

Street Design Academy - the case for, benefits of, best practice and delivery for underground space management.

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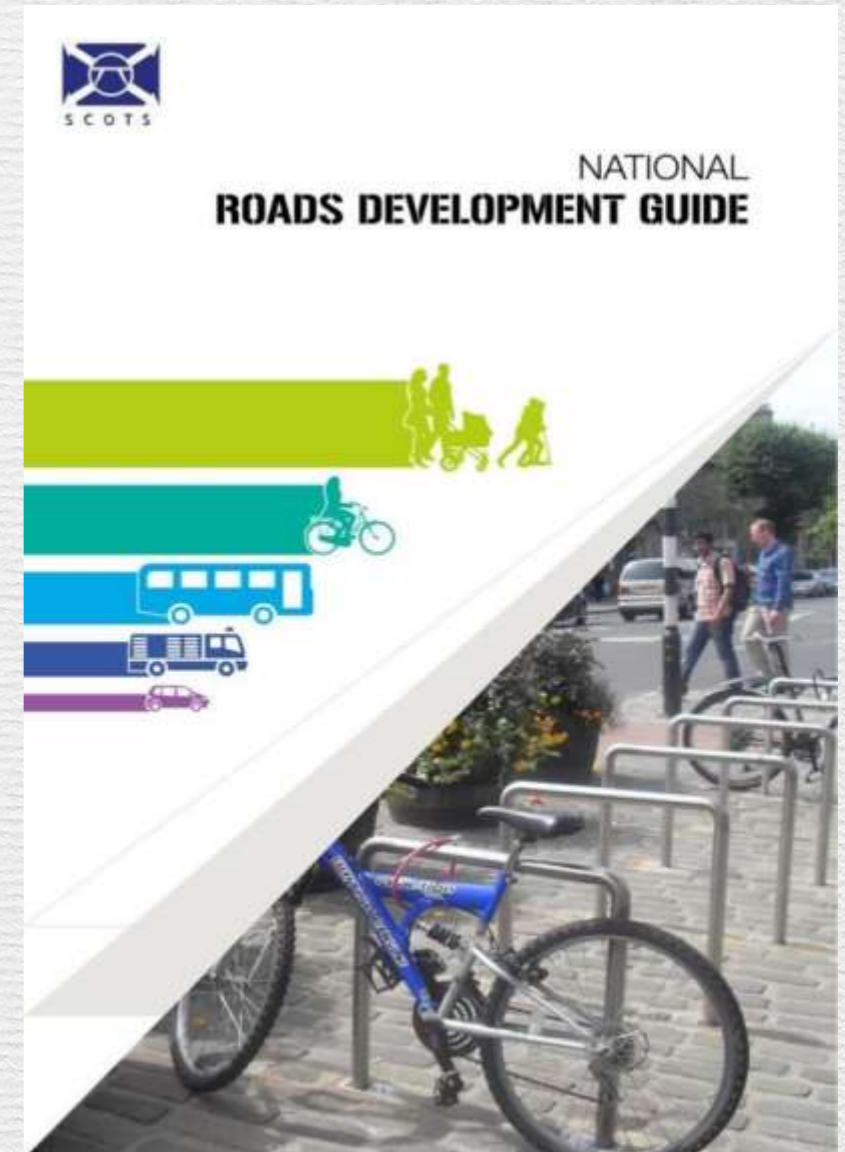
Directing Street Design Academy

The Challenge

Designing
Streets

=

- Creation of SCOTS Development Control sub-group
- provide a technical enabler so that policy was effectively delivered in practice
- consistent advice across the Scottish development industry, reduces time delays and costs



<http://www.scotsnet.org.uk/documents/national-roads-development-guide.pdf>

SCOTS National Roads Development Guide

Key benefits:-

- Web based to improve access to all
- Free to use
- Provide effective links to legislation, best practice specific technical documents etc.
- Adopt a National approach which benefits everybody
- Review group enables it being updated into the future
- Recognise local variations and placemaking

Complacency – job done Is it?

- NRDG's technical range and complexity is challenging to comprehend by many of those using it
- Used by many who have no or limited road related Civil Engineering understanding
- A lack of understanding results = a lack of confidence = a resistance to change from previously used technical street details = compromises the intended industry efficiencies within the guide



A wider and deeper approach

- an accredited, cross industry **Street Design Academy** training course based on the NRDG was considered highly beneficial to all those involved in delivering public infrastructure
- SCOTS, HOPS, Construction Scotland, Homes for Scotland and Scottish Government **identified** the proposed street design academy as addressing **a clear industry gap**.
- deliver an improvement in the national development process in the form of a “**first time right**” approach and aligns with the planning

Strathclyde University

- relevant to the subject, can deliver accreditation, and were willing to resource the course preparation.
- a predominantly distance learning course was most appropriate.
- Transferable product!



Added national benefits

- Multi-profession and sector **collaboration**
- **peer review**, through a training board, the integration of national guidance and technical proposals into a holistic process that could identify potential technical conflicts in a strategic manner
- avoids silo working, **reduces delays and management difficulties**, previously encountered, in delivering new infrastructure



Collaboration benefits

- SDA Board = Industry Peer review group
- Industry and Educational relationship enables **focused R&D** that is rapidly re-deployed.
- **Focused updating** Street Design Academy graduates on innovation or changed policy rapidly - delivering more efficient changes



Conclusions

- Develops appropriate skills
- Flexible process permitting innovation
- Increased confidence in the project planning and delivery process
- Adopts a first time right and asset management priority.
- for the first time coordinates and manages a plethora of well meaning advice and guidance.

Underground space management



- **No** overseeing management of underground space at present
- Underground space is becoming increasingly congested
- Demands on underground space are - Utilities, litter bins, SUDS cells, Tree roots, cellars, culverts etc....

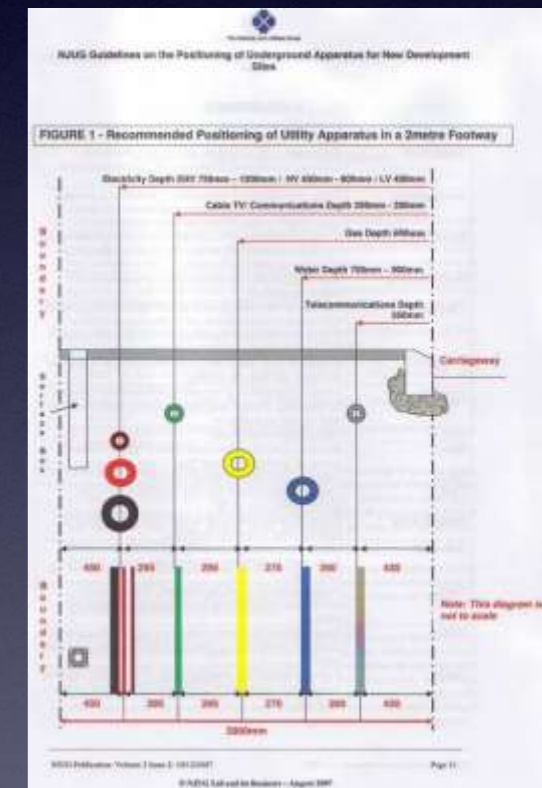
Time to design the underworld?

- Local Authorities + Utility providers (NRSWA 1991)
- VAULT project
- Mapping the underworld (BIM + Asset Management)
- NRDG = advocates ducting services



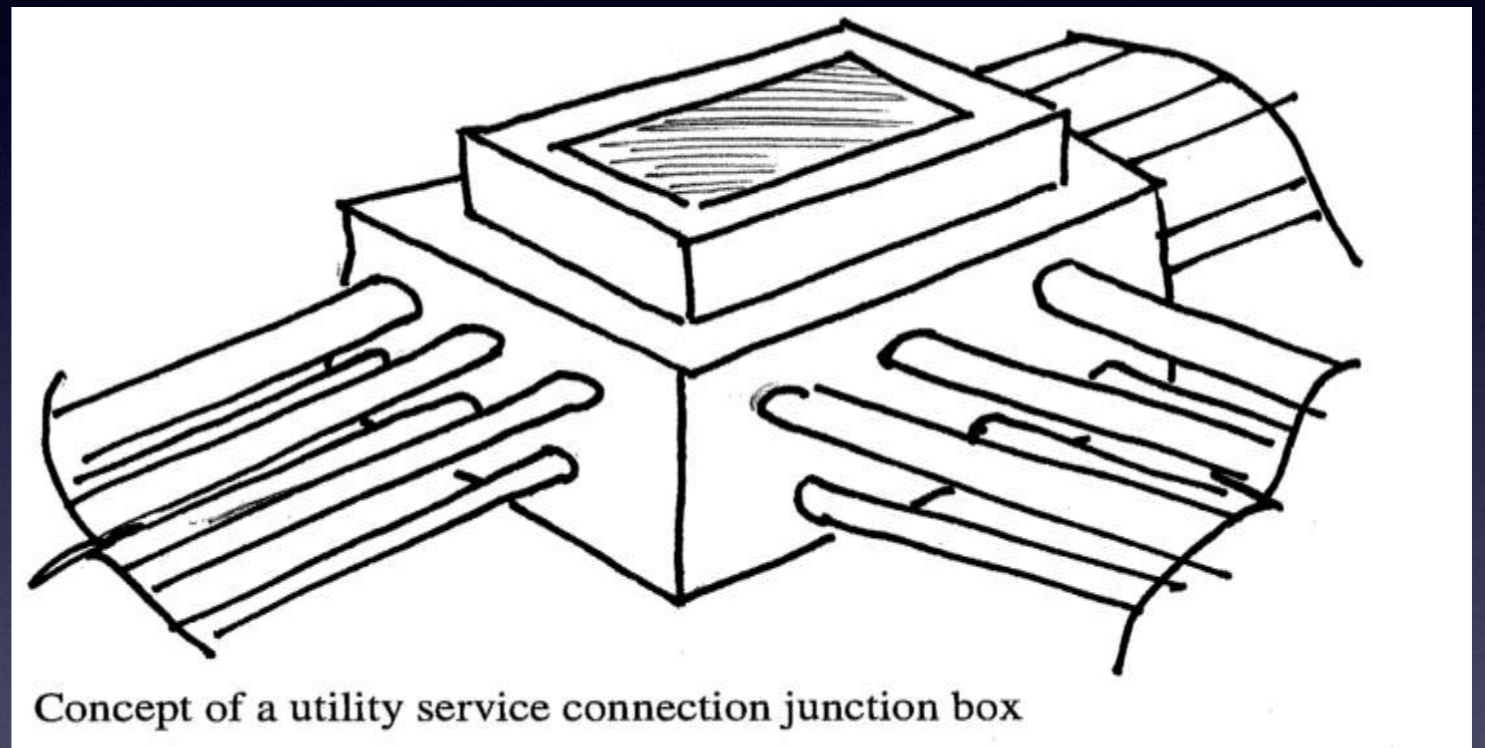
Ducting underground Services

- **Advantages =**
- permits upgrades/replacement without excavations.
- increased speed / reduced service interruption.
- reduces financial risks.
- more efficient use of available underground space. (deeper not wider)
- Normally provides contingency
- **dramatically reduces Street Tree related concerns.**



Ducting underground Services

- **Difficulties** =
- Service connections
- Access by operatives
- Middle management buy-in?
- insulation and security.



How do we achieve a change with a collaborative approach?

- Key - Partners vested interests (whats in it for them)
- Common Language (communicate common interests + inter-professional processes)
- Communicate a vision
- A Government requirement (enhanced liveable society)
- Use precedence - if it exists!

Potential Solutions

- **Legislate?**
 - Utilities Access Act 2015 (New Zealand) = Positive underground management
 - Utility Operators to exercise their right of access to the Road Corridor for the placement, maintenance, improvement and removal of Utility Structures
 - Corridor Managers to exercise their right to apply Reasonable Conditions on working in the Corridor
 - Local Authorities responsibility (corridor manager)
 - **Educate?**
 - Street Design Academy (4D design in practice)
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Key message

- Future developments
- Build in Adaptability !
- Take responsibility.



Thank you