Dear Clive

We, the undersigned, are writing to you as constituents and residents concerned about aspects of the proposed development of the Norwich Community Hospital site in NR2, situated between Bowthorpe Road, Holly Drive, Dereham Road, Merton Road and Godric Place. We support the idea of improving and expanding the facilities on this site, and understand the need for the NHS to pursue innovative funding models in a time of austerity (although many of us would prefer proper government funding on the NHS). However, we have serious concerns about the proposed construction of a private care home and two key worker accommodation blocks of 3-4 storeys at the eastern end of the site, in very close proximity to existing residential housing, in an area with a long history of ground instability. These concerns relate to the potential for the construction of these buildings to trigger subsidence and collapse and thus place properties and lives at risk, and to their wider impacts on the built environment and environmental amenities.

**Safety concerns**

The care home and key worker accommodation blocks are planned for construction on the existing car park and areas immediately south of the car park, constructed over a chalk extraction pit that was partially backfilled in the 1930s and further filled in the 1980s-90s to create the car park. A January 2018 Desk Study Report on the hospital site by Harrison Group Environmental Limited in (Report Number GN21484_DS, available via Norwich City Council’s website) states that backfilling of the pit and the “made ground” under the car park extends to a maximum depth of 21.5 m (at the northern end of the car park adjacent to Merton Road and Holly Drive). The report states that anecdotal evidence indicates the pit was filled with “all kinds of factory waste” (p.10). A March 2018 risk assessment by Capita indicates the potential for this fill to contain coal ash, asbestos, lead and other contaminants. The Desk Study Report further states that the depth to the chalk aquifer is approximately 25 m in this location.

The Desk Study Report states that deep piling will be required for buildings constructed in the location of the existing car park. We are very concerned that these pilings may breach the aquifer and result in its contamination by toxic materials in the fill under the current car park. This could

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1 Details of the plans are available from Norwich City Council at: [https://planning.norwich.gov.uk/online-applications/applicationDetails.do?activeTab=summary&keyVal=P5BS20LX0HQ00](https://planning.norwich.gov.uk/online-applications/applicationDetails.do?activeTab=summary&keyVal=P5BS20LX0HQ00). We have also set up a website via which to collate information and coordinate community responses at: [http://nchrg.wordpress.com](http://nchrg.wordpress.com).
have significant impacts on both the environment and people’s health, via contamination of water supplies.

A further, and potentially much more dramatic risk, relates to the impact of the construction on ground stability.

Merton Road has a long history of ground instability and collapse, including subsidence in the back garden of one of the properties on the road in 1922, the opening of a large hole extending across the entire width of the road in 1927, the collapse of two houses in 1936 that resulted in two fatalities, and the need to underpin two properties following subsidence in the 2000s. The last of these occurred following resurfacing work on Merton Road, which involved the transit of heavy vehicles down the road. Within the last year, properties on Holly Drive have needed to be underpinned due to subsidence at the edge of the old extraction pit. Subsidence and collapses on Merton Road have been due to the extensive network of tunnels and associated features that emanate from the extraction pit under Merton Road. Tunnels and associated structures such as air shafts, lime kilns and underground chambers are detailed on maps produced by the Norwich Corporation following the fatal house collapse in 1936 and are represented on a map in a Desk Study Report. However, it is likely that many such features remain unmapped. Unmapped tunnels may also extend under Holly Drive, Bond Street, and Bowthorpe Road towards the cemetery.

We are very concerned that vibration from deep piling in close proximity to the tunnels and associated features and its environs may result in further subsidence and collapse, particularly under Merton Road and Holly Drive. This risk will be particularly acute if impact piling is used, which seems likely as it is cheaper than other, safer alternatives such as augured piling.

A further potential, and at present unquantifiable risk is that any breaching of the aquifer by deep piling may result in water entering the tunnels via the loose fill under the car park. Flooding of the tunnels to extinguish a fire is thought to have triggered the fatal collapse in 1936, due to softening and dissolution of the chalk by water. Any disturbance of the ground, and especially any breaching of the aquifer, may result in similar effects, affecting ground stability and increasing the risk of collapse.

At least two houses on Merton Road sit on piles that extend to depths of approximately 18 metres and pass through subterranean voids. It is possible that tunnels and voids exist at greater depths at the northern end of Merton Road and under Holly Drive, which are adjacent to the deepest parts of the extraction pit. Any such features may be much closer to the aquifer, with increased vulnerability to water infiltration in the event that the aquifer is breached by deep piling.

Wider impacts

The proposed care home and key worker accommodation are envisaged as 3-4 storey buildings, within 10-30 metres of existing residences on Holly Drive and Merton Road. The Council on Tall Buildings and Urban Habitat Tall Building Height Calculators\(^2\) estimates an approximate height for a 4-storey mixed use building of just over 24 metres. Based on this estimate, these buildings could be well over twice the height of the existing properties in the area, which is around 9 metres. The height of the care home will be well over twice its distance from the properties on Holly Drive.

The height of this building and the key worker accommodation will be comparable to the distance between these structures and the properties on Merton Road, measured to the ends of the gardens.

These buildings will thus completely dominate the area, resulting in overlooking, loss of privacy, and loss of ambient light and direct sunlight. The interiors of the Victorian terraces on Merton Road are already quite dark, and the anticipated loss of light resulting from the construction of these buildings is a cause of great concern and stress to local residents on the western side of Merton Road. These buildings are completely out of keeping with the existing residential structures to which they will be immediately adjacent and represent a grossly out of scale development by virtue of their height, mass and proximity to residential properties.

**Actions**

We believe that is paramount to eliminate any risks to lives and property associated with the development of the hospital site. We are worried that our concerns will not be taken seriously by the developers, and that risk assessments will focus on the hospital site alone and fail to consider wider risks and impacts on the local community. The proposed construction of a 4-storey care home within 10 metres of people’s homes in an area of known ground instability suggests that these risks and impacts are not foremost in the minds of the developers. Local residents also feel that the developers are doing the minimum required in terms of consultation and keeping residents informed about the development (flyers about the consultation appear only to have reached only a very limited number of homes in the area, and many people remain unaware of the development).

We believe it to be vital that a proper risk assessment, including a land instability risk assessment, is conducted by an appropriate body. These assessments should address risks in the surrounding areas associated with historical mining and related works, not just on the hospital site. Where risks are identified in association with tunnels and related features emanating from the extraction pit but external to the development site, these should be addressed by the developers.

Ideally, the area over the pit should be put to alternative use, for example maintained as a car park, with the proposed structures being relocated elsewhere on the site away from unstable ground and not in extreme proximity to existing residential properties. Any construction that does take place on the car park should employ augered piles rather than cheaper impact pilings that carry high risks of ground disruption. Any pilings must avoid breaching the chalk aquifer.

Residents in the immediate vicinity should be offered a structural survey of their homes, and any existing cracks should be monitored in order to detect any subsequent movement that may be associated with the development. The costs of these surveys should be met by the developers, who should also pay for any subsequent remedial works that reasonably can be linked to the development.

We are concerned that the developers will not take the above actions unless they are encouraged to do so through considerable external pressure. We therefore would greatly appreciate your help and support in ensuring that the development considers and addresses risks to lives and property and the impact of out-of-scale buildings on local residents. We would be very grateful if you could raise these issues with local Labour councillors, planning, and the NHS Trust.
We would be happy to meet with you to discuss this matter further.

Yours sincerely

Nicholas Brooks