Social benefits of underground space: moving from cost to value

Think Deep UK is a group of built environment experts committed to creating resilient, sustainable and liveable cities through smart use of underground space. Led by a voluntary, multidisciplinary group of professionals, our Mission is:

- To promote an awareness of the value of underground assets and to create a policy framework that can enable their fair use.
- To inform and guide the general public, decision makers, politicians and professionals how the use of urban underground space can create better cities with socio-economic benefits for society.
- To encourage thinking deeply when making decisions and planning for the future of our cities.

Votes for workshop topics at our launch in January 2017

One of the ways in which Think Deep UK promote awareness of the subsurface, is through the organisation of technical workshops. The first workshop organised by Think Deep UK focused on the social value of underground space, the findings of the workshop are summarised here and expanded in a separate white paper.

Rectory Farm – gravel extraction to enable the creation of logistics facility with public open space at surface level

Executive Summary:

The Public Services (Social Value) Act 2012 requires those that commission public services to deliver wider social, economic and environmental benefits, however social value itself is not clearly defined and less still is understood about the benefits and values associated with underground space. The workshop therefore began by asking participants (from their professional perspective) "how could consideration of underground space influence the social value of urban development?" Responses included a need for cities to be strategic with how all space is developed, for example relocating car parking below ground to create a community park at street level. Participants were also asked where they see the main benefits and challenges of considering underground space in the assessment of social value. Developing a universal quantitative methodology for measuring social value was seen as a challenge, with even the definition needing to be better and more consistently articulated. Other challenges included a lack of understanding of what exactly is underground, as without this knowledge it is difficult to understand the potential benefits or dis-benefits associated with a proposed development. **Potential social benefits associated with the subsurface included raising expectations of what infrastructure projects should incorporate to achieve highest and best return on public investment.** Typical project cost-benefit analysis focus on shorter terms costs and fail to identify the wider, long-term social benefits of underground development. **We suggest that social value frameworks must be flexible enough to incorporate qualitative measures of value,** across different timescales such that long-term benefits and broader societal needs of future generations are planned for.

- A framework defining social value to create a base for early discussion.
- A collection of case studies, with information about how social benefits were described and accounted for as well as potential objections and concerns as expressed by stakeholders or the public.
- A strategy to assess potential long-term benefits of subsurface interventions and weigh them against short-term considerations.

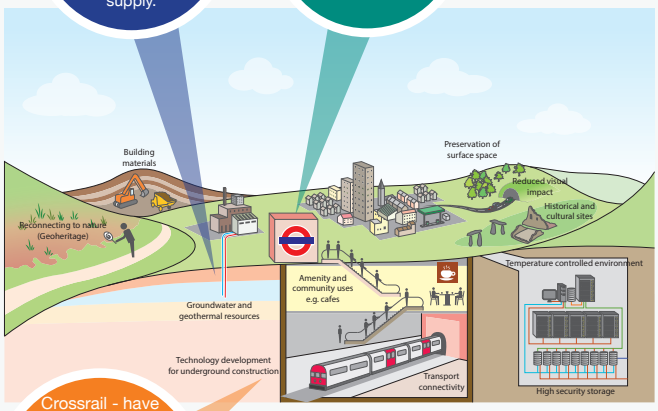
These tools should allow more meaningful discussion between all parties in all stages of a project and help to decide in each case whether underground space utilisation is the best option over use at surface.

TDUK thinkdeep SOCIAL VALUE

Areas where it can be considered

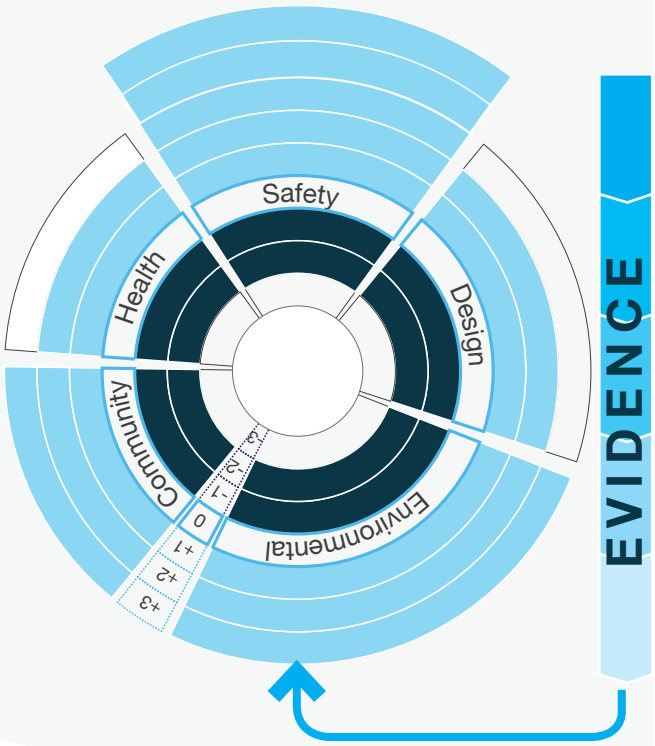
Groundwater from the rocks beneath London and the Thames Valley supports 30% of our water supply.

There are 11 underground lines, connecting 270 stations across the capital for up to 5 million passengers a day.



Crossrail - have set up a Tunnelling and Underground Construction Academy, providing a training facility and ensuring a legacy for the UK's tunnelling industry.

How do we quantify social value?



Should consultation influence the social value assessment?

If space limitations in our cities necessitates underground development – how do we maximise the social benefit?

Is investment in underground development preferable to development at surface?

How do we balance individual preferences, community benefits and national interest?

How do we embed social value in a business case?

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How might this apply to underground space?

Social Evaluation

How do we include social value in business case evaluation?

6 not 5 point business case