6 THE FUTURE REPOSITORY CONCEPT PROGRAMME

NUMO's volunteering approach to site selection presents particular challenges for the repository concept development programme. As outlined in the previous chapters, our adoption of this approach explains why we have deliberately chosen to maintain as wide a spectrum of repository design options as possible. This not only allows us flexibility to respond to the diversity of issues to be addressed in the different siting environments resulting from the volunteering process, but also enables us to respond to the desires of interested parties (in particular the local communities).

Following the process shown in Figure 1-6, Chapters 3 and 4 have outlined our progress in developing methodology for selecting suitable repository concepts for potential siting environments, assessing the safety and practicality of site-specific concepts and ranking different sites and RDOs.

As indicated in Figure 1-6, these basic procedures will be iterated further at the stages of literature survey of volunteers, characterisation of PIAs on the basis of surface-based studies and then detailed characterisation of one or more concepts, for one or more DIAs. The programme for site characterisation will also have to be tailored to environments encountered at particular volunteer sites. Although site characterisation plans are still under development, a modular approach similar to that for the repository components is presently under consideration. In this, a catalogue of site characterisation technologies will be prepared which can be assembled to provide a characterisation plan tailored to a specific site.

As emphasised previously, the site characterisation work provides input to, and receives feedback from, the repository concept analyses. The engineering design, performance assessment and site characterisation teams have already worked together – in particular in the tailoring studies described in Sections 3.3 and 3.4. Such projects are considered essential in preparation for the next stages when work on volunteer sites commences. There are obviously uncertainties concerning the characteristics of volunteer sites and their number is also open. In principle, therefore, the initial stages of characterisation of sites may have to run in parallel for several different locations – which could be very diverse in terms of geology, geography and socio-economic setting.

Parallel site characterisation work may strain available resources of expert manpower, specialist equipment and analytical facilities. This will require efficient co-ordination of these programmes in order to follow the tight planned schedule (Figure 1-3). In addition, such co-ordination may also be needed to ensure that equal treatment of volunteers can be clearly shown to the public.

A concern throughout is to ensure that all critical issues can be communicated to interested stakeholders so that key groups – including regulators, independent experts and local communities – fully understand the resultant repository programme and, indeed, are integrated as far as possible into its important decision processes. We thus plan to continue publishing updates on technical developments in this report series, with English language reports on topics which may also be of interest to international audiences.