



**Canal &
River Trust**

Making life better by water

Wildlife and ecology on canals: How to evaluate environmental assets?

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Overview

Key environmental issues;

- What's this to do with the Canal & River Trust?
- What we are doing about it.
- How this links to Waterways and Wellbeing.

Introduction to Canal & River Trust

- **The Canal & River Trust offers a haven for people and wildlife enjoyed by 12 million of us a year. We are entrusted with a 2,000 mile long network of “green and blue” corridors that support a wide variety of nationally important habitats and species, allowing wildlife to move freely, bringing the heart of the countryside into town.**
- **We have a charitable object to “further for the public benefit the conservation protection and improvement of the natural environment and landscape of inland waterways”**

That which we cannot see

Is that which we cannot measure

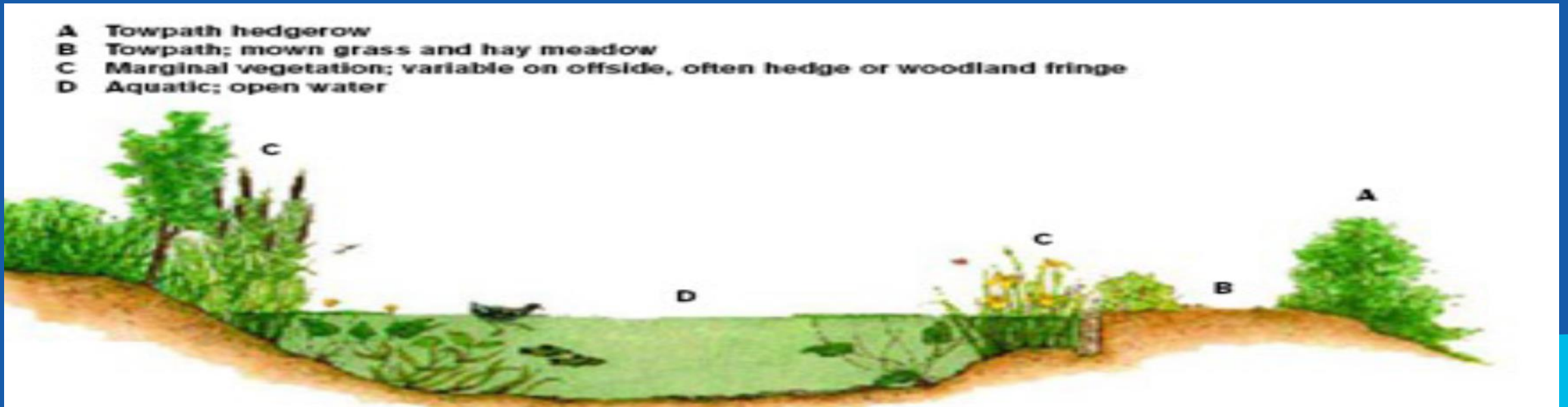
That which we cannot measure is that which we cannot value

That which we cannot value is that which we cannot care about

That which we cannot care about may wither in our ignorant neglect

...That neglect may begin the spiral of doom, or the re-beginning of the cycle based on learned wisdom

Starting to see what we have using our phones!



<http://canalrivertrust.org.uk/media/original/34496-environmental-asset-condition-assessment.pdf?v=f2ab06>

Asset	Attribute	Observation
Marginal fringe	Continuity	Continuous – present along >75% of suitable bank length
		Semi continuous – present along 50-75% of suitable bank length
		Discontinuous – present along <50% suitable bank length
		Marginal fringe absent but potentially suitable conditions
	Diversity	Multiple marginal emergent species present
		At least one fringe forming marginal species present
		No fringe forming marginal species
	Negative indicators <i>High risk woodland invasive species (Himalayan balsam, Japanese knotweed, giant hogweed, rhododendron)</i>	No high risk invasive species
		High risk invasive species present

Survey method

The key attributes for each asset type were divided in accordance with the general condition grades and so a proforma checklist of condition options was compiled that could be completed in the field by a non-technical specialist to grade the condition of each asset from A to E.

This checklist can be utilised in a range of formats, but in the pilot example Arc GIS Survey123 was used (this has the advantage of being useable with handheld devices such as smart phones or tablets and using the devices' own GPS to provide accurate location of data).



Asset types present

select all asset types present

- open water
- marginal fringe
- grassland
- hedgerow
- trees

Potential for assets

Select assets that could be present with management intervention. Grassland relates to semi-natural non-amenity strip

- open water
- marginal fringe
- grassland
- hedgerow
- trees

Open water clarity

Clear-visible to bed, cloudy-visible to bed at margins, turbid-bed not visible

- clear
- cloudy
- turbid

Open water diversity

Number of true aquatic and floating leaved species visible (not including marginal fringe)

- multiple aquatic species
- few aquatic species
- no aquatic species



Condition grades and scores for attributes

Asset	Attribute	Condition					
Marginal fringe		A (5)	B (4)	C (3)	D (2)	E (1)	
	Continuity	>75%		50-75%	<50%	0%	
	Average Width	>1 m	0.5-1 m		<0.5m 0%	0%	
	Diversity	Multiple marginal and emergent species present		at least 1 emergent fringe forming species present			
	Invasive species	Absent			Present		Abundant (>25% cover)

Generic improvement actions

Key Habitat / site	Generic Improvements	Possible synergies with other measures
Marginal Vegetation	Fringe planting to extend / connect / gap-up habitat	
	"Soft/green bank" improvements or introduction of reed fringe and/or restoration of the adjoining soft bank	Dredging (disposal)
	Control of invasive non-native plant species	
	Diversity planting within existing fringe with native local species	

What does all this mean at the end of the day?

- Coarse scale to fine scale?
- Action plans!
- Iterative continuous process embedded within organisation?
- Audit trail for regulators and CRT management.
- Digital information and data is universal.
- Funding secured for present and future biodiversity enhancement.

Thank you for listening – life is better by water!

