# Hexagon Housing Association

**Board of Management**

**Report from the Development & Regeneration Director**

**7th June 2016**

**Agenda Item 15**

**Brickfield Cottages, Plumstead – Ground Collapse**

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#### 1.0 Summary

On 2nd May there was a ground collapse on the driveway to one of the houses at our newly built scheme in Plumstead. No-one was hurt .

The 40 home estate was evacuated by the police overnight and households were able to return the following day.

On the advice of engineers, the hole was concrete filled by end of day on 3rd May.

Five households remain temporarily housed in hotels, while we try and secure suitable temporary accommodation.

Ground experts have been appointed and initial investigative works commenced on 16th May, to try and establish the likely cause of the collapse. This investigative work is expected to take a min. of 3 weeks and is likely to take longer.

Once the cause is known, we can then establish what further action (if any) is needed to confirm the safety of the rest of the site.  *Possible* causes are a collapsed mine, or water ingress causing erosion of chalk.

The insurers have confirmed cover for the incident and the subsequent investigations we are undertaking.

All board members were notified by the Chief Executive on 5th May and a verbal update was provided to the Audit and Risk Committee on 10th May.

Further updates to board will be provided once further information becomes available.

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#### 2.0 Recommendation

That the Board **note** this report.

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**3 Background**

3.1 The site at King’s Highway was purchased by Hexagon in 2014, and completed in December 2015. The development comprises 34 houses and 6 flats. It forms part of the GLA funded Building the Pipeline programme.

3.2 As part of our due diligence, before purchasing the site, we commissioned an extensive geo-environmental ground investigation (via RSK) in partnership with Skillcrown Homes, the contractor selected to build the development.

3.3 The ground investigation report referred to the history of the site and the local area, and highlighted the site’s proximity to known mining areas. Appropriate borehole and geophysic investigations were carried out in light of the known information. The investigations *“..confirmed the absence of any voids associated with chalk mine workings at depth”* on the site.

3.4 The consultant’s recommendations were taken on board and piled foundations were used across the whole site which was over and above the suggestions for foundation design. Approximately 150 piles of depths between 11 and 14m were installed across the site.

3.5 Whilst on-site, the contractor did encounter two deep voids (on a different part of the site to this collapse) when trying to position two piles, and in consultation with their engineers and the NHBC, it was agreed that they should be filled with concrete.

3.6 No other ‘ground problems’ were encountered during construction.

3.7 A few days before the incident, there was a Thames Water mains leak close to the property where the ground collapsed. We are trying to get more information, as this *may* have been a catalyst for the collapse if it triggered chalk dissolution.

**4 Investigations to establish the cause**

4.1 Peter Brett Associates, were recommended by the loss adjusters, as the consultants we should employ to assist us with our investigations. They were formally employed on 10th May (**see Appendix 1**). They are arguably the most experienced consultants when it comes to the investigation and stabilisation of old chalk mine workings (assuming these turn out to be the cause of the problem) and also solution features.

4.2 The lead consultant (Clive Edmonds) has more than 30 years’ experience of investigating and stabilising chalk mines & solution features, including carrying out academic research on subsidence problems over chalk, writing many technical papers and giving invited talks etc. They have been involved in many collapse problems over the years, therefore have a well-established track record for dealing with these matters and will be able to bring clarity to the collapse problem in due course. They hold much historical information for the area concerning chalk mining.

4.3 Forkers are the Contractors who have been employed to carry out the intrusive investigative works, which will involve 16-20 vertical and angled rotary boreholes. This will establish whether disturbed ground or voids are present at depth, around the area of collapse. On completion of each borehole, the holes are being backfilled with a cement/bentonite grout mix. As of writing this report 5 boreholes had been completed to depths of 27-32m and no voids had been encountered.

4.4 In addition to this intrusive work, PBA are carrying out a ground resistivity survey involving the installation of metal electrodes into the ground. This will enable a 2D interpretation of the ground conditions at depth. An updated topographical survey is also being undertaken.

4.5 It is important to note that the investigation will be an iterative process depending on what they find, and where the investigation leads. Therefore it is difficult to establish an end date at this point in time.

4.6 The estimated costs for these *initial works* is £75k.

4.7 Whilst these investigative works are being carried out, houses 28-36 remain unoccupied.

4.8 On the advice of Peter Brett, daily monitoring of any movement to the five properties above, is being undertaken by Newsome surveyors. Some cracking had been detected after the incident.

**5 Affected residents**

5.1 There are five households who are badly affected as they have been unable to return home since 2nd May. The collapse occurred outside no. 32 and the 2 houses either side have had to remain unoccupied (28, 30, 34, 36)

5.2 These five households have been staying in hotels since the incident.

5.3 As at the time of writing this report, we have found suitable temporary accommodation within our stock for three families. We expect them to have moved out of hotels and into temporary homes by 3rd June. This is dependent on the work to the voids being completed.

5.4 For the other two households we are continuing to try and find accommodation for them and are in close contact with the Council for their assistance, as we have access to a very small number of homes, whereas the Council has a much bigger pool. However, the council have advised they may not be able to source any temp. homes within the borough.

5.5 For the rest of the residents, the biggest inconvenience is that they have been unable to park on the estate. Cars were recommended not to drive on to the estate after the incident. Access to the estate is now prohibited by the machinery which is on site carrying out the investigative work.

5.6 Due to the restricted access situation, the rubbish collection arrangements have had to be altered, such that we have arranged to move bins to the entrance of the estate for collection. Our cleaning contractor is facilitating this arrangement.

5.7 A security presence is being maintained on site (since 3rd May) due to the risk presented to the five unoccupied homes which contain tenant’s property.

5.8 Understandably, the residents remain concerned about their safety as it is impossible at this point for us to confirm that another collapse will not happen. We have been open with them about this. There are households who have said they want to move off the estate, and we are managing these requests, but not treating them as a priority.

**6 Public Relations**

6.1 There were a number of press enquiries in the days following the incident, which the Chief Executive responded to. Articles featured in the local press and on local t.v. News. Generally, the press coverage was not negative towards Hexagon, however there was one story which did not reflect well on Hexagon; One of the wheelchair bound residents claimed that he had not been fairly treated by Hexagon with regard to the evacuation arrangements, and consequently was left to make his own arrangements. His claims were investigated and found to be unsubstantiated.

In recent weeks there have been no press enquiries.

6.2 The Chief Executive arranged for a resident’s meeting to be held on 12th May, where we explained to residents what we were doing to establish the cause of the collapse and seek assurance of resident’s safety. Peter Brett were in attendance as well as members of the housing services team and the Development & Regeneration Director. Residents had the chance to ask questions, and the majority of concern was around reassurance on the ongoing safety.

6.3 Since the incident we have tried to keep resident’s informed of what we are doing using a variety of communication methods; email, website, texts and direct mailings. We will arrange another meeting once we have the results of the investigation.

6.4 We do have an ongoing PR challenge. Dominic Clinton is an archaeology / mining enthusiast with a website dedicated to information about historic mining sites across SE London. He and his ‘colleague (Dr. Von Per Schneiber ) believe that it is a collapsed mine which has caused the collapse. They also believe that there are other mines on the site. He has issued a number of postings on his site setting out his view on what is going on at Brickfield Cottages. He has been communicating with us directly and has contacted a number of other parties including the contractor, NHBC, the GLA as well as the local press.

6.5 We are in communication with Mr Clinton in an effort to keep him ‘onside’ and assure him that we are following well sourced advice. We are also sharing any technical information or guidance he provides with Peter Brett.

6.6 It is fair to say that the tone of his communications is very unsettling as it warns of the dangers of further collapse, and questions the actions we have taken thus far, suggesting we are being secretive. It is understandable that residents are concerned about their safety.

6.7 We have decided that we need some assistance with managing our communications, so that we can be more pro-active in letting residents know what we are doing. Importantly, this will be reassuring for residents but also it will serve to counter the misleading updates being posted by Dominic Clinton. We are in the process of sourcing a suitable communications ‘expert’ to assist us.

**7 Insurer’s Position**

7.1 The insurers have confirmed that the incident is covered (filling the whole, temp. accommodation) including the costs of the investigations. They have allowed a reserve of £350k.

7.2 It is not yet clear if there are any costs which we’ve incurred which won’t be covered. E.g. security

7.3 They will be investigating liability on the part of the contractor and Thames Water.