

Giant Hogweed, Japanese Knotweed and other non-native invasive plants

APSE Wales environmental services
advisory group meeting
Welsh Parks Forum

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Environment Officer
City and County of Swansea



23/5/18



-
- Defining the problem
 - The importance of survey data
 - Developing a plan of control
-



Defining the problem

Sally Rhubarb

Gypsies Curse

Super Weed Buster

Pysen saethwr

Tigers Walking Stick (pea shooter)

March of the Triffids

Mari waedlyd

(bloody Mary)

Chinese Bamboo

Donkey Rhubarb

The Knot Cracker

Itadori



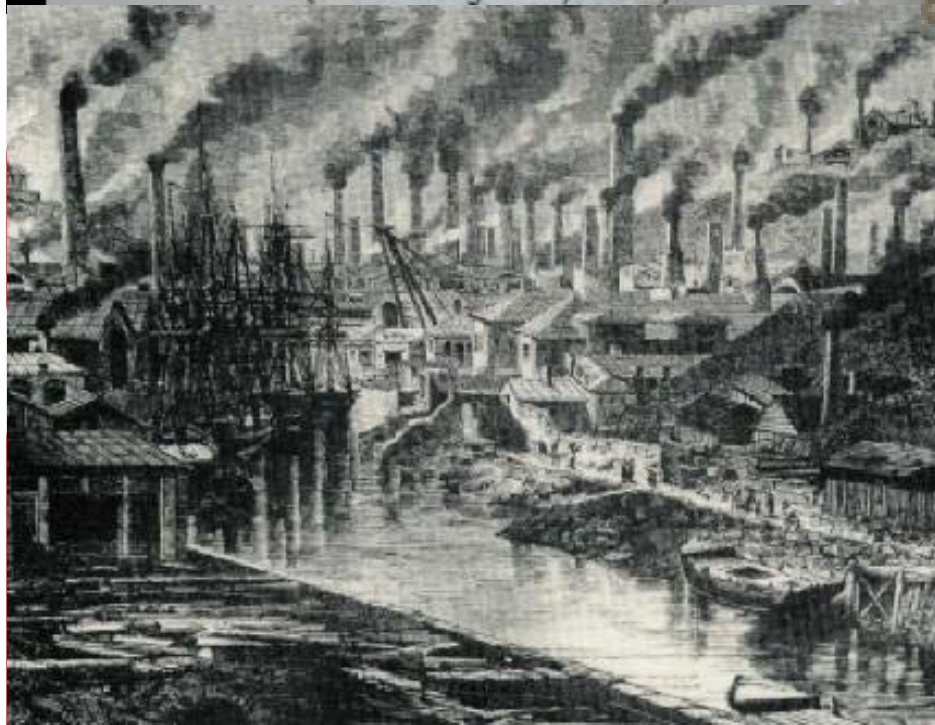
Spread

- Bought back to Europe as an; ornamental, fodder and as slope stabiliser (Thunberg and von Siebold)
- Kew Gardens records from early 1800's
- 1886 naturalised at Maesteg
- 1902 first Swansea (Glamorgan) record
- 1970 first known official complaint in Swansea





"This blighted area lives at Swansea's front door..."
(R. Huws Jones, 1961)



Mynydd Bach Chapel Pre 1907



MYNYDDBACH CHAPEL

The Strand 6/7/1970



CITY ESTATE
DEPARTMENT,
SWANSEA.

Neg No. E/3357
Date Taken July 6th 1970
Time Taken Morning
Photo by A. J. Simms
Subject Former Architects Yard
Upper Strand, Swansea.

THIS PHOTOGRAPH IS THE
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CORPORATION.

Three Cliffs Bay, Gower AONB



Swansea Bay



Reed bed



6500m²



Inside bathroom



Urban



Inside library



Council land bank, Development Sites



For Sale



Waste, illegal disposal



Designated sites

SSSI-Pwlldu Head/Cliffs.
SAC-Limestone Cliffs.
Common Land-Pennard Cliffs.
National Trust land.

SAC-Ash Woodland.
Ancient woodland.

SSSI-Caswell Bay.
CCS land.
Private land.
PROW.
Open access
Right of access

Gower AONB

Green Coast Award.
Heritage Coast.

LNR-Pwlldu Cliffs +
Sec 15 agreement.





SSSI-Pwlldu Head/Cliffs
SAC-Limestone Cliffs
Common Land Pwlldu Cliffs.
National Trust

Holm oad
Private land
PROW.
Open access
Right of access

Knotweed

Gower AONB

Green Coast Award.
Heritage Coast.

Coton easter

Llŷr Pwlldu Cliffs +
Site 5 agreement.

Giant hogweed





Giant hogweed-risk, public health



ACC
4990

Giant hogweed-risk, public health



Himalayan balsam



ID, spread, control





Costs

St Joseph's School

- £59,500 to remove soil with knotweed
- £13,000 to remove soil without knotweed
- Increase of £46,500 due to presence of knotweed.

PLUS additional costs of (in bold)

•Armater panels	260m2	£1625
•Geosynthetic liner	366m2	£1010
•Geomembrane	125m2	£230
•Membrane Protection layers		£512

Total (Inc vat, delivery, installation)

£3377



Importance of survey data

A Site Survey

- Entrance/exit
- Access routes
- Boundary – physical eg walls, fences
- Boundary – legal/political eg land ownership
- Waste, tipping
- Storage, surcharge
- Riparian zones/watercourses
- Habitats eg woodland, wetland
- Services eg sub stations, pumping stations
- Disturbed areas



The Surveys

1992 Urban 96km²

- 47.7 ha

1998 Urban 96km²

- 61.9 ha

1998 all of CCS 400km² (inc' 1992/8 urban area)

- 99.9 ha

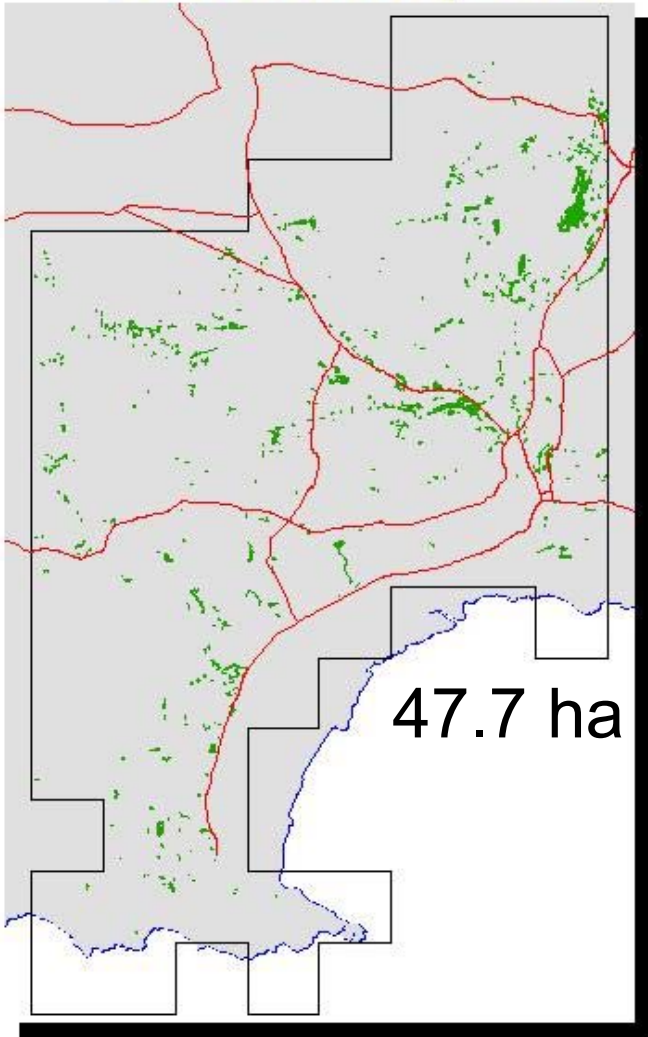
- Gower AONB repeated 2016/17/18



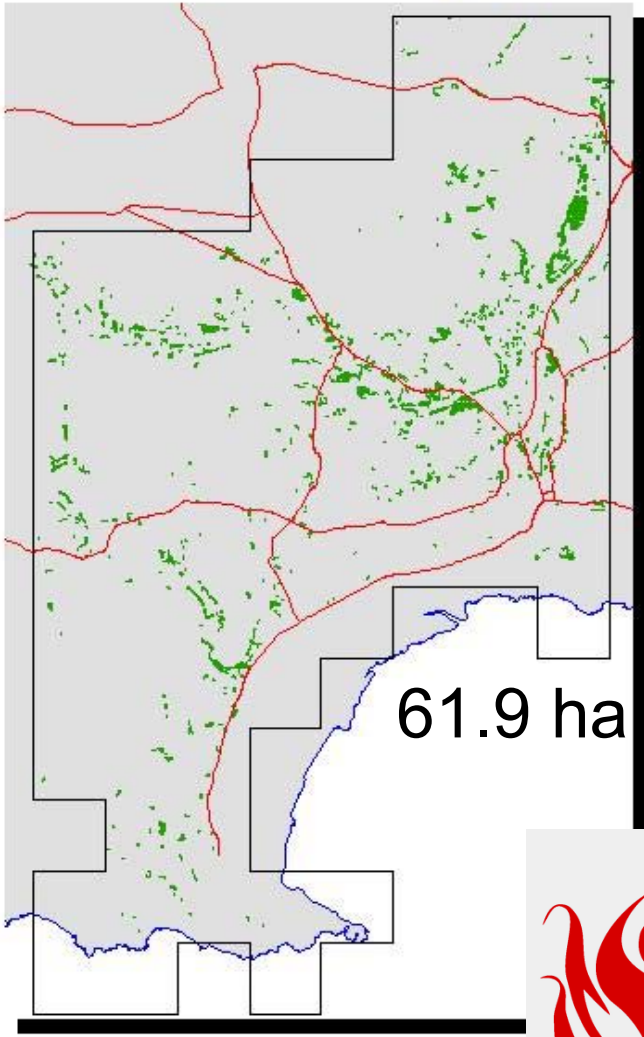
Urban surveys

1992




1998



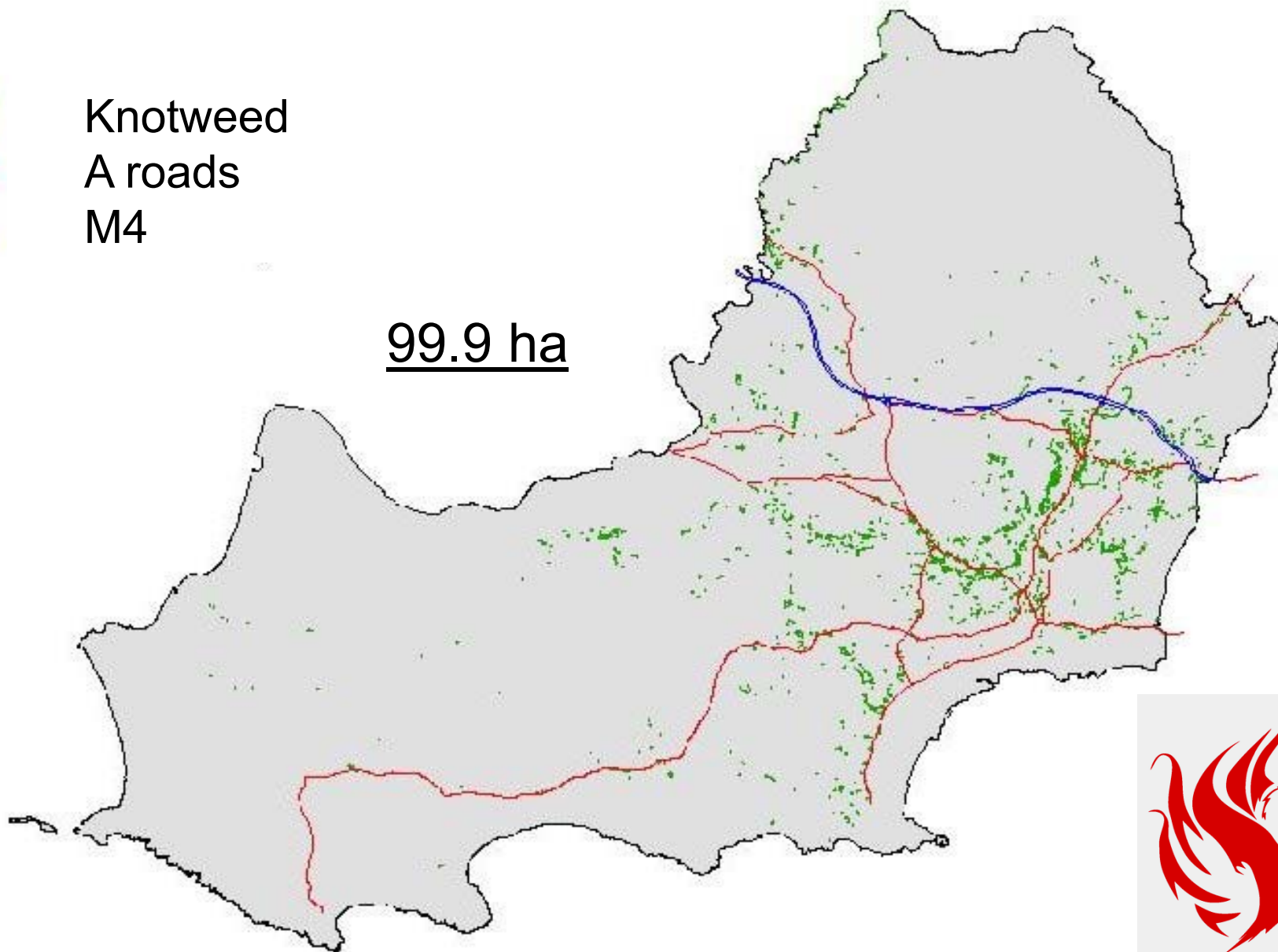
+ 14.2 ha



1998 County survey

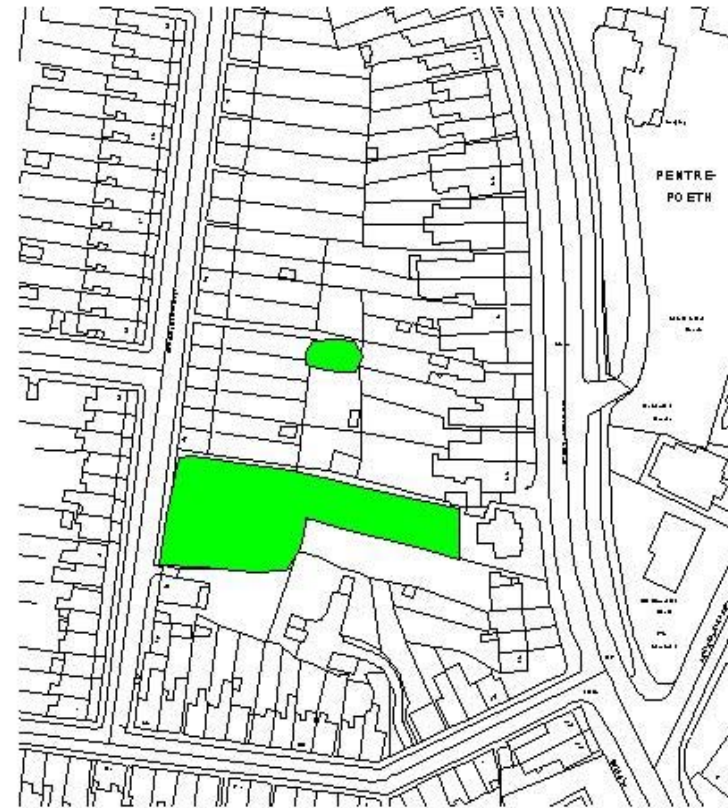
-  Knotweed
-  A roads
-  M4

99.9 ha

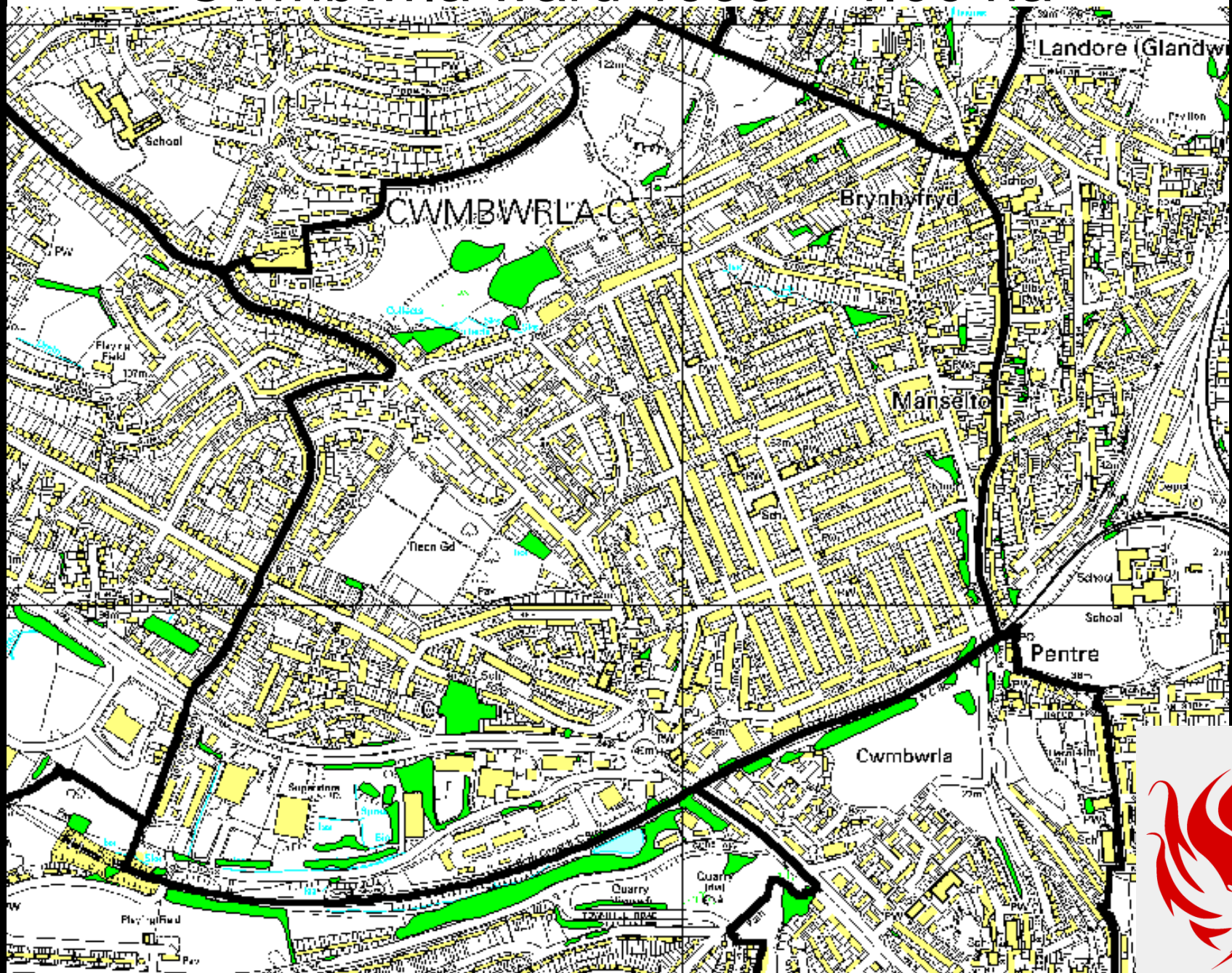


Spread 1992 to 1998

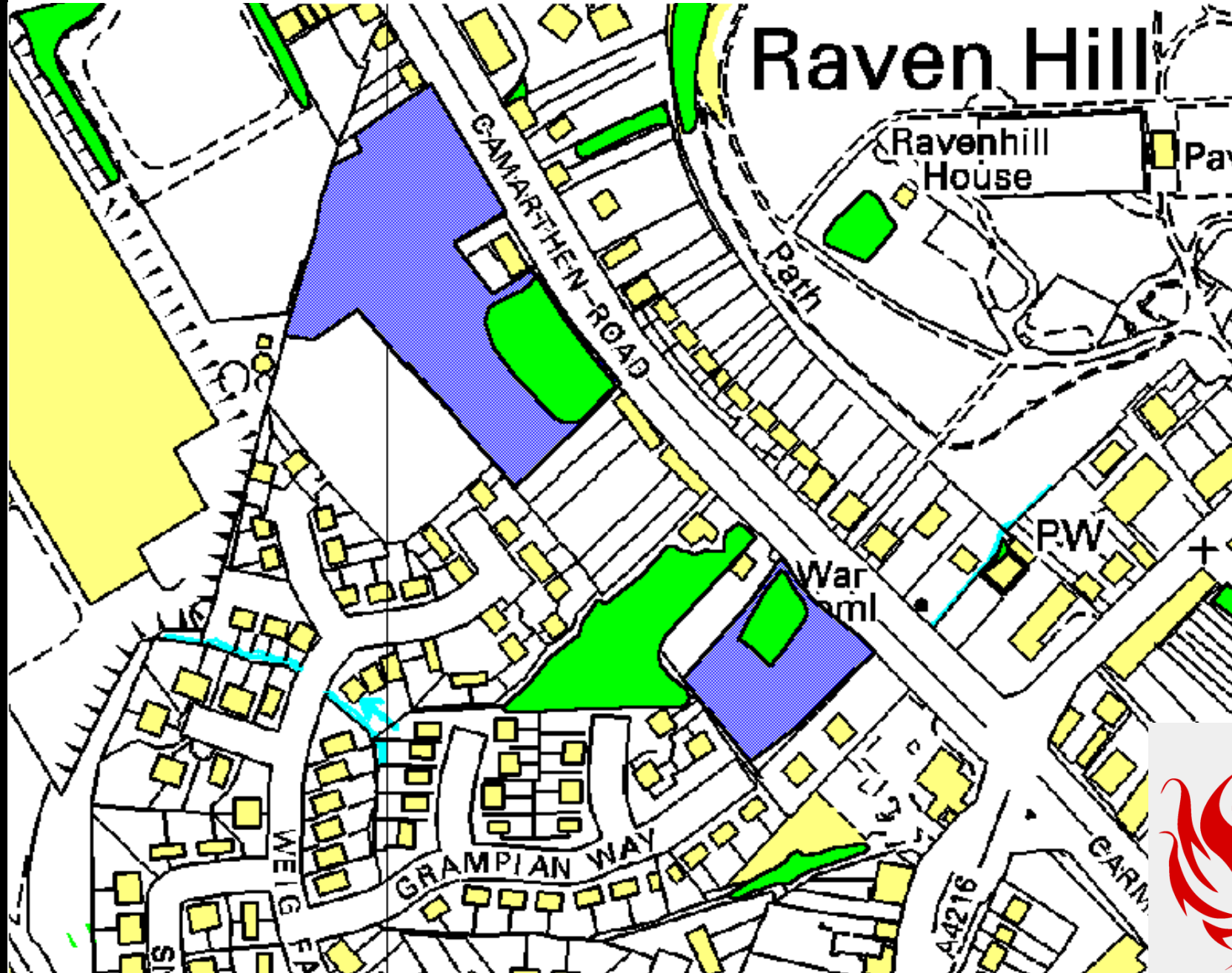
A Planning Application



Cwmbwrla ward 1998 – 4.66 ha



Local plan policy, housing land allocation



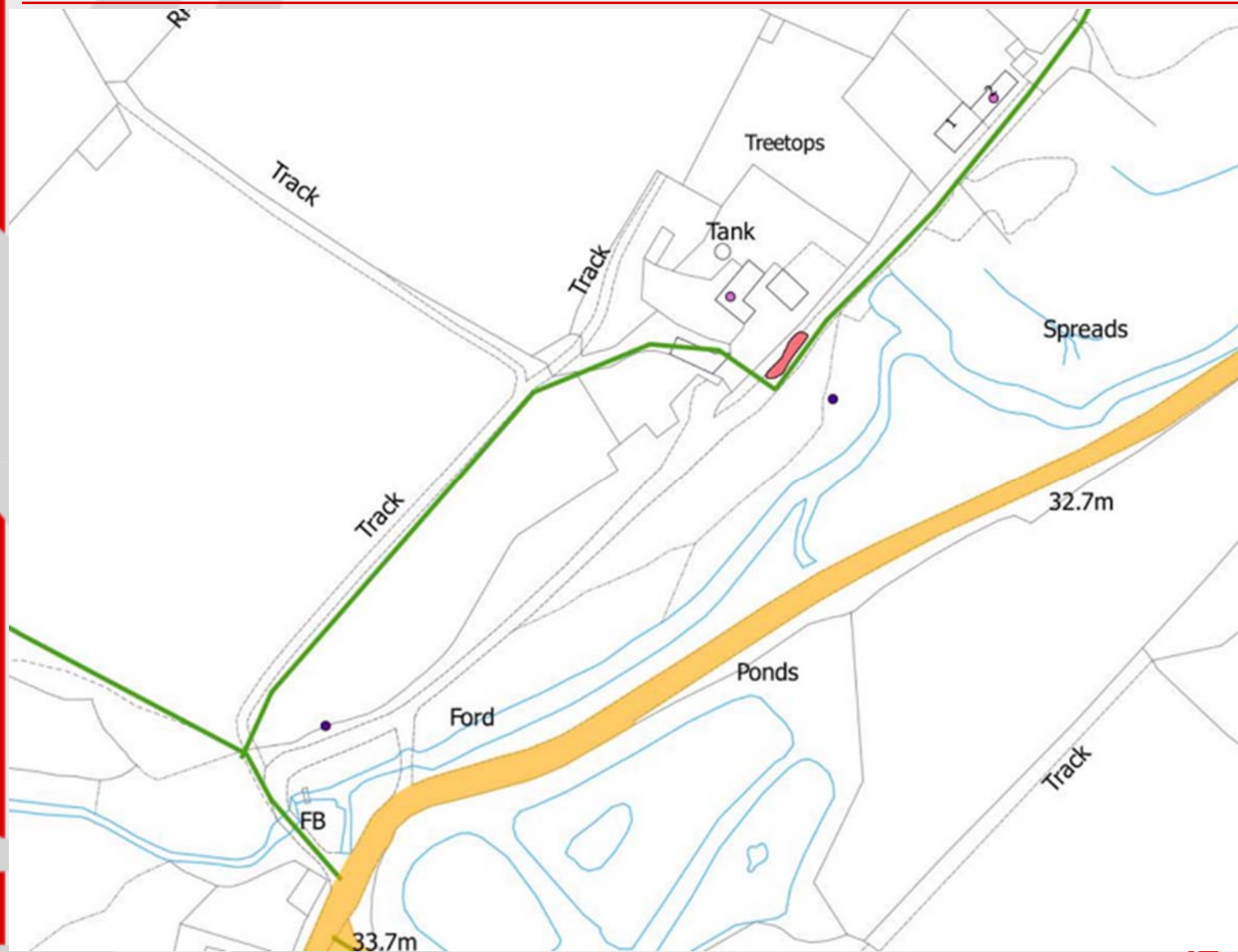
The Surveys

1998 Survey Results

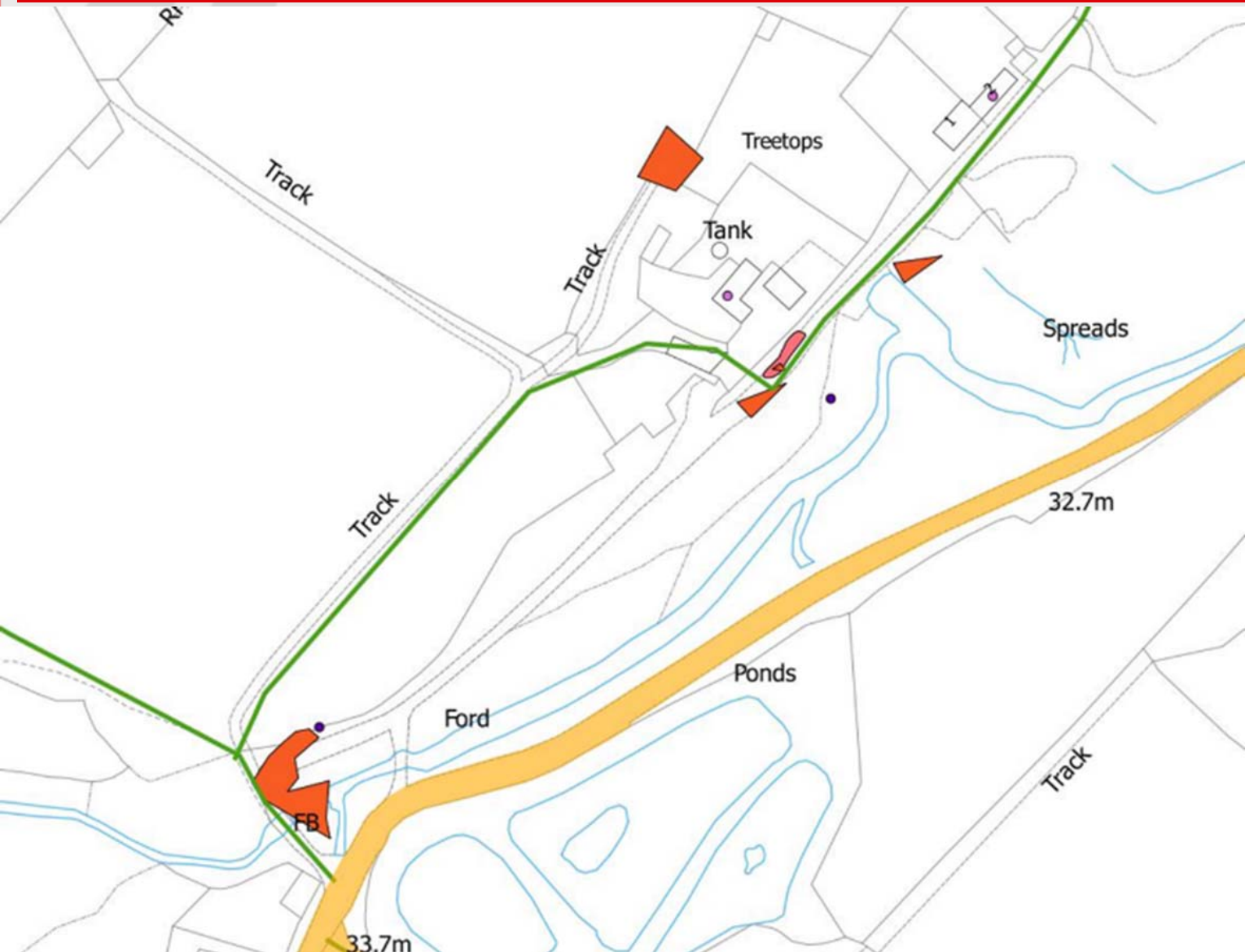
- Parks 0.64 ha
- Landscaped area 2.41 ha
- Recreation ground 6.34 ha
- Railway 4.49 ha
- Waste ground 32.34 ha
- Grassland 12.25 ha



Gower AONB



Gower AONB



Developing a plan of control

Swansea and knotweed

- 1992 Urban knotweed survey
- 1993 Conference
- 1994 First large scale treatment programme
- 1995 Knotweed planning condition introduced
- 1997 Swansea Council Knotweed Action Plan
- 1998 Urban survey (measure increase from 1992)
- 1998 County wide survey
- 1998 Knotweed officer appointed (3 year post)



Swansea and knotweed

- 2000 The Knotweed Manual launched
- 2001 “No knotweed” garden waste bags
- 2002 100 years of Knotweed in Glamorgan
- 2005-8 Last large scale treatment programme, approx 100,000m²
- 2011 Wales Natural control trials (knotweed)
- 2012 INNS flora planning condition introduced
- 2015 Wales Natural control trials (balsam)
- 1/8/15 Parks dept’ launch payable knotweed control service





Action plan

- 1 Promote and encourage a coordinated approach to the problem
- 2 Identify and treat sites
- 3 Prevent spread into unaffected areas
- 4 Raise awareness and offer advice



Action Plan

1) Promote and encourage a coordinated approach to the problem

- Partnerships
- Co-ordinated control



Action Plan

2) Identify and treat sites

- Criteria list for treatment
- Funding
- Council land, non council land
- Use of statutory/non statutory powers
- Monitor treatment



Criteria for selecting sites for treatment

- Designated land
- Availability of funding, grants
- Causing problems, complaints, claims or an eyesore
- Safety, highways, health hazard (giant hogweed)
- Where previous control has been undertaken
- Landscape improvement work
- Planning



Action Plan

3) Prevent spread into unaffected areas

- Surveys, GIS
- Monitor
- Encourage correct disposal
- Statutory/non statutory powers



GARDEN WASTE ONLY GWASTRAFF GARDD YN UNIG

Please do not include
Peidiwch â chynnwys

- Large Branches or Logs - Canghennau Mawr neu Foncyffion
- Soil, Stones or Rubble - Pridd, Cerrig neu Rwbel
- Food waste or Plastic Bags - Gwasttraff Bwyd neu Fagiau Plastig
- Animal Waste - Gwasttraff Anifeiliaid
- Invasive Plants - (e.g. Japanese Knotweed) ★
Planhigion Ymledol - (e.e. Canclwm Japan) ★

Enquiries: Environment Department
Ymholiadau: Adran yr Amgylchedd
Tel/ffôn: 01792 635600 recycling@swansea.gov.uk

Action Plan

4) Raise awareness and offer advice

- Council staff
- Public, developers, landowners
- Professional bodies
- Invasive pathway





Standard Condition for Planning Permission

1995 Planning Condition added to the planning approval decision notice if knotweed is on site;

Full details of a scheme for the eradication and/or control of Japanese Knotweed shall be submitted to and approved by the Local Planning Authority prior to the commencement of work on site, and the approved scheme shall be *implemented* prior to the use of the building commencing

- Approx 50 p/a

Also for INNS flora (2012)



Planning Dept Treatment Costs

1993-96	Treatment	£58,750
1996-97	Treatment	£16,000
1997-98	Treatment	£32,000
1998-99	Treatment	£20,000
1999-00	Treatment	£13,000
2000-01	Treatment	£9000
2001-02	Treatment	£33,171
2002-03	Treatment	£46,606
2003-04	Treatment	£39,896
2005/06	Treatment	£91,307
Total		<u>£359,730</u>



Treatment Costs

£1.56 Billion to treat all knotweed in UK

£56 Million to treat all Welsh knotweed
(based on previous CCS knotweed treatment costs)

CCS Housing	2012/13	£22k
	2013/14	£19k
	2014/15	£17.5k
	2015/16	£36,646
	2016/17	£40,687

CCS Highways approx £7k-10k p/a

Nature Conservation – reserves, commons, wildlife sites



How we deal with knotweed queries

- The land holding department will deal with the enquiry
- Can treat if it's a problem eg mortgage, damage
- No need to treat is not causing a problem



How we deal with knotweed queries

- Is it knotweed? (yes) (no)
 - Is it on CCS land? (yes)
 - Housing (10 DHOs)
 - Parks (3 areas)
 - Schools/Education
 - Highways/adopted roads
 - Estates/Policy
-



Is it knotweed?



Treatment

Chemical

Persistent

Chikara

Non persistent

Roundup (glyphosate)

Water courses

“ “ “ “

Shop

‘Resolva’ (glyphosate)

Non Chemical

Dig/excavate

to licensed landfill/bury on site

Liners

prevent spread

Landscaping

treat over several years

Mowing/cutting

over many years

On site

specialist contractors

Cover

weed suppressant sheets



Legislation

WILDLIFE AND COUNTRYSIDE 1981 amended

- Schedule 9, Sec 14
- 'deliberately cause the plant to grow in the wild'
- What is deliberate/wild? Urban knotweed
- Scotland has defined what the wild is not

ENVIRONMENTAL PROTECTION ACT 1990, DUTY OF CARE REGS 1991

- Waste producers, carriers, disposers Code of Practice
- Controlled waste/hazardous waste
- Can only be disposed of at a registered site
- NOT local amenity sites
- Not in green waste collection



Legislation

Anti-social Behaviour, Crime & Policing Act 2014

The Knotweed ASBO

- The Act does not explicitly refer to knotweed
- Guidance from the Home Office is just guidance (may, can, could etc)
- The Act gives a power (**not a legal duty**) for local authorities to get involved

“CCS does not have to enforce this Act”



Legislation

NOT a Statutory Nuisance

But

COULD BE a Private Nuisance

- Common law of private nuisance defined as the “unlawful interference with a person’s use or enjoyment of land, or some right over, or in connection with it”
- Allows landowners or tenants of leasehold properties who have a right to the land affected to bring an action against the person responsible.
- Could also relate to strict liability for foreseeable damage caused by escapes resulting from non natural uses of land.



Legislation

PREVENTION OF DAMAGE BY PESTS ACT 1949

- Sec 4
- Keep land free from vermin

HIGHWAYS ACT 1980 - Sec 154

- Encroachment onto a highway



Legislation

ENVIRONMENT AGENCY AqHerb01 FORM

- Use of herbicides in or near water (ie 7m)
- PA1, PA6, PA6AW

WATER RESOURCES ACT 1991 ACT, SEC 221:

- All rivers, streams, ditches, drains, cuts, culverts, dykes, sluices, sewers and passages through which water flows

(even if the watercourse is dry for part of the year)

HIGHWAYS ACT, 1980, SEC 100(9)

- drain includes; ditch, gutter, watercourse, soakaway, bridge, culvert, tunnel and pipe.



Legislation

- BS 3882:1994, Specification for Topsoil April 1998

6.2 Weeds and Foreign matter

free from propagules of aggressive weeds (see N.6.4.5)

N.6.4.5 Weeds and foreign matter

... to minimise future weed control problems, freedom from propagules, e.g. stolons, rhizomes, or other perennial weed species, such as couch grass, red fescue, docks, **Japanese knotweed** and horsetail is critical for planting areas.



Legislation

Waistell/Williams v Network Rail Infrastructure (Maesteg)

- 1) Encroachment and caused damage.
- 2) Interference with the quiet enjoyment or amenity value of the properties ie couldn't sell.

County Court found NR liable not binding
Appeal result soon



Legislation

Environment Act (Wales) 2016

Part 1, Sec 6

Enhanced duty for 2020 biodiversity targets

(Natural Environment and
Rural Communities Act 2006)

Public bodies must;

“maintain and enhance biodiversity”

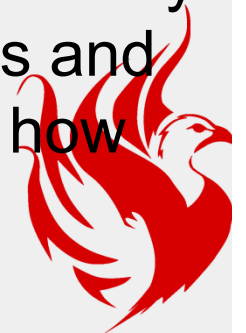
“promote the resilience of ecosystems”



1. The State of Natural Resources Report (SoNaRR)- A report produced by NRW that gives an assessment of natural resources and how well Wales is doing to manage them in a sustainable way

2. Natural Resources Policy - A policy produced by Welsh Government that sets out the priorities, risks and opportunities for managing natural resources sustainably. The policy takes into account the findings of the State of Natural Resources report

3. Area Statements –A local evidence base produced by NRW which helps to implement the priorities, risks and opportunities identified in the National Policy and how NRW intends to address



Well-being of Future Generations Act 2015

Sustainable Development Principle

The process of improving the economic, social, environmental and cultural well-being of Wales by taking action, in accordance with the sustainable development principle, aimed at achieving the well-being goals.

7 Well Being Goals

Resilient Wales;

A nation which maintains and enhances a biodiverse natural environment with healthy functioning ecosystems that support social, economic and ecological resilience and the capacity to adapt to change;



Swansea Public Service Board Local Well-being plan

3/5/18

3. Working with nature – improving health, supporting biodiversity and reducing our carbon footprint.
(3rd of the 4 areas of the plan)

“the negative impacts of plants and animals not originally from the UK (invasive non-native species) are tackled”





Action for Wildlife in Merthyr Tydfil

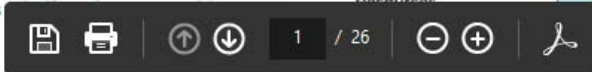
The Merthyr Tydfil Biodiversity Action Plan

2014-2019

Free
Publication



Wales





HM Government

A Green Future: Our 25 Year Plan to Improve the Environment



EU Regulation (1143/2014), 1/1/2015 on invasive alien (non-native) species

- Prevention
- Early warning and rapid response
- Eradication, containment, management and restoration

49 Invasive Alien Species of Union Concern



What Can You Do?

DO

- Plan ahead and understand the problems
- Find out where your knotweed is
- Set aside a budget-in the long term
- Look into grants, partnerships, cost sharing
- Use appropriate treatment methods
- Use trained contractors
- Be persistent and patient



What Can You Do?

DO NOT

- Ignore it-it will only get worse!
- Use incorrect methods
eg time of year
- Forget the law
- Use inexperienced contractors
- Expect treatment to work overnight



The Future

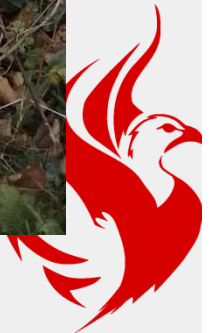
- Tougher legislation (eg via EU 2013) to control movement, sale and spread of INNS
- DEFRA Non Native Review
- Natural Control (in the long term)
- Outside funding eg NRW, WG, EA, EN
- A departmental corporate knotweed control budget
- Correct treatment techniques/methodologies used to ensure successful control in the long term
- New herbicides
- Global warming



7/1/16



23/1/14



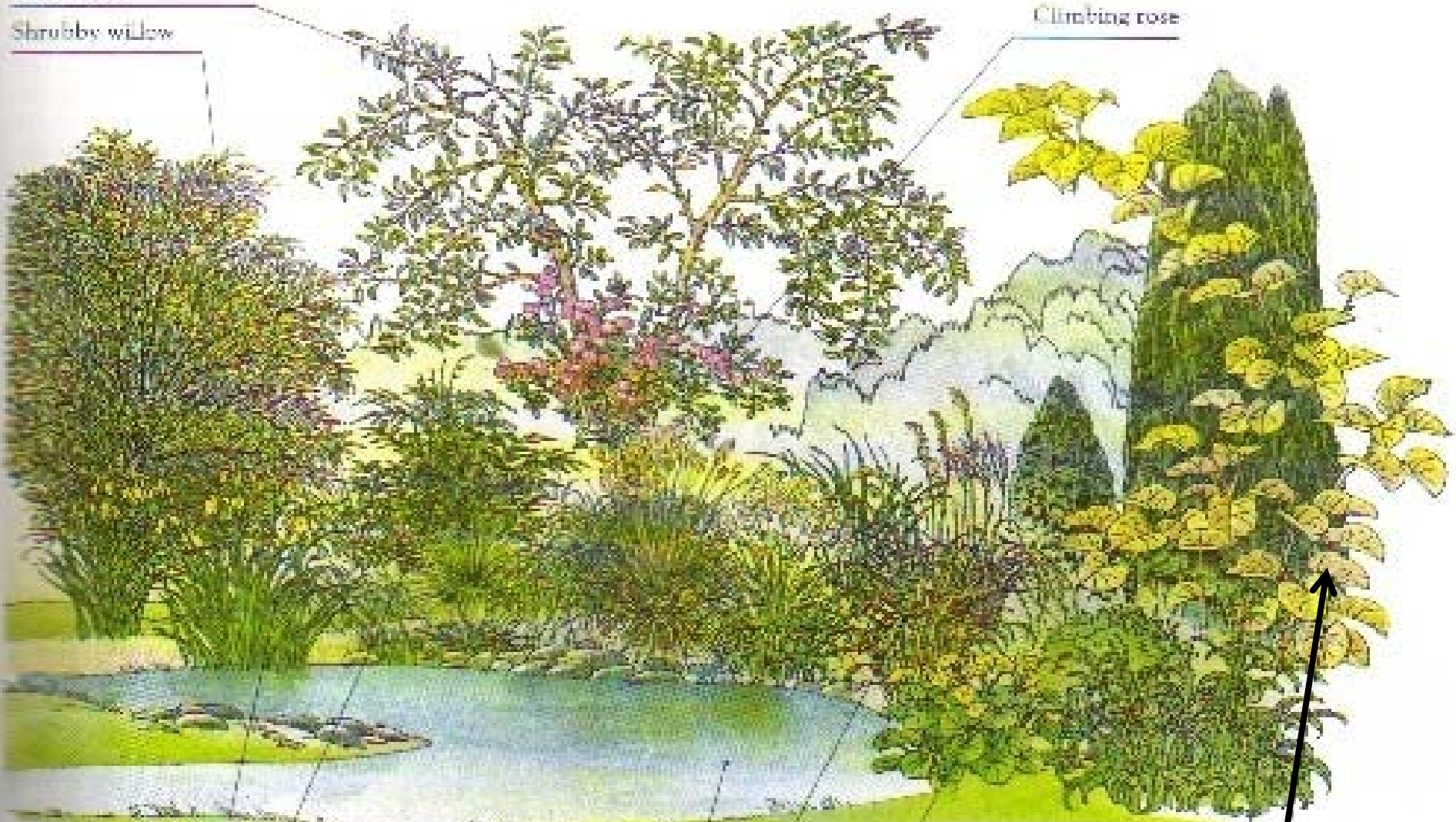
The Complete Gardener 1984

LUXURIANT RURAL GARDEN

Apple tree

Shrubby willow

Climbing rose



Iris foetidissima

Cream-flowering
Anemone sylvestris

Pool

Mixed grasses

Marek marigold

Hellicoxes

Polygonum spp

Conclusion

Direct Action

- Treatment

Indirect Action

- Planning
 - Enforcement
 - Raising Awareness
-





Thank you for listening