

# TOWARDS WASTE MANAGEMENT FACILITIES THAT BECOME A DURABLE AND ATTRACTIVE PART OF THE FABRIC OF LOCAL COMMUNITY - RELEVANT DESIGN FEATURES



*It is a special challenge to assure safe radioactive waste management over the long term. The greatest challenge, both technical and societal, may be to create a local operating facility to fulfil that mission over generations. Scientific knowledge and technical competency are needed, as are resources for implementing an agreed approach. Importantly, the people living in the host community must be willing to live with and help maintain the facility over the years. How then may a facility and its site be better integrated with the host community, and be made attractive for the long term? To meet the challenges, the local facility should actively improve a community's prospects for quality of life across the generations. To build a sustainable relationship between radioactive waste management and everyday life in the community, designers have to develop the facility and its site to suit peoples' needs, ambitions, and desires to the extent appropriate including, potentially, those of future generations.*

*When a facility fits in and adds value, it is more likely to be durably "adopted" by the members of the host community. The NEA Forum on Stakeholder confidence (FSC) observes that specific functional, cultural, and physical design features could be profitably employed to maximise the potential of the facility to fit in, adapt to and also contribute directly to the host community's preferred way of life.*

## *Functional design features*

*help provide flexibility in the uses to which an installation may be put.*

The facility must serve the primary purpose of assuring safe and secure long-term management of radioactive waste. Not every part of the facility, however, may need to maintain its initial function at all times, and it may be desirable at one point to turn it to other uses. It would be prudent to conceive and build some parts of the facility

in such a way that new functions, including use by the community, may be accommodated. Careful multi-functional design adds opportunities by making it possible to put the installation to other uses both in the present and in the future, serving more directly the interests of residents and visitors.

## *Cultural design features*

*help the installation to reflect and strengthen "the best" of a given society or community.*

Cultural features help to transmit an honoured legacy, to communicate symbolic meaning, or to advance ideals. Technical partners working directly with stakeholders to design and integrate the facility can build in distinctiveness and aesthetic quality, convenience and meaningfulness, and foresee opportunities for residents

and visitors to meet, learn, relax, and enjoy. When community members undertake such a process — with appropriate procedural guarantees and socio-economic provisions — they can also foster improvements in areas like educational level, image definition, or problem-solving capacity.

## *Physical design features*

*help preserve the attachment of people to the place and a feeling of familiarity and safety.*

Physical design features can harmoniously integrate the installation into its geographic setting. The community gets the added value of amenity from an attractive, convenient and accessible site, open and welcoming. Communities point out that if a licensed

installation can be freely visited, walked through, or enjoyed for other uses, it clearly must be safe. The goal of protection is accomplished better if the facility does not emphasise danger or disrupt the town landscape.



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## DESCRIPTION OF DESIGN FEATURES, THEIR CHARACTERISTICS, AND THE ADDED VALUE THAT THEY MAY BRING TO A COMMUNITY

	DESIGN FEATURE	CHARACTERISTICS	VALUE ADDED
FUNCTIONAL	<b>Multi functionality or polyvalence</b>	The installation assures its mission of safely managing radioactive waste and also supports other uses like recreation or education.	A wider range of people come into contact with the installation and bring it into their lives.
	<b>Adaptability</b>	Foreseeable functions can be accommodated at acceptable or no cost.	Supports the near-term multi-functionality of the installation.
	<b>Flexibility</b>	New and unforeseen functions can be accommodated at acceptable cost.	Supports longer-term multi-functionality, including complete transformation.
CULTURAL	<b>Distinctiveness</b>	The installation is attractive, recognisable and "like no other".	The installation may become an icon, a well-known, emblematic and admired feature of the place. People may draw pride from the presence of the installation; it can become a positive part of local identity.
	<b>Aesthetic quality</b>	The installation is nice to look at and to "experience".	Pleasure is drawn from the presence of the installation rather than avoiding it or rejecting it.
	<b>Understandability</b>	The installation and its functions are understandable.	The RWM project and installation are connected to daily life.
	<b>Memorialisation</b>	The facility and site are marked so that people (now and later) know both what is there and something about its context.	Local identity and culture are preserved and showcased. Society's choices and achievements are recorded.
PHYSICAL	<b>Integration</b>	The installation respects the "genus locus" (spirit of the place), fits into and complements the landscape.	No intrusion or disruption of people's living space and their attachment to the place.
	<b>Amenity</b>	The site includes features that enhance its attractiveness, convenience and usability.	People may actively go toward the site and draw satisfaction from using it.
	<b>Accessibility</b>	A large proportion of the installation surface is open; fences and barriers are reduced to the essential.	People get a feeling of security and familiarity rather than a sense of threat.

### *Reflection on design and implementation is best started from the very first planning stages – even before final siting agreement is reached.*

It takes time to work out new ideas, new possibilities, and where the communities' own interests lie. The information and ideas gained during an early discussion will form a part of the basis on which a local community may agree to become a candidate and then actively engage in the final siting stages. Before a specific site is agreed, institutions generally cannot commit to the final form of a facility and site, or guarantee their ultimate fate. As well, the relationship between a community and a facility or site will depend in part upon external events (safety performance in the nuclear realm; statements by political

actors, etc.). Still, feasibility studies and social science investigations early in the decision-making process can support community dialogue about what people want for their community. This is consistent with the UN Economic Commission for Europe (UNECE) Aarhus Convention, which has given many European citizens formal rights to participate in decision-making about their environment.

#### **The overall FSC message is**

**"Do not hide these facilities. Do not keep them apart, but make them A PART of the community"**