

# 20 Years of SUDS in Scotland

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# The beginning of SUDS in Scotland

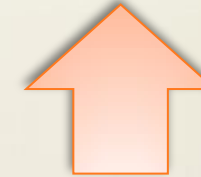
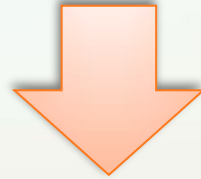




# What was happening in the world when we introduced SUDS in Scotland?



This was the music we were buying



This film had just been released

This was the top selling car in the UK



WWC Edinburgh 2015

# The SUDS that were being implemented then.....

Some not quite as good  
*(remember this was before technical guidance was available in Scotland!)*

Some good



# Scottish legislative context

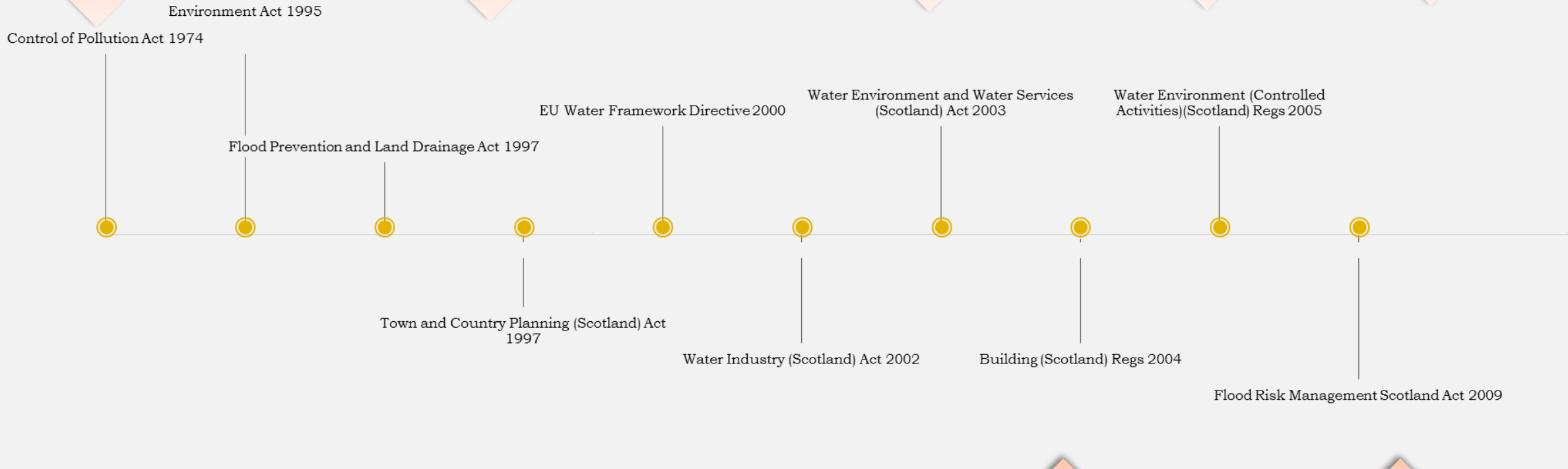
COPA 1974

National CIRIA guidance on SUDS (C521)

SUDS become law to tackle water quality

Sewers for Scotland (Sfs2)

SUDS retrofitting to address flood risk



WWC Edinburgh 2015

Building regs include SUDS



SUDS for Roads guidance





# SUDS surveys in Scotland

## 1996 Abertay University survey

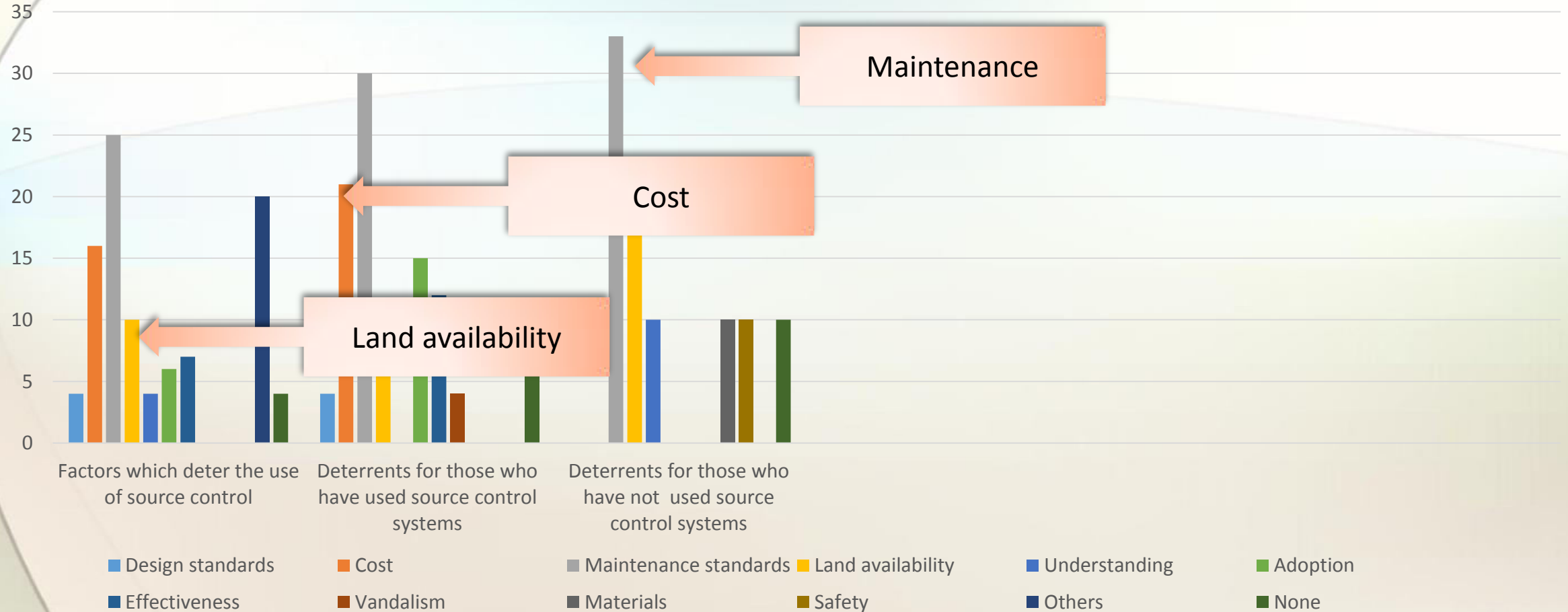
*A total of 119 questionnaires were sent out wide range of engineers, environmental consultants, local councils, water authorities and planners, with 43 being returned.*

*'an American idea which will never work in Scotland'*

- **72%** knew that ponds can be used for flood and pollution control but only **18%** thought that they could be used for flood control and not for pollution control.
- Only **2%** replied that guidance was adequate and only **5%** believed that adequate guidance on adoption was available.
- **79** systems were planned or built in Scotland. The most popular types of system were infiltration trenches and ponds. Swales, wetlands and porous paving were not found to be popular options, and infiltration basins were the least popular type.

# SUDS surveys in Scotland

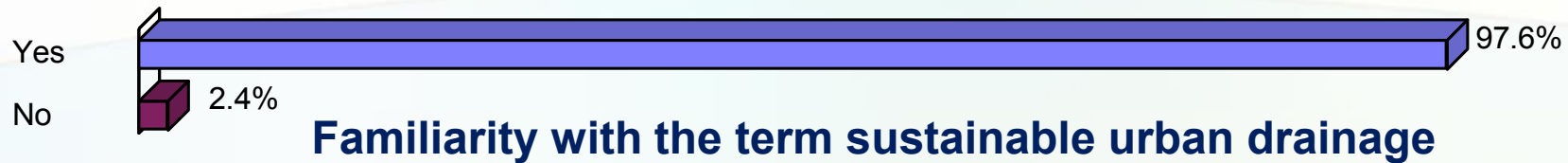
## Deterrents to the use of SUDS in 1996





# SUDS surveys in Scotland

Evaluation of urban diffuse pollution guidance and reference materials – *Hyder Consulting 2003*



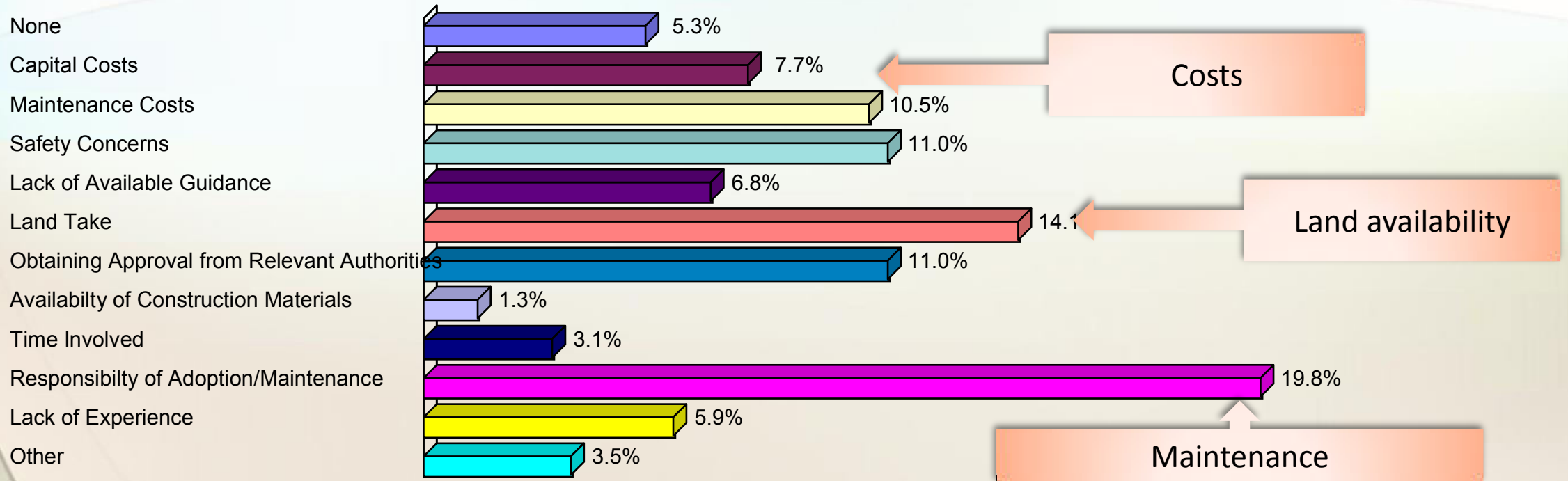
Things were changing with the first large scale SUDS demonstration site.....



The Dunfermline Eastern Expansion - DEX

# SUDS surveys in Scotland

## Deterrents to the use of SUDS in 2003



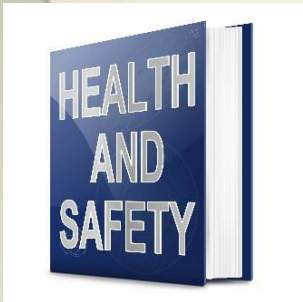
# SUDS surveys in Scotland



**Fast forward to 2013** - Abertay University survey, carried out on behalf of the Sustainable Urban Drainage Scottish Working Party (SUDSWP)

## Key barriers

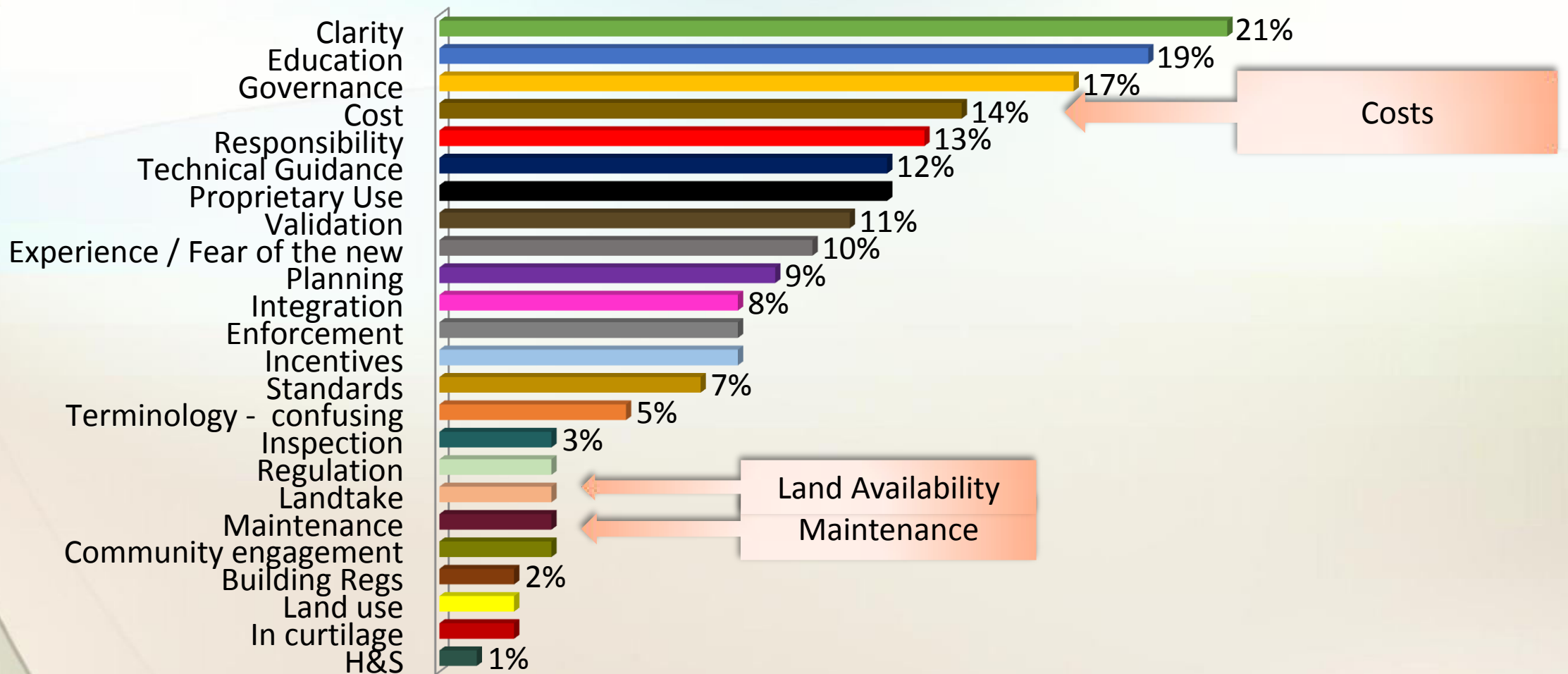
- **Guidance (35%)** – clarity needed on technical issues, functionality, terminology.
- **Governance (25%)** – fragmented inter-agency collaboration, enforcement, funding mechanisms, quality control.
- **Education (22%)** – best practice case studies for emerging techniques.
- **Responsibility (10%)** – inspection, maintenance, private ownership, H&S.
- **Financial (8%)** – land take, land use, construction costs.





# SUDS surveys in Scotland

## Barriers to implementing Source Control in 2013



# SUDS in Scotland now..

Some of the issues identified in the earlier surveys have been largely resolved, such as the absence of design guidance and standards. These have been largely addressed with:



**but indications are that more guidance may still be required.....**

# SUDS in Scotland now...

There has been significant progress in terms of the numbers of SUDS implemented

79 SUDS  
in 1996

3,900  
SUDS in  
2000

SUDS  
are  
routine  
business  
in 2015





# Conclusions

- It is widely acknowledged that SUDS implementation has come a long way....

*but there are still fundamental issues which were identified in the surveys carried out 20 years ago which have still to be addressed.*

- Scotland has benefitted from a strong legislative and regulatory regime.
- We still have weak enforcement of regulatory requirements and inspection policies.
- There are fragmented funding responsibilities, which influence the ability of organisations to adopt SUDS. The FRMA goes some way to addressing this; with a more holistic and collaborative approach.
- There is still confusion regarding the use of the management train approach, in particular controlling runoff at source.
- New guidance is required on existing statutes/interpretation of existing regulatory requirements.

**Thanks for your attention!**