the group or purchasing it from third parties lowers the initial investments. According to the Notifying Party, the investment cost for a grinding station of approximately 500 kt could amount to between EUR […]* million.[278] One competitor estimated the construction of a grinding station of a capacity of 800 kt of cement to be in the range of approximately EUR 30–35 million.[279]

(248) Finally, entering into new cement markets can also occur by way of expansion of competitors already active in other geographic markets. Such entrants have, for instance the possibility of setting up terminals/silos where cement manufactured elsewhere is stored and dispatched. Holcim estimated the setting up of the Ginsheim-Gustavsburg terminal[280] below EUR […]* million in internal documents.[281]

(iv) Conclusion on potential current coordination

(249) The Commission considers, based on the evidence presented in sections 6.6.3.1(a)(i) to 6.6.3.1(a)(iii), that several features of the grey cement markets under investigation point to the existence of current coordination. At the same time, however, other elements speak against any such coordination. As such, although it cannot be excluded that there is a degree of coordination in the grey cement markets under investigation, in this case the Commission does not have to conclude whether there is current coordination in the markets under investigation due to the lack of merger-specific effects as described in section 6.6.3.1(b).

(b) Assessment of merger-specific changes

(250) The changes that a merger brings about can increase the likelihood of coordination in several ways. In addition to facilitating the reaching of a common understanding on the terms of coordination, a merger can facilitate the detection of deviation, limit the ability and incentives of some market players to deviate and allow a more efficient retaliation, thereby strengthening coordination.

(251) The Commission has investigated whether Holcim's acquisition of Cemex West would make any possible current coordination in the cement markets under investigation easier, more stable or more effective for cement competitors who could

277 Form CO, paragraph 544. The brownfield investment at Obourg was estimated at EUR […]* million. See also section 0, in particular recital (292) and footnote 329.
278 Form CO, paragraph 545.
279 Agreed minutes of the call with a competitor, 28.2.2014.
280 See footnote 262.
281 See slide 18 of Holcim internal document 'TOP 2.3a: Cementitious Materials (Markt)' of 21.6.2011, Annex 1.2 of the response to the Commission's request for information of 3.10.2013.

potentially coordinate their market behaviour prior to the Notified Transaction. The Commission has thus assessed whether the Notified Transaction would specifically facilitate (i) reaching a common understanding on the terms of coordination, (ii) monitoring deviations, (iii) deterring deviations and (iv) weakening the reactions of non-coordinating firms, potential competitors.[282]

(252) A number of competitors will remain active in the markets, including both international as well as regional cement suppliers (see section 6.4 on the market shares and market structure). It is therefore unlikely that the reduction in the number of cement competitors through the disappearance of Cemex West will facilitate the reaching of a common understanding on the terms of coordination.

(253) The reduction in the number of competitors is also not likely to have a significant effect on market transparency and, therefore, on the possibility to monitor deviations from coordination. As outlined in section 6.6.3.1.(a)(iii)(2), market transparency in the cement markets under investigation derives from commercial links between the cement competitors, from publications of trade associations, from publicly available information on $CO_2$ allocations, from the sending of price increase announcement letters as well as from information obtained from customers. It is therefore unlikely that the Notified Transaction will make it easier for competitors to access those sources of information and will therefore not facilitate market transparency in any other way.

(254) There is no indication that the Notified Transaction would lead to a weakening of the possible reactions of non-coordinating firms or new entrants. In particular, there are no indications that the incentives of possible outsiders or new entrants would change as a result of the Notified Transaction.

(255) In addition, the Commission has assessed in-depth the plausibility and potential magnitude of a potential increase in retaliatory power, and, therefore, of a strengthening of a deterrence mechanism, through the Notified Transaction. The Commission has analysed whether there could be an increase in retaliatory power with respect to the regional competitors in North Rhine-Westphalia or with respect to Dyckerhoff, as indicated by the past competitive interactions between Holcim and Dyckerhoff (see recitals (236) to (242)).

(256) For the reasons set out in recitals (257) to (281), the Commission has concluded that there is insufficient evidence to show that the acquisition of Cemex West would appreciably increase Holcim's retaliation potential against its competitors and that therefore the Notified Transaction would make any possible coordination easier, more stable or more effective.

(i) General findings on merger-specific changes

(257) There are several cement suppliers in North Rhine-Westphalia with plants and, most likely, customers close to the Cemex West plants. Those suppliers include the

[282] As regards customers, as mentioned in footnote 272, the Commission did not find any indication of countervailing buyer power through which they would be able to destabilise a possible coordinated scheme. Therefore, the merger-specific changes with regard to possible reactions of customers will not be assessed.

international competitors Dyckerhoff and Heidelberg as well as the regional competitors Miebach, Spenner, Seibel & Söhne, Gebrüder Seibel and Phoenix.

(258) It might be considered that the Cemex West assets could allow Holcim to retaliate against those competitors in North Rhine-Westphalia more efficiently since Holcim (i) would incur lower transport costs to reach the competitors' customers due to proximity, (ii) could possibly identify and target those customers better due to an increased local sales knowledge, and, (iii) may also have additional spare capacity and thus less opportunity costs as it needs to divert less sales than otherwise.[283]

(259) On balance, however, these advantages appear to be rather small and are generally not confirmed by respondents to the market investigation.

(260) First, Holcim's cement production facilities in Höver/Hannover and Bremen are near those of its competitors in North Rhine-Westphalia. Höver is located approximately 180 road km from each of Erwitte, where four regional competitors are located, and Beckum, where one of Dyckerhoff's production facilities is located. Bremen is located approximately 215 road km from Erwitte and 220 road km from Beckum. Considering the economic study of 27 January 2014, according to which the transport costs for each additional road km is approximately [less than 10 EUR cent]* per tonne, Holcim would save transport costs of a maximum of roughly EUR […]* per delivery to one of its competitor's customers, implying that any possible 'retaliation' would not be substantially cheaper.

(261) Second, Cemex West already had incentives to use targeted actions against the sales of its competitors from North Rhine-Westphalia before the Notified Transaction, for instance in relation to competition for sales to the Netherlands. That was acknowledged by a competitor contacted in the market investigation who explained '*Both [Cemex and competitor] supply their Dutch customers from the production facilities in [North Rhine-Westphalia] and compete with each other. In [competitor's] view, it does thus not make a big difference with respect to the export markets of the Netherlands and Belgium if Cemex West or Holcim is active in the immediate vicinity, the risk potential does not increase.*'[284]

(262) Third, competitors that responded to the market investigation generally did not confirm indications from Holcim's internal documents[285] that competitors from North Rhine-Westphalia had significantly increased their business activities in northern Germany or Belgium, or that they planned to increase their activities in the near future,[286] and thus create a threat to Holcim's current operations.

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283 According to Cemex' figures, Cemex West had an annual clinker capacity utilisation of […]* % in the years 2010 to 2012 and thus free capacity that could in principle be used for retaliation; see Annex 9 to Cemex' reply to the Commission's request for information of 12 November 2013.

284 The German original reads: '*Beide [Cemex und Wettbewerber] bedienen ihre niederländischen Kunden von den Produktionsstätten in [Nordrhein-Westfalen] aus und stehen im Wettbewerb. Aus [Wettbewerbers] Sicht macht es folglich im Hinblick auf die Exportmärkte Niederlande und Belgien keinen großen Unterschied, ob Cemex West oder Holcim in unmittelbarer Nähe agiert, das Gefährdungspotential steigt nicht.*', agreed minutes of the call with a competitor, 11.2.2014.

285 See in detail section 6.6.3.1(b)(ii).

286 See replies to question 14 of the Commission's request for information to competitors, 28.1.2014.

(263) Fourth, while certain respondents to the market investigation raised concerns with regard to the effects on coordination, the majority of respondents did not identify any specific expected effects of the Notified Transaction.[287]

(264) With regard to customers pointing towards possible merger-specific effects, the following concerns have been expressed:

– *'[…] Holcim would be able to compromise the currently functioning competition in western Germany. Regional competitors from [North Rhine-Westphalia] willing to expand to northern Germany (Holcim's home market) would need to expect reactions by Holcim in [North Rhine-Westphalia]. This "deterrence" would also work if Holcim only won limited volumes in [North Rhine-Westphalia] because the regional competitors in [North Rhine-Westphalia] react strongly to losing volume.'*[288]

– '*With the acquisition of Cemex West, Holcim will become a leader on the German market and will be in a position to avoid or hamper German cement from other suppliers being exported to Belgium (as it will in a position to (threaten to) retaliate against such suppliers on the German market).'*[289]

– '*The passive market behaviour could be reinforced.'*[290]

(265) As regards competitors, the clear majority of respondents to the market investigation explained that they did not expect the Notified Transaction to lead to an increased retaliation potential.[291] Those competitors stated that they do not consider the Notified Transaction as a retaliation tool or as a threat to potentially discipline them or retaliate against their operations. Overall, the vast majority of those competitors also considered that the Notified Transaction would not lead to a significant change in the competitive environment or to any specific effects on their business and business strategy.[292] For instance, one competitor is '*not much concerned about the proposed transaction. The existing plants in western Germany would simply change owner. An impact on supply volumes seems rather unlikely*.'[293] According to other competitors, the Notified Transaction would mean '*[j]ust a [different] name on the*

287 See replies to questions 33 and 34 – Phase I questionnaire to customers and replies to question 50 – Phase II questionnaire to customers.

288 The German original reads: '*[…] Holcim [wäre] in der Lage, den aktuell funktionierenden Wettbewerb in Westdeutschland zu gefährden. Mittelständische Anbieter aus [Nordrhein-Westfalen], die nach Norddeutschland (Holcim's Heimatmarkt) expandieren wollten, müssten mit Reaktionen von Holcim in [Nordrhein-Westfalen] rechnen. Diese „Abschreckung" würde auch funktionieren, wenn Holcim geringere Mengen in [Nordrhein-Westfalen] abgreifen würde, weil die Mittelständler in [Nordrhein-Westfalen] sehr sensibel auf Mengenverluste reagieren.*', agreed minutes with a customer, 3.12.2013.

289 Reply of a customer to question 50.1 – Phase II questionnaire to customers.

290 Reply of a customer to question 50.1 – Phase II questionnaire to customers.

291 Agreed minutes of the conference call with a competitor, 11.2.2014.

292 Agreed minutes of the conference call with a competitor, 12.2.2014; agreed minutes of the conference call with a competitor, 25.2.2014; agreed minutes of the conference call with a competitor, 7.2.2014; agreed minutes of the conference call with a competitor, 7.2.2014; agreed minutes of the conference call with a competitor, 11.2.2014; agreed minutes of the conference call with a competitor, 28.2.2014; see also replies to questions 16/17 of the Commission's request for information to competitors, 28.1.2014, and to question 41 – Phase II questionnaire to competitors.

293 Agreed minutes of the call with a competitor, 26.9.2013.

*door*' and it '*would remain of little effect, as one big player would simply be replaced by another*'.[294]

(266) Only a minority of the competitors anticipated certain effects of the Notified Transaction which would make it easier for Holcim to use or threaten to use targeted retaliatory actions against its competitors:

– According to one competitor, '*The acquisition of Cemex West would provide Holcim the corresponding market knowledge and a distribution network in [North Rhine-Westphalia]. That would make it easier to poach customers <u>through targeted actions</u> from specific competitors in the way [described] above. For example, Holcim could win over customers of Dyckerhoff in [North Rhine-Westphalia].*'[295] (Emphasis added by the Commission)

– Another competitor explained that '*Since the knowledge about which supplier supplies to which customer is available at a supra-regional level, Holcim is already today able to win over customers of [competitor] <u>through targeted actions</u>. However, due to the shorter distance between the future Holcim cement facility in Beckum and the [competitor] facility in [competitor's location] such targeted winning over of customers will be more profitable after the transaction.*'[296] (Emphasis added by the Commission)

(267) Fifth, the Commission considers that it cannot be concluded that the threat of retaliation against Dyckerhoff specifically will significantly increase through the Notified Transaction. In particular, Dyckerhoff is already exposed to Holcim in several cement markets in Europe.[297] Moreover, Dyckerhoff neither perceives the Notified Transaction as a retaliation measure nor as a potential retaliation threat to discipline Dyckerhoff when expanding and competing with Holcim.[298]

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294 See replies to question 41 - Phase II questionnaire to competitors – cement and agreed minutes of the call with an anonymous competitor, 1.10.2013. Another competitor is also '*not much concerned about the proposed transaction. The existing plants in western Germany would simply change owner. An impact on supply volumes seems rather unlikely*.'; agreed minutes of the call with a competitor, 26.9.2013.

295 The German original reads: '*Die Übernahme von Cemex West würde Holcim entsprechende Marktkenntnis und ein Vertriebsnetz in [Nordrhein-Westfalen] verschaffen. Hierdurch wäre die oben [genannte] gezielte Kundenübernahme von bestimmten Wettbewerbern deutlich einfacher. Holcim könnte z.B. Kunden von Dyckerhoff in [Nordrhein-Westfalen] abwerben*'; in that statement, the competitor refers to the specific targeting of competitors' customers as set out earlier in the minutes: '*Verliert ein Zementlieferant einen Kunden an einen Wettbewerber, versucht dieser Lieferant üblicherweise, die verlorenen Mengen bei einem anderen Kunden zurückzuholen, der bislang bei dem entsprechenden Wettbewerber gekauft hat.*', agreed minutes of the conference call with a competitor, 7.2.2014.

296 The German original reads: '*Da die Kenntnis, welcher Lieferant welchen Kunden bedient, überregional vorhanden ist, kann Holcim auch heute schon Kunden von [Wettbewerber] gezielt abwerben. Aufgrund der nunmehr kürzeren Distanz zwischen dem künftigen Holcim-Werk in Beckum und dem [Wettbewerber]-Werk in [Wettbewerber-Standort] wird ein solches gezieltes Abwerben von Kunden jedoch nach dem Zusammenschluss profitabler*', agreed minutes of the conference call with a competitor, 7.2.2014.

297 For instance, Dyckerhoff has plants in Lengerich and Gesecke in North Rhine-Westphalia, which are at a road distance to Höver of approximately 180 and 150 km and to Bremen of approximately 140 and 273 km respectively. Dyckerhoff had significant sales in reach of Holcim's plants in the northern Germany.

298 See Dyckerhoff's reply to questions 10 and 11 of the Commission's request for information of 5.12.2013.

(ii) Specific evidence from Holcim internal documents

(268) In its review[299], the Commission assessed in depth a study[300] by a business consultancy prepared for Holcim and finalised in May 2012 ('the business consultancy study'), and the conclusions of which could be consistent with a potential coordinative scheme and the increase in retaliation potential as set out in detail 6.6.3.1(a).[301] The business consultancy study was commissioned[302] in order to identify, assess and prioritise consolidation options in Germany for Holcim.[303]

(269) The business consultancy study[304] identifies as one of the key current challenges for Holcim Germany: *[…]**.[305] The business consultancy study also expects […]* on which it comments that *[…]**'.[306]

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299 Holcim provided the business consultancy study as part of its reply to the Commission's request for information of 14 November 2013, as clarified on 28 and 29 November 2013. The Commission had asked Holcim to provide the study in questions 11 and 16 of its request for information of 28 October 2013. Holcim replied to both questions on 31 October 2013: '*Holcim is still investigating this topic and will revert as soon as possible with a response.*' without subsequently following up on those questions. Furthermore, already in question 22 of its request for information of 20 September 2013, the Commission had asked Holcim to provide '*a full set of internal documents that are in the possession of Holcim that relate to the acquisition of Cemex West by Holcim*'. Holcim did not submit the business consultancy study in response to that question with its reply. The document was submitted on 18 December 2013, as an attachment to an email responsive to the Commission's information request of 14 November 2013 for internal documents. On 9 January 2014 the Commission inquired in a request for information why the study had not been submitted earlier. Holcim argued in its reply that the study can: (i) neither be regarded as a document requested by section 5(4) of the Form CO, because it was not were prepared for the purpose of assessing or analysing the concentration; (ii) nor in response to the Commission's request for information of 20 September 2013, as that particular information request asked for documents relating to the acquisition of Cemex West by Holcim.

300 See footnote (192).

301 Holcim argues that the business consultancy study is an external work product which should not be attributed to Holcim even if it uses Holcim presentation templates. See Holcim's reply to question 3 of the Commission's request for information of 9 January 2014. The Commission considers that business consultancies usually work in close cooperation with their clients on the basis of data and market knowledge provided by the client. The Commission also notes that the business consultancy study was prepared based on several follow-up workshops with the participation of Holcim's representatives. Therefore, Holcim cannot distance itself entirely from the results of the business consultancy study. Furthermore, the analysis contained in the business consultancy study can provide useful evidence as to the existence of potential coordinated effects of the Notified Transaction regardless of whether the analysis is attributed to Holcim as the Notifying Party in this case or to the author of the business consultancy study as a knowledgeable third party.

302 See the signed Letter of Engagement of 12 March 2012, page 1.

303 The Letter of Engagement of 12 March 2012 identified as one of the goals to attain in the second phase of the study to answer the questions: '*Where do we want to strengthen market share/sell volumes? And where do we have to have/build up "retaliation"-potential?*' Ibid page 2; the German original reads: '*Wo wollen wir Marktanteil stärken/Volumen bedienen? Und wo müssen wir "retaliation"-Potential haben/aufbauen*?' It also suggested developing implementation options in the form of '*Acquisitions or swaps of (the production facilities of) competitors and/or JV's to attain this goal*' Ibid, the German original reads: '*Kauf oder Swaps von Wettbewerber(werken) und/oder JVs, um dies zu erreichen*'.

304 Holcim internal document, entitled 'Strategy Northern-Germany. Holcim Northern-Germany. Final documentation', 9.5.2012.

305 Ibid, slide 4, see also slide 7.

306 Ibid, slide 7. An earlier draft workshop document related to the business consultancy study identified […]*. Holcim internal document, entitled 'Strategy Northern-Germany. Holcim Northern-Germany. Documentation of strategic options. Draft version – to be revised', 27.4.2012, slides 2 and 7.

(270) The Commission considers that the business consultancy study thus starts from the premise that cement suppliers in western Germany constitute an important competitive constraint on Holcim's cement operations in northern Germany and in Belgium, the Netherlands and Luxembourg with corresponding effects on cement prices in those regions.

(271) The idea of addressing the perceived competitive pressure exerted by competitors in North Rhine-Westphalia through the acquisition of one or more of those competitors also appears in other internal documents of Holcim, such as an internal presentation from 2009 on 'cement import mitigation'.[307] Similar views on the competitive pressure exerted by cement suppliers in North Rhine-Westphalia are expressed in two further presentations of September 2012[308] and September 2013[309] as well as in the minutes of a 2011 meeting of the Holcim executives responsible for the 'Western Europe' area.[310]

(272) The Commission considers that the business consultancy study commissioned by Holcim thus identifies the acquisition of a cement supplier based in North Rhine-Westphalia as a means to decrease the competitive pressure imposed by competitors from North Rhine-Westphalia. Therefore, the business consultancy study could be indicative of a strategy pursued by Holcim to acquire market players in North Rhine-Westphalia to alleviate the effects of significant and possibly increasing flows from international competitors such as Dyckerhoff as well as from regional North Rhine-Westphalian competitors to northern Germany and Belgium, where Holcim has a strong market position.[311] The business consultancy study assesses in detail the potential acquisitions of the cement companies […]* in North Rhine-Westphalia, either individually or in combination.[312]

(273) The business consultancy study identifies an ensuing price effect of an acquisition of Cemex West of EUR […]* per tonne in northern Germany, EUR […]* per tonne in Belgium and EUR […]* per tonne in the Netherlands based on the effects of '*manage own flows*' and '*loc. market presence*' under the wider heading of '*stabilization [northern Germany]/Benelux*'.[313]

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307 Holcim internal presentation entitled '*Cement Import Mitigation 2009. Market Analysis and Recommendations*' which refers to cement imports from Germany into Belgium and the Netherlands as well as their adverse impact on cement price levels in the German border regions. Holcim internal document entitled 'Cement Import Mitigation 2009, Market Analysis and Recommendations' 1.4.2009.

308 Holcim internal document, entitled 'Western Europe. Area Urs Frankhauser', 6.9.2012; slide 13: […]*; slide 15: […]*.

309 Holcim internal document, entitled 'Finplan Western Europ. LT Meeting #4', 10.9.2013; slide 3: […]*.

310 *[…]**' Holcim internal document, entitled 'Minutes: Area DO CEO Meeting 4.5.2011', page 2.

311 The strategic recommendation drawn by the business consultancy study is the […]*. Ibid, slide 4, see also slide 9.

312 Both of the options are assessed under the headings of '*stabilization [northern Germany] & Belgium*' and '*network optimization [northern Germany]/Benelux*'.

313 The Commission notes that in an earlier draft workshop document the term '*retaliation*' was used instead of the term '*local market presence*' to describe the price effects of the acquisition of Cemex West. Moreover, that earlier draft workshop document, also considered that one of the stabilisation effects ensuing from the acquisition of a competitor in North Rhine-Westphalia would be '*[l]local retaliation potential to discipline overly aggressive competitors (especially independents)*'. The term '*retaliation potential*' also appears on two slides of the business consultancy study in relation to two of the assessed acquisition scenarios, see footnote 304, slides 60 and 64.

(274) As regards Holcim's reactions to the business consultancy study, Holcim explained that it did not agree with the study's financial assumptions and strategic conclusions, in particular not with the *'price effect'* foreseen by the business consultancy study, which was perceived as unlikely. Thus, according to Holcim, the business consultancy study was not the rationale and trigger for the Notified Transaction (although it subsequently used the transport and logistics figures contained in the business consultancy study).[314]

(275) Holcim's internal documents, including the relevant correspondence of the Holcim employees commissioning the business consultancy study do not contain any evidence of an explicit rejection or endorsement of the findings of the study .

(276) There are, however, some indications that Holcim took into consideration the findings of the business consultancy study *implicitly* in the acquisition of Cemex West as reflected in the following statements:

– According to an initial reaction of August 2012 to the proposed Cemex West acquisition by the Holcim executive responsible for western Europe, the acquisition could provide Holcim […]*.[315]

– Holcim's executive responsible for Europe commented on the Notified Transaction in October 2012: '*[…]*.*'[316]

– The same Holcim executive summarised in August 2013: '*[…]*.*'[317]

(277) The Commission also notes that there are a number of statements in Holcim's internal documents relativising and questioning the assumptions or conclusions of the business consultancy study:

– '*[…]*.*'[318]

– '*[…]**'[319]

– '*[…]**'[320]

– '*[…]*.*'[321]

(278) According to those statements, although Holcim might have taken into account a certain consolidation effect when discussing the Cemex West acquisition, concrete price effects were considered to be ultimately uncertain. Moreover, there are also indications that according to Holcim acquiring one player only (for example Cemex West) would not lead to any potential desired consolidation effect.

(279) An earlier study of 2010 also assessed, *inter alia*, possible acquisitions of competitors in North Rhine-Westphalia. *[…]*'*.[322]

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314 See Holcim's reply to question 5(m) of the Commission' request for information of 20 January 2014.
315 Internal Holcim email of […]* of 17.8.2012.
316 Internal Holcim email of […]* of 29.10.2012.
317 Internal Holcim email of […]* of 24.8.2013.
318 Internal Holcim email of […]* of 11.5.2012. CX refers to Cemex.
319 Internal Holcim email of […]* of 30.10.2012.
320 Holcim internal presentation entitled 'Ceibo' of 2012.
321 Holcim internal document, entitled 'Memo' by […]* of April 2013, page 1.
322 Holcim internal document, entitled 'Europe Strategy Roadmap. Document to the Board of Directors', 8.10.2010, slides 52, 56, 66 and 100.

(280) Those conclusions were subsequently endorsed by the Holcim executive responsible for Western Europe stating that consolidation in North Rhine-Westphalia through the acquisition of regional players, including Cemex West, was neither a feasible nor a value creating option.[323]

(281) The conclusions of the business consultancy study thus conflict to a certain extent with the conclusions of a previous study on acquisition opportunities in North Rhine-Westphalia and prompted mixed reactions within Holcim. Overall, there is insufficient evidence to conclude that an increase in retaliation potential was an important factor in Holcim's decision to acquire Cemex West.

(iii) Conclusion on merger-specific changes

(282) On balance, there is therefore insufficient evidence to conclude that the Notified Transaction would appreciably increase Holcim's retaliation potential against suppliers in North Rhine-Westphalia and that any possible coordination would be made easier, more stable or more effective.

(c) Conclusions on potential strengthening of current coordination

(283) While certain features of the grey cement markets under investigation make them prone to coordination and there are indications of pre-existing coordination (in particular the gross margins and competitors' expectations of targeted reactions to aggressive competition), on balance, it is unlikely that the Notified Transaction would make coordination easier, more stable or more effective to a degree that could be considered to give rise to a significant impediment to effective competition on the various geographic markets for grey cement defined by circles with radii of 150 km or 250 km drawn around the Parties' cement production facilities in Germany, Belgium and north-eastern France.

6.6.3.2. Assessment of a potential creation of coordination

(284) The Commission has also assessed whether competitors that previously were not coordinating their competitive behaviour in the various geographic markets for grey cement defined by circles with radii of 150 km or 250 km drawn around the Parties' cement production facilities are significantly more likely to coordinate as a result of the Notified Transaction.

(285) As set out in recitals (286) to (289), it is unlikely that the Notified Transaction will change the market structure to such an extent that it will alter significantly the ability or incentives of competitors to engage in coordination as a result of the Notified Transaction.

(286) In particular, the Notified Transaction is likely to have no or only limited effects on the different factors facilitating coordination.

(287) As discussed in section 6.6.3.1(b), it is unlikely that the reduction in the number of cement competitors through the disappearance of Cemex West will make it significantly easier to reach the terms of coordination due to the presence of a reduced number of competitors. The reduction in the number of competitors is also

[323] Holcim internal document, entitled 'Area Western and Central Europe, Induction A. Gut', 26.9.2011, slide 9, Holcim internal document, entitled 'Europe Strategy Roadmap, Board meeting' 8.11.2010.

unlikely to have a significant effect on market transparency and, therefore, monitoring of potential deviations from coordination, as the Notified Transaction will not make it easier for competitors to access the relevant sources of information or otherwise facilitate market transparency. There is no indication that the Notified Transaction would weaken the possible reactions of non-coordinating firms or of new entrants.

(288) As regards potential effects on deterrence mechanisms, the Notified Transaction might provide Holcim with an increased retaliation potential through the acquisition of the Cemex West assets in close proximity to the regional cement suppliers in North Rhine-Westphalia and in close proximity to Dyckerhoff's cement production assets in western Germany. However, as discussed in detail in section 6.6.3.1(b), the advantages for Holcim in terms of transport costs, market knowledge and spare capacity appear to be rather small and were generally not confirmed by the respondents to the market investigation.

(289) Consequently, competitors that were previously not coordinating are not significantly more likely to engage in coordination as a result of the Notified Transaction and, thus, the Notified Transaction is unlikely to give rise to a significant impediment to effective competition due to the creation of coordinated effects on the various geographic markets for grey cement defined by circles with radii of 150 km or 250 km drawn around the Parties' cement production facilities in Germany, Belgium and north-eastern France.

*6.6.4. Conclusions on coordinated effects*

(290) The Notified Transaction is unlikely to significantly impede effective competition in the various geographic markets for grey cement defined by circles with radii of 150 km or 250 km drawn around the Parties' cement production facilities in Germany, Belgium and north-eastern France due to coordinated effects.

**6.7. Competitive assessment – coordinated and non-coordinated effects – possible [Holcim plant]* capacity reduction**

*6.7.1. Background*

(291) The Commission has found indications in Holcim's internal documents that: (i) Holcim has assessed the full (both kilns) or partial (one of the two kilns[324]) closure of its integrated grey cement plant in […]*; and (ii) that the plant closure could be merger-specific as it was discussed in the context of potential acquisitions in North Rhine-Westphalia, such as in the business consultancy study.[325] The idea of

[324] The operation of one kiln in […]* corresponds to approximately […]* kt of clinker capacity which could correspond to close to […]* mt of cement capacity assuming a clinker factor of 70 %. The […]* plant has a maximum technical clinker production capacity of approximately […]* mt which corresponds to approximately […]* mt of cement capacity assuming a clinker factor of 70 %.

[325] See the business consultancy study, Holcim internal document, entitled 'Strategy Northern-Germany. Holcim Northern-Germany. Final documentation', 9.5.2012, slide 4: '*Leveraging available capacity to partly substitute outdated Holcim plants with future capex needs*', slide 9: '*Possibility to partly/fully substitute outdated Holcim plants with upcoming capex requirements*', see also slides 10 and 11; see also Holcim internal document, entitled 'Strategy Northern-Germany. Holcim Northern-Germany. Documentation of strategic options. Draft version – to be revised', 27.4.2012, slides 10 and 11.

supplying […]* customers from Cemex West plants after the Notified Transaction was also mentioned in Cemex internal documents.[326]

(292) The […]* plant is considered by Holcim[327] and by market participants[328] to be outdated […]*. The cost of modernisation of the two existing kilns has been estimated by Holcim to be in the region of EUR […]* million.[329] Moreover, […]*.[330] Although Holcim has also considered an upgrading of the facility in the past,[331] due to the investment involved, Holcim submitted that the project is currently abandoned.

(293) Certain competitors that responded to the market investigation suggested that a full or partial closure of […]* would have an effect on prices in the relevant markets for grey cement.[332] By contrast, as regards the magnitude of such price effect, respondents indicated that, in view of the large existing overcapacity in North Rhine-Westphalia and Belgium, any capacity reduction would need to be much larger to have a significant price effect. According to a competitor '*[i]n order for capacity reductions to have a significant effect on the cement market in […]*, […]* at least 25 % of grinding and/or clinker production capacity (i.e. at least ca. 1.4 [mt]) would need to shut down*'.[333]

(294) As regards Holcim’s incentives to reduce capacity following the implementation of the Notified Transaction, if it closes down one or two kilns in […]*, the risk of losing […]* customers is reduced because Holcim will be able to continue supplying at least some of those customers from the newly acquired German plants. At the same time the price in the affected area could increase as a result of the capacity reduction increasing Holcim’s profits on sales to those customers. In addition, Holcim could indirectly benefit from a potential price increase due to a capacity reduction through the profits of the Cemex West plants, as their potential sales regions partially overlap with those of […]*. The Notified Transaction could thus increase Holcim's incentives to reduce capacity at […]*.

### *6.7.2. Framework of assessment*

(295) The closure of […]* could give rise to coordinated and non-coordinated effects in the grey cement markets via price increases. In the case of grey cement, as a relatively homogeneous product, the difference between available capacity and demand is

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326 '*By acquiring our cement & grinding plants in the West and by securing our slag contracts, H. will avoid a complete renovation of* […]*, *estim. at* […]* *Mio. € CAPEX by themselves*'. See Cemex internal document 'Interlinked Transactions in Europe – Due Diligence Phase – West Germany Team Meeting', 11.9.2013.

327 See Holcim internal document 'Kiln Systems – Overview'.

328 '[…]*' Agreed minutes of the call with a competitor, 25.2.2014.

329 The economic study of 24 February 2014, page 2.

330 Ibid.

331 […]*.

332 '*If […]*'s capacity of approximately 800 000 tonnes of grey cement exited the market, it could induce going back to normal prices.*' Agreed minutes of the call with a competitor, 28.2.2014.

333 Agreed minutes of the call with a competitor, 25.2.2014. Also: '*Eine Kapazitätsreduktion von 700.000 Tonnen […]* hat vermutlich keine Auswirkung auf das Preisniveau. Diese ist erst bei einem Kapazitätsabbau von mehreren Millionen Tonnen zu erwarten.*' Agreed minutes of the call with a competitor, 12.2.2014 and '*Der Zementmarkt in [Nordrhein-Westfalen] ist nach wie vor geprägt durch Überkapazitäten. Selbst der Abbau von Zementkapazität (bspw. die Schließung eines Werkes von Cemex West in Beckum) und der Abbau von Klinkerkapazität (u.a. bedingt durch den vermehrten Einsatz von Ersatzbrennstoffen) haben die Überkapazitäten nicht in spürbarem Maß abgebaut.*' Agreed minutes of the call with a competitor, 11.2.2014.

important for determining: (i) the competitive constraints on suppliers when setting prices unilaterally; and (ii) the constraints on incentives to collude. In both cases a reduction of overcapacity could increase prices.

(296) As regards how capacity affects competitive prices, two opposing scenarios may be possible:

(1) On the one hand, if there were no overcapacity in the relevant markets, grey cement would be a scarce good and it may be optimal for each cement supplier to set a price equal to the customers' willingness to pay for cement. Decreasing the price would not increase profit as margins would decrease without any more quantities being sold;

(2) On the other hand, if each cement supplier had capacity to serve the entirety of the relevant markets, each supplier would have the incentive to decrease prices in order to increase its sales volumes. With a relatively homogeneous product such as grey cement, it could be expected that prices would be close to the variable production costs, and correspondingly the contribution margins (price minus variable production costs) would only be as large as differences in the product offers. In such a case, differences in transport costs as well as limited switching costs would be relevant.

(297) In between these two opposing scenarios the amount of overcapacity in the relevant markets would matter. In particular, a cement supplier could choose to charge a high price and serve the residual demand which its competitors could not satisfy with their capacity. The less capacity competitors have, the higher the residual demand and thus the profit will be. As a consequence, the average price in the relevant markets would be negatively related to the amount of overcapacity if firms set prices competitively.[334]

(298) If firms are coordinating their behaviour or intend to do so, overcapacity would have two countervailing effects. On the one hand, it could increase the incentive to deviate and sell more. On the other hand, the punishment could be more severe if the other firms had more capacity for doing so. Thus the overall effect would depend on how firms would coordinate and retaliate against each other.

### *6.7.3. The Notifying Party's arguments*

(299) Holcim argues that the evaluation and discussions relating to the future of the […]* production facility are ongoing and no final decision has been taken.[335] Any decision in that regard will be taken with the aim of ensuring the competitiveness of Holcim's operations in […]* in the long-run. Holcim submits that it is investigating a range of scenarios that will reduce the investment needed in […]*, while continuing to assure a stable supply for its […]* customers.

[334] For example, in a so called Bertrand Edgeworth model with inelastic demand and six symmetric suppliers, the average contribution margin would be significantly lower when there would be only some additional capacity than demand compared to a situation where capacity would equal demand. Although this model would not perfectly fit the cement industry where location matters, suppliers have different capacities and prices could be set individually for each customer, this result would nevertheless be indicative that relatively small reductions in capacity could also lead to price increases.

[335] See Holcim's reply to question 20 of the Commission's request for information of 6 February 2014.

(300) According to Holcim, the evaluation of whether to run the […]* plant with one or two kilns is thus determined by Holcim's overall strategic goals and the Notified Transaction is not the decisive factor for the future of the […]* plant.[336] Holcim also argues that the final decision on the […]* plant is not predictable at this point in time. In principle, the […]* plant will be operated as long as it is profitable with adequate cost to market.[337]

### *6.7.4. The Commission's assessment*

(301) As explained in recitals (302) and (303), the Commission considers that there is an insufficient link between any possible capacity reduction at […]* and the Notified Transaction.

(302) The evaluation and discussions relating to a potential partial closure of the […]* facility are ongoing and no final decision has yet been taken by Holcim. In particular, recent Holcim internal documents indicate that Holcim is still assessing what actions to take regarding […]*. While Holcim is assessing the closure of one kiln in […]* as a possible option, uncertainties remain as to whether Cemex West assets in North Rhine-Westphalia should be taken into account as an alternative source due to, *inter alia*, logistical issues.[338]

(303) Recent discussions in Holcim internal documents[339] seem to favour the option of keeping both kilns at […]* in operation, in particular because of a […]* which would remove the need to invest in further […]* at […]*.[340] If the derogation were granted by the competent […]* authorities, Holcim internal documents identify […]*.[341]

### *6.7.5. Conclusion on [Holcim plant]* capacity reduction*

(304) The Commission considers that the Notified Transaction is unlikely to significantly impede effective competition in the market for grey cement within 150 and 250 km clusters around the […]* plant due to non-coordinated and coordinated effects as a result of a capacity reduction at Holcim's […]* plant.

## 6.8. Conclusion on grey cement

(305) The Commission therefore concludes that the Notified Transaction is unlikely to significantly impede effective competition on the relevant markets for grey cement.

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336 See Holcim's reply to questions 20 and 24 of the Commission's request for information of 6 February 2014.

337 See Holcim's reply to questions 22 and 23 of the Commission's request for information of 6 February 2014.

338 See Holcim internal document, entitled 'Allez! STC2' 10.12.2013. The Commission notes that these logistics issues have been also mentioned in earlier Holcim discussions. Email of […]* of 17 August 2012: '[…]*'. Due to the logistical challenges, Holcim identified shipments to […]* from Holcim's plants in […]* as an alternative to […]* for supplies to […]* customers.

339 Holcim internal document, entitled 'Allez! STC3' 7.2.2014 in particular slides 8 and 21.

340 Holcim requested a derogation from the […]* authorities […]*. See Holcim's reply to question 2(e) of the Commission's request for information of 12 March 2014.

341 Holcim internal document, entitled 'Allez! Status update Roland Köhler' 18.2.2014, in particular slides 4 and 6. The derogation was granted on 14 February 2014. See Holcim's reply to question 2(d) of the Commission's request for information of 12 March 2014.

## 7. CEMENTITIOUS MATERIALS

### 7.1. Relevant product market definition

*7.1.1. Introduction to cementitious materials*

(306) As set out in section 5, cement is produced by grinding clinker and, in some cases, other cementitious materials that constitute the main reactive components in cement.

(307) *Cementitious materials* refer to substances that have cementitious or pozzolanic characteristics and are used in the production of cement. The basic cementitious material is clinker. Alternative or supplementary materials such as blast-furnace slag and fly ash can also be used in the production of cement and concrete. They are added to cement[342] and concrete[343] in order to confer specific characteristics on the end product and to substitute, on the one hand, clinker in the production of cement and, on the other hand, cement in the production of concrete.

(308) *Clinker* is the basic cementitious material and the main constituent of (Portland[344]) cement. Clinker consists of calcium silicates and certain other minerals. It is made by heating in a rotary kiln at high temperature a homogeneous mixture of raw materials, such as limestone and alumino-silicate. The products of the chemical reaction aggregate together as molten minerals at the sintering temperature of approximately 1 450 °C.

(309) However, as clinker does not constitute an affected market even under the narrowest feasible market definitions, it is not considered further in this Decision.[345]

(310) In addition to clinker, other materials that exhibit cementitious or pozzolanic properties are used in the production of cement with the aim of either providing the end product with specific characteristics or to substitute clinker with cheaper raw materials ('alternative cementitious materials'). The most important alternative cementitious materials are fly ash and blast furnace slag.

(311) According to the Notifying Party, other alternative cementitious materials include natural pozzolans, metakaolin, natural limestone, silica fume and oil shale, although these materials are mostly used for special applications.[346] The Parties do not, however, sell cementitious materials other than fly ash and blast furnace slag.[347]

(312) *Fly ash* is a by-product of electricity (and heat) generation in (usually coal-fired) power plants. Fly ash can be either added to cement at the cement plant or used to

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[342] This can be done either by grinding them together with clinker in process called 'co-grinding' or by grinding the alternative cementitious materials separately and blending them with ground clinker.

[343] This can be done by, for instance blending ground alternative cementitious materials with cement during the production of ready-mix concrete.

[344] 'Portland' cement is hydraulic cement: it hardens when water is added. Portland cement was first developed in the United Kingdom in the early part of the nineteenth century, and its name is derived from its similarity to a stone quarried on the Isle of Portland, off the British coast. http://www.cemexusa.com/ProductsServices/CementHistoryFacts.aspx (last retrieved 14.4.2014).

[345] The Commission has not so far considered the exact market definition of clinker in its decisional practice. However, the Parties' activities with respect to clinker are negligible. In 2012, Holcim Southern Germany and Holcim Belgium/Netherlands did not sell any clinker to third parties, and Holcim Germany sold approximately […]* kt to […]*. As regards Cemex West, it did not sell clinker to third parties in 2012, with the exception of […]* tonnes sold to […]* for research purposes.

[346] Form CO, paragraph 251.

[347] Form CO, paragraph 251.

substitute cement at a ready-mix concrete plant. However, as fly ash does not constitute an affected market even under the narrowest feasible market definitions, it is not considered further in this Decision.[348]

(313) Liquid *blast furnace slag* is a by-product of steel production that forms during the production of pig iron by a thermo-chemical reaction in a blast furnace where it accumulates on top of the liquid metal. When the slag is released from the blast furnace, it is an extremely hot liquid that can be treated in two ways: it can either be air-cooled slowly or cooled quickly by quenching it in water or steam.

(314) When liquid blast furnace slag is cooled quickly by quenching in water or steam, it generates a glassy or amorphous granular or sand-like structure known as *granulated blast-furnace slag* ('GBS'[349]). GBS exhibits cementitious properties and is used as hydraulic binder in the production of, for instance, cement, concrete, mortar and grout. By contrast, when liquid blast furnace slag is air-cooled slowly, it forms a crystalline structured aggregate-like mass called air-cooled blast furnace slag ('ABS'). ABS does not have cementitious properties similar to GBS. It is used as an aggregate in other applications such as road construction.

(315) For the production of further downstream products, such as cement, GBS needs to be ground. In the production of cement, the grinding often takes places together with clinker (so-called 'co-grinding') to directly produce blended cements. Alternatively, GBS can be ground separately in which case a powder known as *ground granulated blast-furnace slag* ('GGBS'[350]) is produced. GGBS is then blended with ground clinker and other cement constituents to produce blended cements.

(316) In some Member States, such as the United Kingdom, GGBS is also used as a substitute of cement in the production of concrete at ready-mix cement stations.[351] National concrete standards, however, appear to limit the possibility of using GGBS as a substitute for cement in concrete production in other Member States, such as Germany.[352]

*7.1.2. Previous decisional practice*

(317) In past decisions, the Commission considered, but ultimately left open, the question of whether products derived from fly ash and blast furnace slag belong to the same product market, referring to cementitious materials other than clinker as 'cement additives'.

(318) For example, in *CSN/Cimpor*, the Commission left open whether GGBS constitutes a distinct market.[353] Similarly, in *Heidelberg/Hanson*, the Commission found indications that GGBS and fly ash belong to the same relevant market but left that

[348] Cemex West is not meaningfully present in the sales of fly ash as it sold only […]* kt of fly ash in 2012. In any event, the Parties' combined 2012 market share remained below 15 %.

[349] Sometimes also abbreviated as GBFS.

[350] Sometimes also abbreviated as GGBFS.

[351] See, for instance, UK Competition Commission report of 14.1.2014 – A report on the aggregates, cement and ready-mix concrete market investigation, paragraph 5.45.

[352] See Holcim's reply to the Commission's request for information, 25.9.2013, Question 8, and Form CO, paragraph 242. See also the minutes of the call with FEhS – Institut für Baustoff-Forschnung e.V. ('FeHS-Institute'), 17.12.2013.

[353] Commission's decision of 15 February 2010 in Case No COMP/M.5771 – CSN/Cimpor, paragraph 12.

question open.[354] In the earlier case of *CRH/SEMAPA/Secil JV* the Commission also left open whether fly ash belongs to a wider cement additives market that also includes other materials, such as blast furnace slag. In a number of other cases, the Commission also discussed, but ultimately left open, the question whether fly ash constitutes a market of its own.[355]

*7.1.3. The Notifying Party's arguments*

(319) The Notifying Party submits that all cementitious materials, or at least blast furnace slag and fly ash, belong to a single relevant product market. According to the Notifying Party, these cementitious materials can be used, to an appreciable extent, as substitutes for one another, for clinker (to produce cement) and for cement itself (to produce concrete).

*7.1.4. The Commission’s assessment*

(320) Respondents to the market investigation did not support the Notifying Party's view as regards the relevant product market for alternative cementitious materials. While respondents pointed to a certain degree of demand-side substitutability between blast furnace slag derived products and other cementitious materials,[356] both technical (for example quality, characteristics and colour of the final downstream product) and economic considerations (for example price and availability) appear to limit that substitutability.[357] In addition, respondents noted that GBS and GGBS have different chemical characteristics compared to fly ash and thus different properties and usability in the production of cement and concrete.[358] Furthermore, there is no supply

354 Commission’s decision of 7 August 2007 in Case No COMP/M.4719 – Heidelberg/Hanson, paragraphs 16–20.

355 Commission’s decision of 14 March 2006 in Case No COMP/M.3868 – DONG/Elsam/Energi E2, paragraph 276; Commission’s decision of 28 May 2004 in Case No COMP/M.3267 – CRH/Cementbouw, paragraph 10; Commission’s decision of 14 August 2002 in Case No COMP/M.2826 – Alsen/E.ON/JV, paragraph 10; and Commission’s decision of 16 July 2001 in Case No COMP/M.2465 – CVC/Amstelland, paragraphs 11 and 15.

356 See replies to question 8 – Phase I questionnaire to competitors; question 9 – Phase I questionnaire to customers; questions 8 and 9 – Phase II questionnaire to competitors; and questions 9 and 10 – Phase II questionnaire to customers.

357 See replies to questions 9 and 10 – Phase II questionnaire to customers; agreed minutes of the call with a competitor, 10.12.2013; and agreed minutes of the call with FEhS-Institute, 17.12.2013.

358 Blast furnace slag is a latent hydraulic material whereas fly ash is a pozzolan, which results in different chemical reactivity in cement/concrete. *'Reduced performance of FA versus GBS results in limited usability into cement. Limited availability and price to high restricts use dramatically.*', *'The standard EN 197-1 limits the amount of fly ash in the cement by a maximum of 35 %. LH Cements with fly ash not producible.*', *'The chemical reaction is different. The composition is different. The origin is different. Fly ash is pozzolanic, GGBS is latent hydraulic (Lime content as major difference). In practice main use of fly ash is "addition to concrete". GGBS is mainly used as "composite in cement". Both can be used in these applications but have to follow technical standards with explicit and different rules for each (products and use).*', *'Fly ash and GGBS differ in structure and composition. The use of these materials for the production of concrete is subject to different production processes.*', *'GGBS wird nicht in der Betonproduktion eingesetzt. Eine Umstellung von Flugasche auf GGBS is nicht sinnvoll.'* See replies to question 8 – Phase I questionnaire to competitors; question 9 – Phase I questionnaire to customers; questions 8 and 9 – Phase II questionnaire to competitors – cementitious materials; and questions 9 and 10 – Phase II questionnaire to customers – cementitious materials. See also agreed minutes of the call with FehS-Institute, 17.12.2013.

side substitutability between blast furnace slag and any other cementitious materials, including clinker.[359]

(321) Among the broad category of alternative cementitious materials, respondents to the market investigation considered GBS and GGBS to be the closest alternatives to clinker in the production of cement. Other alternative cementitious materials were said to be technically or economically different although they may be used in some applications due to their specific chemical characteristics.[360] That is also reflected in the EU cement standard EN 197-1 that allows the use of up to 95 % of blast furnace slag in the production of cement, while restricting the use of other materials to lower amounts, for instance fly ash to only 35 %.

(322) Moreover, according to respondents to the market investigation, a limited number of customers have in the past switched from GBS or GGBS to other cementitious materials. In the few instances where such a switch has occurred, it has most often occurred from GBS or GGBS to clinker when the availability of blast furnace slag had been reduced.[361]

(323) As to the question whether GGBS and GBS could be distinct markets, respondents to the market investigation indicated GBS and GGBS to be largely substitutable as GGBS is merely further processed (ground) GBS,[362] although separate trading in GBS and GGBS seems to take place.

(324) In any case, since it is unlikely that the Notified Transaction will significantly impede effective competition even under the narrowest plausible product market definition, the exact relevant product market definition for cementitious materials can be left open.

### 7.2. Relevant geographic market definition

#### *7.2.1. Previous decisional practice*

(325) In *Heidelberg/Hanson*, which concerned the United Kingdom, respondents to the market investigation supported a market wider than the national market, given that European continental exporters of GGBS exerted competitive pressure in the United Kingdom. The market definition was, however, left open.[363] The geographic market definition was also left open in *CSN/Cimpor*.[364]

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359 Blast furnace slag is a by-product of steel production while other cementitious materials are produced or obtained through other processes.

360 See replies to questions 9 and 10 – Phase II questionnaire to customers – cementitious materials; agreed minutes of the call with a competitor, 10.12.2013; and agreed minutes of the call with FEhS-Institute, 17.12.2013.

361 The market participants that indicated a reason for the change noted reduced availability of GBS during a past economic crisis, stating *'[r]educed availability of GBS in 2009 due to steel crisis forced to go back to CEM I with higher clinker content'* and *'[d]uring the financial crisis there was an undersupply of GBS in Germany. Hence we had to produce our cements with clinker instead of GBS'*. See replies to questions 7 and 8 – Phase II questionnaire customers – cementitious materials.

362 See replies to questions 8 and 9 – Phase II questionnaire to competitors – cementitious materials; and questions 9 and 10 – Phase II questionnaire to customers – cementitious materials.

363 Commission’s decision of 7 August 2007 in Case No COMP/M.4719 – Heidelberg/Hanson, paragraph 31.

364 Commission’s decision of 15 February 2010 in Case No COMP/M.5771 – CSN/Cimpor, paragraph 15.

(326) In the earlier case of *CRH/Semapa/Secil JV*, however, the wider market for cement additives was considered to be national in scope.[365]

*7.2.2. The Notifying Party's arguments*

(327) The Notifying Party submits that the relevant geographic market for alternative cementitious materials should be defined as *'quasi-European'*,[366] and, in any case, *'much larger than national in scope'*. The Notifying Party supports that view by reference to the commoditised nature of the products and the ability to transport them economically over long distances, *'easily up to and beyond 500 km'*.[367]

(328) The Notifying Party's estimates of the transport costs of GBS and GGBS are presented in Tables 4 and 5. The Notifying Party estimates that the transport costs of GGBS are slightly higher than those of GBS when transported by lorry.

**Table 4 Notifying Party's estimate of GBS transport costs**[368]

| **Transport method** | **Distance: 150 km, EUR / tonne** | **Distance: 250 km, EUR / tonne** | **Distance: 350 km, EUR / tonne** |
|---|---|---|---|
| Lorry | [10–20]* | [10–20]* | [20–30]* |
| Train | [0–10]* | [0–10]* | [10–20]* |
| Barge | [0–10]* | [0–10]* | [0–10]* |

**Table 5 Notifying Party's estimate of GGBS transport costs**[369]

| **Transport method** | **Distance: 150 km, EUR / tonne** | **Distance: 250 km, EUR / tonne** | **Distance: 350 km, EUR / tonne** |
|---|---|---|---|
| Lorry | [10–20]* | [10–20]* | [20–30]* |
| Train | [0–10]* | [0–10]* | [10–20]* |
| Barge | [0–10]* | [0–10]* | [0–10]* |

(329) According to the Notifying Party, cementitious materials are also traded internationally, for example from Spain to the United States and South America as well as from Italy to the United States, Africa and the Mediterranean countries.[370]

*7.2.3. The Commission's assessment*

(330) GBS is produced solely at steelworks. Transport from steelworks to intermediary storage sites will therefore result in transport costs that effectively limit the economic possibility to transport the GBS further from that storage site. Similarly, in cases

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365 Commission's decision of 28 May 2004 in Case No COMP/M.3415 – CRH/SEMAPA/Secil JV, paragraph 16.

366 This would cover an area consisting at least of Germany, Belgium, the Netherlands, Luxembourg, France, Norway, Sweden, Denmark, the UK, the Czech Republic, Poland, Austria, Switzerland and Italy. Form CO, paragraph 116, and the Notifying Party's submission of 9 January 2014, page 81.

367 Form CO, paragraph 265.

368 The Notifying Party's reply to the Commission's request for information, 25.9.2013, Question 5.

369 The Notifying Party's reply to the Commission's request for information, 25.9.2013, Question 5.

370 Form CO, paragraph 266.

where GBS is first transported from steelworks to a grinding facility located elsewhere, the transport costs associated with this first transport of GBS are likely to limit the feasible subsequent transport distance of GGBS from that grinding location.[371]

(331) The Commission therefore considers that economically viable transport distances for both GBS and GGBS should be assessed as starting from the steelworks producing GBS. Those distances may be longer if a transport method other than lorry is used, albeit that not all customers are able to receive deliveries by other means than by road transport as they are not situated near inland waterways, seaports or railways.

(332) Regarding those distances for GBS and GGBS, respondents to the market investigation did not support the Notifying Party's view that GBS can be economically transported over long distances. Rather, respondents considered that costs limit economically viable transport distances of GBS and GGBS.[372]

(333) Regarding economically viable transport distances for GBS and GGBS, respondents to the market investigation generally estimated that these distances are confined to a maximum of 250–300 km.[373] Those estimations are in line with data on the Parties' deliveries of GBS and GGBS to third-party customers, which indicates that a majority – and from some locations all – deliveries are made to locations within 250 km from the production facility.[374]

(334) As for national borders, respondents to the market investigation considered that they do not affect trade flows of GBS and GGBS.[375] That is supported by the fact that there is a certain level of cross-border trade, for example exports from the western parts of Germany, where Cemex West's GBS sourcing and processing is located, into neighbouring territories such as France, Belgium and Luxembourg.[376]

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371 For instance, Holcim takes into account transport costs of GBS when producing GGBS at its […]*, but not when producing GGBS in […]*. See Holcim's reply to the Commission's request for information, 6.2.2014, Question 42.

372 See replies to questions 14–5 and 18–9 – Phase II questionnaire to competitors – cementitious materials, and replies to questions 14–7 and 19–22 – phase II questionnaire to customers – cementitious materials. See also Agreed minutes of calls with customers 17.9.2013, 26.9.2013 and 1.10.2013 as wellas agreed minutes of a call with a competitor 10.12.2013. See also agreed minutes of a call with FEhS-Institute, 17.12.2013.

373 *'The maximum economically viable delivery distance would be at around 300 km by road.', 'The maximum delivery distance depends on transport means and costs (approx.. 120 km by truck/approx.. 300 km by vessel being the longest distance currently/generally reasonably feasible).', 'However, sourcing distance ultimately depends on the transport costs, currently making deliveries above 250 km on road economically unviable',* and *'The maximum distance where they can transport GGBS by truck and still be competitive is 250 – 350 km'*. Agreed minutes of calls with customers 17.9.2013, 26.9.2013 and 1.10.2013 as well as agreed minutes of a call with a competitor 10.12.2013. See also agreed minutes of a call with FEhS-Institute, 17.12.2013.

374 Parties' replies to the Commission's request for information, 17 September 2013, Question 5.

375 See replies to questions 14 and 18 – Phase II questionnaire to competitors – cementitious materials, and replies to questions 15 and 20 – phase II questionnaire to customers – cementitious materials.

376 For instance, Holcim France has sourced annually approximately […]* kt of GBS from […]*, for use in Holcim's plants located in France. See Holcim's reply to the Commission's request for information, 28.10.2013, Question 32. The Parties themselves exported approximately [less than 15]* % of GBS at their disposal in Germany in 2012 (including exports as GBS and as further-processed GGBS) to, for instance France, Belgium, Luxembourg and the United Kingdom. See Holcim's reply to the Commission's request for information, 28.10.2013, Questions 27 and 32; Holcim's reply to the

(335) Therefore, the Commission considers that 250 km radii around Cemex West's GBS sourcing sites and any Holcim GBS sourcing sites falling within these radii constitute the relevant geographic market most likely to be affected by the Notified Transaction. The locations and 250 km radii around them are presented in Figure 10.

[Map showing the sites of Cemex West's GBS sourcing in Duisburg and drawing 250km circles around those sites. The circles encompass steelworks in Germany, the Netherlands and Belgium.]*

**Figure 10 The Parties' GBS sourcing in Germany and 250 km radii**[377]

(336) Within these 250 km radii, Cemex West sources its GBS from the steel producers […]*. As for Holcim, it sources GBS for its German operations from the steel producers […]*). Within the 250 km radii from Cemex West's sourcing locations, Holcim also sources GBS from […]* for operations in the Benelux countries.[378] In addition, Holcim France sources GBS from the steel producer […]*. This GBS is, however, used for operations in France.[379]

(337) In any case, as it is unlikely that the Notified Transaction will significantly impede effective competition even under the narrowest possible geographic market definition, the exact geographic market definition concerning GBS and GGBS can be left open.

*7.2.4. The Parties' activities*

(338) The Parties source blast furnace slag for their own cement production. In addition, they are also involved in the processing of blast furnace slag and the subsequent sale of GBS and GGBS.

*7.2.5. Other suppliers and their production facilities*

(339) Blast furnace slag, from which GBS and GGBS are derived, is a by-product of steel production. In Germany, such production takes place at the premises of steel producers in Bremen (AM Bremen), Salzgitter (SZFG), Duisburg (HKM and TKS), Dillingen in Saarland (Rogesa), and Eisenhüttenstadt (ArcelorMittal Eisenhüttenstadt GmbH, 'AM Eisenhüttenstadt'). In the Netherlands, production takes place in Ijmuiden (Tata Steel Ijmuiden), and in Belgium in Ghent (AM Ghent).

(340) Liquid blast furnace slag needs to be granulated in a granulator[380] in order to be used as a substitute for clinker in the production of cement. The purpose of the granulator is to quench the hot liquid blast furnace slag with water or steam to produce GBS. Granulators are located at steelworks to minimise the transportation of the hot liquid slag. Some of the granulators are owned by cement manufacturers, in which case these usually have long-term agreements with the steel producer for the supply of

Commission's request for information, 6.2.2014, Question 43; and Cemex' reply to the Commission's request for information, 28.10.2013, Questions 15 and 17.

377 The Notifying Party's response to the Commission's request for information, 17.9.2013, Question 1.

378 See Holcim's reply to the Commission's request for information, 6.2.2014, Question 43.

379 See, for instance Holcim's reply to the Commission's request for information, 28.10.2013, Question 32. In addition, Holcim imports GBS from […]* for its internal cement production in Belgium, but does not sell this GBS further on to third parties. See Holcim's reply to the Commission's request for information, 6.2.2014, Question 43.

380 It is also possible, albeit less effective, to granulate the blast furnace slag manually by using a waterskin. See Form CO, paragraph 256.

liquid blast furnace slag to the granulator's owner. By contrast, if the steel producer owns the granulator, it can directly sell the GBS produced to the market.

(341) Cemex West owns a granulator in Duisburg at TKS' steelworks in Duisburg while Holcim owns granulators in SZFG's steelworks in Salzgitter (one granulator being fully-owned by Holcim and another one being a 50/50 joint venture with Schwenk, another cement manufacturer).

(342) All other granulators within the 250 km radii described in recitals (335) and (336) are owned by the respective steel producers.

## 7.3. Competitive assessment

### *7.3.1. The Notifying Party's arguments*

(343) The Notifying Party submits that the Notified Transaction will not significantly impede effective competition on the relevant markets for either cementitious materials or GBS and GGBS considered separately.

(344) The Parties’ combined market shares will be low and any possible '*position of strength*' will only be temporary in nature as it will depend on the existence of supply contracts with steel producers that are without exception limited in duration.

(345) Moreover, the Notifying Party submits that there is a surplus of GBS produced in the market compared to demand, resulting in significant stockpiles of GBS. According to the Notifying Party, steel producers are also increasingly marketing GBS directly to the market.

### *7.3.2. The Commission's assessment*

#### 7.3.2.1. Cementitious materials

(346) On an overall market for cementitious materials, comprising at least GBS, GGBS and fly ash, the Parties' combined market share would have amounted to only [10-20]* % in Germany in 2012[381] and none of the respondents to the market investigation raised concerns on that wider market.[382]

(347) Therefore, the Commission considers that it is unlikely that a significant impediment to effective competition could arise on that potential market.

#### 7.3.2.2. GBS

(348) As mentioned in recital (340), the Parties' sourcing of GBS is based on long-term supply contracts with steel producers. The Parties acquire their GBS in two ways. First, they source liquid blast furnace slag and then granulate in their granulators.[383] Second, they purchase readily-granulated GBS from the steel producers.

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[381] Form CO, paragraphs 280 and 385. On the quasi-European basis suggest by the Notifying Party, the Notified Transaction would not give rise to market shares in the merchant market for cementitious materials excess of 15 %. See Form CO, paragraph 278.

[382] See, for instance replies to questions 27, 29 and 30 – Phase I questionnaire to competitors; replies to questions 33, 35 and 36 – Phase I questionnaire to customers; replies to questions 45–9 – Phase II questionnaire to competitors – cementitious materials; and questions 56–63 – Phase II questionnaire to customers – cementitious materials.

[383] For the sake of completeness it is noted that the Cemex West's granulator located at TKS' steelworks is operated by TKS but financed by Cemex.

(349) For the reasons set out in recitals (350) to (358), the Commission considers that it is unlikely that the Notified Transaction will significantly impede effective competition on the relevant markets for GBS.

(350) First, there is currently an oversupply of GBS in Germany.[384] Regarding the market as a whole, the Notifying Party has indicated that the total amount of blast furnace slag stored in Germany by all market participants at the end of 2012 amounted to at least 3.3 mt.[385]

(351) While the Parties' long-term supply contracts with steel producers guarantee a constant supply of GBS, these agreements also oblige the Parties to take a certain amount of supplies regardless of their capacity to absorb the amount in their internal production or to sell it to the merchant market. That has led to the Parties having to store GBS and GGBS, and they have accumulated stockpiles of approximately […]* mt in Germany by the end of 2012 (Holcim: […]* mt; Cemex West […]* mt).[386] Holcim also disposed of (destroyed) […]* mt of GBS in 2012 at a cost of EUR […]* per tonne.[387] According to Holcim's internal documents, Cemex West's GBS sourcing amounts and high levels of GBS stocks are a liability and a risk, rather than an asset or opportunity.[388]

(352) Several respondents to the market investigation have also indicated that GBS can be stored only for a limited time because of degradation in reactivity over time even if such degradation can to some extent be counteracted by, for instance, grinding the GBS more finely.[389]

(353) Second, notwithstanding the fact that the Parties' 2012 sourcing of GBS in the 250 km radii[390] represented approximately 40–50 % of all GBS produced in Bremen, Salzgitter, Duisburg, Dillingen, Ghent and Ijmuiden,[391] it is unlikely that the merged entity will be in a position to limit access of its downstream competitors to GBS.

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384 See, for instance replies to question 42 – phase II questionnaire to competitors – cementitious materials, and replies to question 53 – phase II questionnaire to customers – cementitious materials.

385 Form CO, paragraph 399.

386 The figures include approximately […]* mt stored as GGBS, the rest having been stored as GBS. See Holcim's reply to the Commission's request for information, 28.10.2013, Question 28, and Cemex' reply to the Commission's request for information, 28.10.2013, Question 16.

387 The disposal cost given does not include the purchasing cost of the destroyed GBS that was approximately EUR […]* per tonne. See Holcim's reply to the Commission's request for information, 28.10.2013, Question 27; and Holcim's reply to the Commission's request for information, 17.9.2013, Question 2a.

388 See, for instance Holcim internal document, entitled 'Strategy Northern-Germany'.

389 Respondents to the market investigation indicated, for instance that *'[t]he maximum span of time is 5 years due to the quality of GBS worsening over time', 'maximal 2 Jahre', '[d]epending on storage facility, but the storing time is longer than for cement. We normally say 1 year without losing performance.', '[i]n fact the GGBS is produced according to demand; the raw material stored is in upstream process. GBS stored has after certain duration to be either poured with fresh one or ground more finely*'. See replies to questions 41 and 43 – Phase II questionnaire to customers – cementitious materials, and replies to question 33 – Phase II questionnaire to competitors – cementitious materials.

390 Should the market be considered to be national, the Parties' combined purchases would correspond to approximately 50–60 % of all German domestic production. Only Holcim sources from the steelworks located in the Benelux-countries and its purchases correspond to approximately 10–15 % of all GBS produced there. In addition, Holcim imported approximately […]* kt of GBS from […]*.

391 The Parties' total sourcing of GBS from steelworks in Bremen, Salzgitter, Duisburg, Dillingen, Ghent and Ijmuiden in 2012 was […]* mt, including their internal granulation of liquid blast furnace slag. The figure includes sourcing by Holcim France from […]* for use in France ([…]* mt). According to the

(354) In the first place, the Parties use a large amount of the GBS they source internally in their own cement production. Consequently, the Parties' share of GBS sales to the merchant market has been lower than their share of purchases from the steelworks. According to the figures provided by the Parties and the Commission's market reconstruction, the Parties' combined market share in the sales of GBS to the merchant market[392] was 20–30 % in 2012 with respect to GBS sold from steelworks in Bremen, Salzgitter, Duisburg, Dillingen, Ghent and Ijmuiden. Other market participants included, for instance TKS (30–40 %), HKM (10–20 %), Tata Steel Ijmuiden (10–20 %) and AM Ghent (10–20 %).[393]

(355) In the second place, since 2007, Cemex West's GBS sourcing agreements have been subject to a voluntary arrangement between Cemex and the German Competition Authority (Bundeskartellamt).[394] According to that arrangement, Cemex West's sourcing amounts have been significantly reduced from the pre-arrangement volumes of approximately […]* mt of GBS.[395] Table 6 shows the main long-term supply contracts the Parties had in 2012.

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Commission's market reconstruction, the total GBS production in the area was approximately [5–10]* mt in 2012.

392 Excluding sales made by steel producers to the Parties themselves.

393 The Parties' combined 2012 share of sale of GBS to third parties from all German domestic GBS production was 30–40 %. Other market participants included TKS (30–40 %), HKM (10–20 )%, Rogesa (10–20 %) and AM Eisenhüttenstadt (10–20 %).

394 The arrangement was entered into in 2007 but the first release of GBS for sale to other market participants by steel producers was required at the latest as of 1.1.2009. See Form CO, paragraphs 282-4.

395 In the absence of the arrangements, […]* mt of GBS would have been delivered to Cemex West annually as of 2008 and onwards. According to the arrangements, GBS has released for sale to other market participants three consecutive tranches of […]* mt each: the first at the latest as of […]*, the second at the latest as of […]* and the last at the latest as of […]*. See Form CO, paragraphs 282–4 and in particular Annex 19 to the Form CO, pages 3–4.

**Table 6 Parties' long-term supply contracts 2012 for GBS and liquid blast furnace slag in Germany and the Benelux-countries[396]**

| Party | Steelworks | Product | Take-off quantity, 2012, actual deliveries (tonnes) | Contract expiry | Comment |
|---|---|---|---|---|---|
| Holcim | […]* | GBS | […]* | […]* | |
| Holcim | […]* | Liquid slag | […]* | […]* | […]* |
| Holcim (France)[397] | […]* | GBS | […]* | […]* | |
| Holcim | […]* | GBS | […]* | […]* | |
| Holcim | […]* | GBS | […]* | […]* | |
| Cemex West | […]* | GBS | […]* | […]* | |
| Cemex West | […]* | GBS | […]* | […]* | […]*<br>[…]* |
| Cemex West | […]* | Liquid slag | […]* | […]* | |

(356) In the third place, the Parties have taken further steps during 2012 and 2013 to reduce their sourcing of GBS and have re-negotiated or initiated negotiations concerning some of their main agreements with steel producers. For instance, in 2013, Holcim agreed a reduction with […]* of approximately […]* mt to GBS volumes from 2014 onwards.[398] Cemex West has also agreed a similar reduction with a steel producer ([…]*).[399] As these respective amounts of GBS can now be commercialised by the steel producers themselves, this facilitates access to GBS by other market participants, such as competing downstream cement manufacturers.

(357) In the fourth place, many of the agreements the Parties have with steel producers for the supply of GBS will expire in the near future: Holcim's agreement with […]* will expire in […]*[400] and the majority of Cemex West's agreements will expire in […]*.[401] While it cannot be excluded that the merged entity may seek to extend or renew at least some of the agreements, the expiry of the agreements supports the Notifying

396 Sources: Form CO, annexes 20–1, Holcim's reply to the Commission's request for information, 28.10.2013, Questions 26–7, and Cemex West's reply to the Commission's request for information, 28.10.2013, Questions 14–5.

397 The sourcing is for cement production in France. No GBS is sold back to Germany or further to the Benelux countries. See Holcim's reply to the Commission's request for information, 6.2.2014, Question 44.

398 The amended response to the Article 6(1)(c), page 90.

399 The amended response to the Article 6(1)(c), pages 90–1.

400 The sourcing agreement with […]* is going to expire end of […]*; with […]*; and with […]*. Holcim's reply to question 8 of the Commission's request for information of 25.4.2014.

401 Taking into account the agreements the Parties had in force in December 2012, their combined share of GBS purchases from the steelworks in Bremen, Salzgitter, Duisburg, Dillingen, Ghent and Ijmuiden would drop to 30–40 % by 2016 and to 10–20 % by 2018.

Party's submission that the Parties' share of GBS sourcing is not fully stable and structural in nature.

(358) Third, the merged entity will continue to face competition from steel producers that are selling GBS directly.[402] Certain of the main steel producers that responded to the market investigation indicated that they prefer having multiple customers for their GBS, also facilitating access to GBS for customers other than through the merged entity.[403] For instance, one downstream cement competitor, Spenner, is presently constructing a new GBS grinding facility at HKM's steelworks in Duisburg, Germany. The grinding facility will have a total capacity of handling 0.3 mt of GBS a year.[404]

7.3.2.3. GGBS

(359) For the reasons set out in recitals (360) to (362), the Commission considers that it is unlikely that the Notified Transaction will significantly impede effective competition on the relevant markets for GGBS.

(360) First, as explained in recitals (348)–(358), competitors will continue to have sufficient access to GBS, the raw material needed for the production of GGBS.[405]

(361) Second, the merged entity will continue to face competition from alternative suppliers of readily-ground GGBS, such as Orcem B.V. whose 2012 market share within the 250 km radii exceeded that of the merged entity.[406]

(362) Third, respondents to the market investigation indicated that Spenner will be able to supply GGBS from its new grinding facility at HKM's steelworks (see recital (358)), thereby increasing the competitive pressure on the merged entity.[407]

### 7.4. Conclusion on cementitious materials

(363) Therefore, the Commission considers that it is unlikely that the Notified Transaction will significantly impede effective competition as regards cementitious materials.

## 8. CONCLUSION

(364) Therefore, it is concluded that it is unlikely that the Notified Transaction will significantly impede effective competition in the internal market or a substantial part thereof.

HAS ADOPTED THIS DECISION:

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402 Respondents to the market investigation indicated, for instance as follows: *'High availability of GBS. Alternative sources are Thyssen, HKM, Dillinger Hütte [Rogesa], VOEST [in Austria]*' and *'We would increase the amounts from our other GBS suppliers: Thyssen Krupp, Dillinger Hütte [Rogesa], Voest Linz [in Austria], etc.'*. See replies to question 52 – phase II questionnaire to customers – cementitious materials. Positive replies were also given by smaller cement manufacturers.

403 See replies to question 27 – phase II questionnaire to competitors – cementitious materials.

404 See www.spenner-zement.de/de/news (last retrieved on 4.4.2014).

405 See replies to questions 27, 29 and 30 – phase I questionnaire to competitors.

406 See, for instance agreed minutes of a call with a competitor, 10.12.2013. Ecocem's 2012 market share was 70–80 % in the sale of GGBS concerning sales from facilities located within the 250 km radii from Cemex West's sourcing locations.

407 See a competitor's reply to the Commission's request for information, 4.2.2014.

*Article 1*

The notified operation whereby Holcim Beteiligungs GmbH (Deutschland) acquires sole control of Cemex West within the meaning of Article 3(1)(b) of Regulation (EC) No 139/2004 is hereby declared compatible with the internal market and the functioning of the EEA Agreement.

*Article 2*

This Decision is addressed to:

Holcim Beteiligungs GmbH (Deutschland)

Willy Brandt-Stra• e 69

20457 Hamburg

Germany

Done at Brussels, 5.6.2014

*(signed)*

*For the Commission*
*Joaquín ALMUNIA*
*Vice-President*