

8.0

Classification of Basements Projects

- 8.1 When contemplating basement construction on a site of an existing residential building, it is important that the overall situation is considered so that feasibility is judged not simply on a spatial brief, but also on the basis of adjoining ownership, planning policy and technical feasibility, taking account of the constraints that will influence the planning, design and construction of the proposed project.
- 8.2 When the work is to be done to a semi-detached or terraced property, adjoining ownership issues are governed by party wall legislation. This legislation sets out how the parties on each side of a party wall should proceed when one of them is proposing works that affect the party wall or the adjoining property. This is discussed in more detail in section 10.
- 8.3 Planning Policy is developed by local authorities within the framework of national planning legislation. Traditionally these policies were developed to control above ground development, but have equally been applied to below ground development. However, there is now an awareness that different factors apply to planning policy for below ground development.
- 8.4 The subsoil below existing buildings performs a variety of functions. It provides a founding material for buildings; it supports streets and infrastructure; it contains utilities and services; it supports plant growth and biodiversity; and it acts as a drainage medium. It is clear that the effect of below ground construction on these functions must be considered at the planning stage and that planning policy needs to evolve to control underground development, so that these functions of the subsoil are not fundamentally altered, damaged or destroyed by such development.
- 8.5 From the work on the characterisation of the Borough, it can be seen that there are a number of key factors that determine how complex basement proposals are. These factors influence their feasibility in legal, planning policy and technical terms.
- 8.6 The main issues that need to be considered are:
- a) *The configuration of the existing property and its neighbours*

This involves considerations about the layout and structural form of the building and adjoining development, whether it has an original basement or not, and the history of alteration of the building.
 - b) *The geology and ground conditions*

Is the property founded on fill, gravel or clay and what are the geological and topographical factors that need to be considered?

c) *The groundwater regime in the area and at the site*

The upper aquifer and groundwater generally need to be understood as they apply to the property in question. Are there any local subsurface water channels in the clay at or close to the site?

d) *Land drainage of the site, the immediate area surrounding the site and the wider area.*

How does the area, within which the site is located, drain? Does the site lie within any of the Borough's surface water flood hazard zones? How does the upper aquifer drain?

e) *Topographical considerations and unusual influences*



Is the site within the Notting Hill area, subject to particularly unusual groundwater flows because of the influence of the topography and geology? Is the site located close to old or existing water courses and what could be the implications of this?

f) *Major infrastructure and services (Underground railways, sewers, utilities etc)*

Development teams for all subterranean development sites need to consider whether or not they are close to or above major existing or planned infrastructure and whether such infrastructure will be affected by the proposals.

g) *The location of the new basement*

- i) Under the house
- ii) Under the garden
- iii) Both

h) *The depth of the proposed new basement*

This is very significant factor in determining how complex and disruptive the design and construction of a new basement will be. As a general rule single levels of basements (but not all) are relatively straightforward to build. Multiple basement levels are very much more challenging and complex.

i) *The building type*

- i) Terraced house
- ii) End of terraced or semi detached house
- iii) Detached villa/house

- j) *The foundation details of the existing property, particularly for terraced or semi-detached houses which share a party wall with their neighbours*

Where the existing building foundations are shallow and on clay, the excavation of a basement can be much more problematic for an adjoining owner in terms of the effects of movement on their property, than for situations where buildings are founded in gravel well above the London Clay. In such cases particular care needs to be taken to address this issue

- k) *The condition of the existing building and its neighbours.*

This not only involves an understanding of the construction and structural arrangement, but of the history of any ground movements within the buildings and to buildings in the nearby area. Are the movements historic? What caused them? Are they ongoing and why?

- 8.7 It is important to recognise that each case must be considered on its merits and that each needs careful consideration by experienced construction professionals. They should carry out a desk top study, research the local area and carry out on-site inspections to be able to advise fully on all of these issues at an early stage.