

EXECUTIVE SUMMARY

(1) In November, 2010 Belfast City Council (BCC) commissioned Land Quality Management Ltd (LQM) to undertake contaminated land assessment works at the former Belfast City Gasworks, east of Ormeau Road, Belfast. The Site has been considered in terms of three zones: The Developed Area; The proposed Marriot Hotel; The undeveloped Northern Fringe.

(2) No risks to current receptors warranting immediate remedial action were identified.

(3) Legal drivers have been identified requiring protection to: Current and future users (planning); Surface water (under the Water Order 1999) and Aquifer (under the Water Order 1999 and Groundwater Regulations 2009). It is not clear whether there is a legal driver to address the contamination already present in the sandstone aquifer.

(4) Many uncertainties were identified in the preliminary conceptual site model (PCSM). Suggested actions to address each uncertainty have been detailed. Stakeholders need to be aware of these to assist in their decisions on the site. The major uncertainties relate to:

- The extent of coal tar contamination in the sandstone aquifer
- Groundwater conditions;
 - depth to groundwater (minimal data) and
 - contradictions in the data for the Marriot and Northern Fringe parts of the Site
- vapours entering buildings in the Developed Area.
- Impact of piled foundations in respect of upward vapour migration and possibly also downward migration of contaminants to the underlying aquifer.

(5) This report outlines likely risk assessment strategies (Section 6) and possible methods of risk management/ remediation and may be a useful reference when evaluating submitted proposals relating to contamination issues at the site. Its findings, if not the whole report, should be made available to potential developers of the Northern Fringe.

(6) There is a great deal of information which might be inexpensively obtained to address the identified uncertainties. Gaining this sooner rather than later (or finding out and documenting that it does not exist) will assist in subsequent decision making. Monitoring of existing wells

for groundwater depth should begin to be carried out as soon as possible as it will provide valuable data for designing a groundwater quality monitoring strategy.

(7) NIEA should be briefed on the findings of this report at the earliest opportunity as they can assist both with some of the uncertainties identified in the PCSM and with formulating a plan to comply with existing (and perhaps future) legislation. There is evidence of significant quantities of contamination in the sandstone aquifer hence NIEA's view in relation to existing groundwater contamination should be sought. At present, it is not clear any of the existing legislation would require BCC to deal with it nor that a technically feasible economically viable means of doing so can be developed.

(8) The uncertainties around possible vapour pathways in the Developed Area may be resolved by obtaining the relevant information listed in Table 2. If this is not possible an air monitoring programme may be required. Details are in Section 5.

(9) There is contamination in the soils and groundwater at the site. Likely risk assessment and remediation methodologies exist. Piling should be carried out in a way that does not create new pathways by following the principles in Environment Agency of England and Wales guidance. It may be useful to draw this to the attention of the developers at an early stage to allow them to incorporate likely suitable foundations into their design and the need for the foundations work risk assessment could be included in any planning conditions where appropriate. Stakeholders should also be made aware of some remaining uncertainties, listed in Table 2. Any planning permission granted will need to ensure that the proposed development is compatible with this contamination by:

- a. preventing the creation of new pathways.
- b. Interrupting pathways to new receptors, especially direct and vapour exposure to contaminants by new
- c. Breaking pollutant linkages causing pollution of groundwater
- d. verification reports demonstrating pollutant linkages have been broken should be required in the planning condition.

(10) In addition to imposing planning conditions to address contamination it is essential to ensure that the planning conditions are complied with and hence discharged. This applies to all development on the Northern Fringe and on the Marriot site.

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