Developing and Implementing Innovative and Integrated Approaches to Conserve the Great Crested Newt within the Urban and Rural Areas of North Wales

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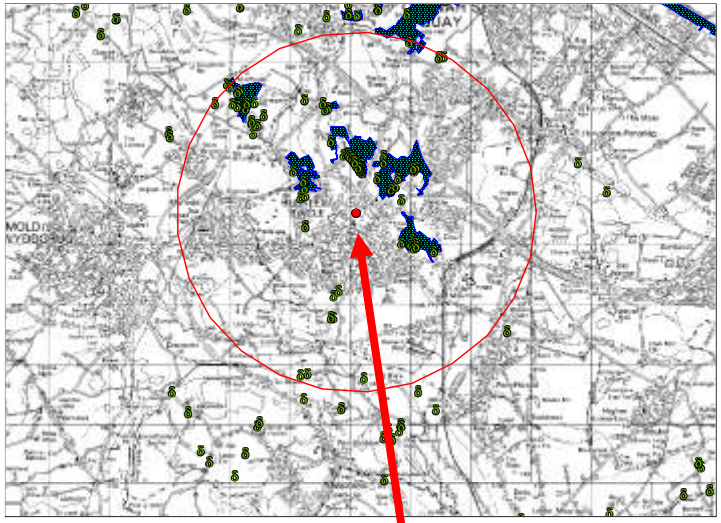
Presentation Overview

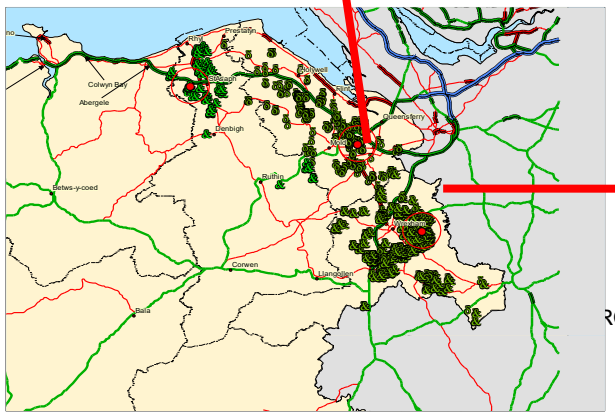
- The great crested newt in North Wales and issues associated with its conservation
- Context for traditional and innovative approaches to conserving the species
- Demonstration of the application of innovative techniques including the use and applications of modelling, spatial conservation plans and the work of Building Wildlife to address small scale development issues

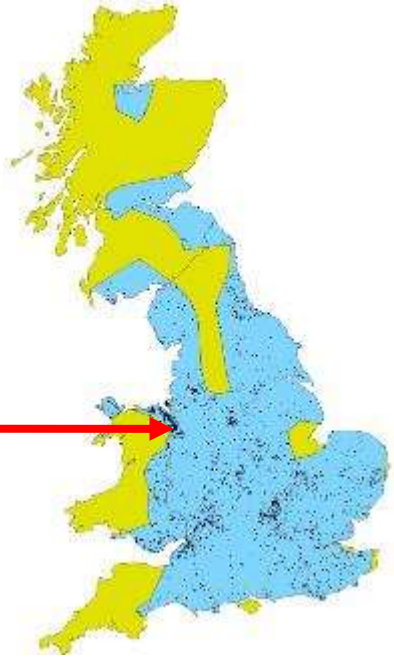
Great Crested Newt in North Wales

- Over 800 known sites
- 3 SACs, 5 SSSIs
- Many populations located close to settlements
- Potential conflict with development
- Delivery of effective surveillance and conservation action
- Considered decline

(NRW Report 2019)







RC 2010

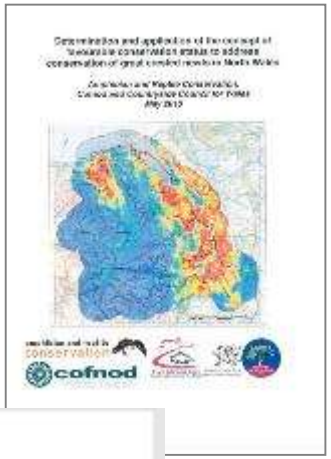
European Protected Species Conservation Issues

- No overall vision, objectives and lack of contextual information, including locations of existing derogation/compensation sites, together with functionality of component sites
- Focus of consideration of the species during the implementation stage of development management
- Difficulties in dealing with small scale multiple development including indirect impacts on European sites
- Difficulty/lack of mechanisms to undertake strategic or composite action
- Risks of incidental capture/killing at construction and operational phases of a project.
- Failure to effectively consider requirements (including funding) for long term surveillance (see FCS definition in respect of consideration of multiple generations)
- Data management and reporting to assess overall effectiveness of actions
- High failure rate of schemes (if long term issues are not considered). Associated with this is ineffective consideration of requirements (including funding) for long term site security, management and wardening.
- Fragmented approach (habitat, policy and action) to overall conservation action including compensation (*Pizza effect*)

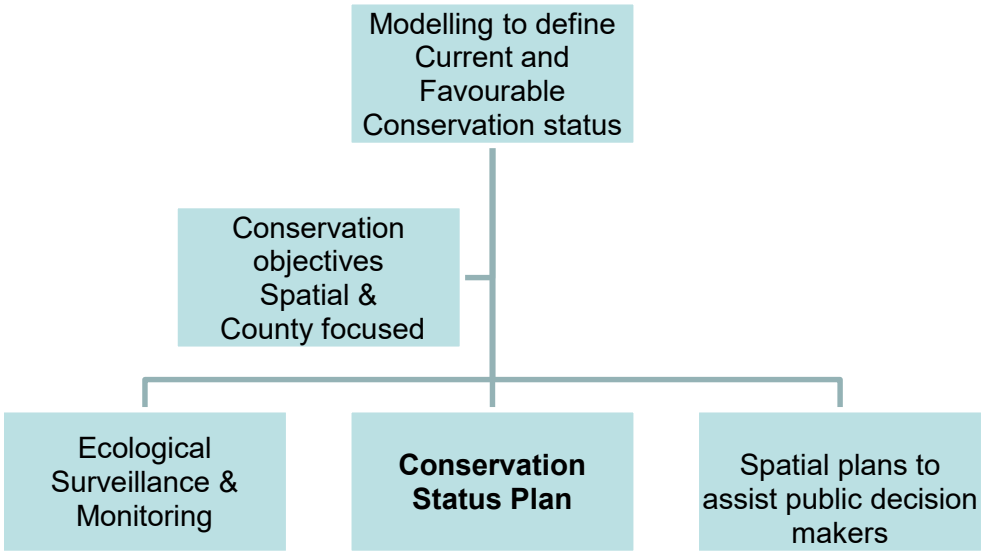
Defining Current Conservation Status (CCS) and Favourable Conservation Status (FCS)

NRW and Amphibian & Reptile Conservation have led developmental modelling informed by the concept of favourable conservation status. Work aimed to:

- Define current conservation status (CCS)
- Inform the rationale for what constitutes 'favourable'
- Informing best locations for actions: survey, habitat creation,
- Inform Spatial Conservation Status Plans (3 plans now prepared)
- Develop a tool for more resilient conservation and development management



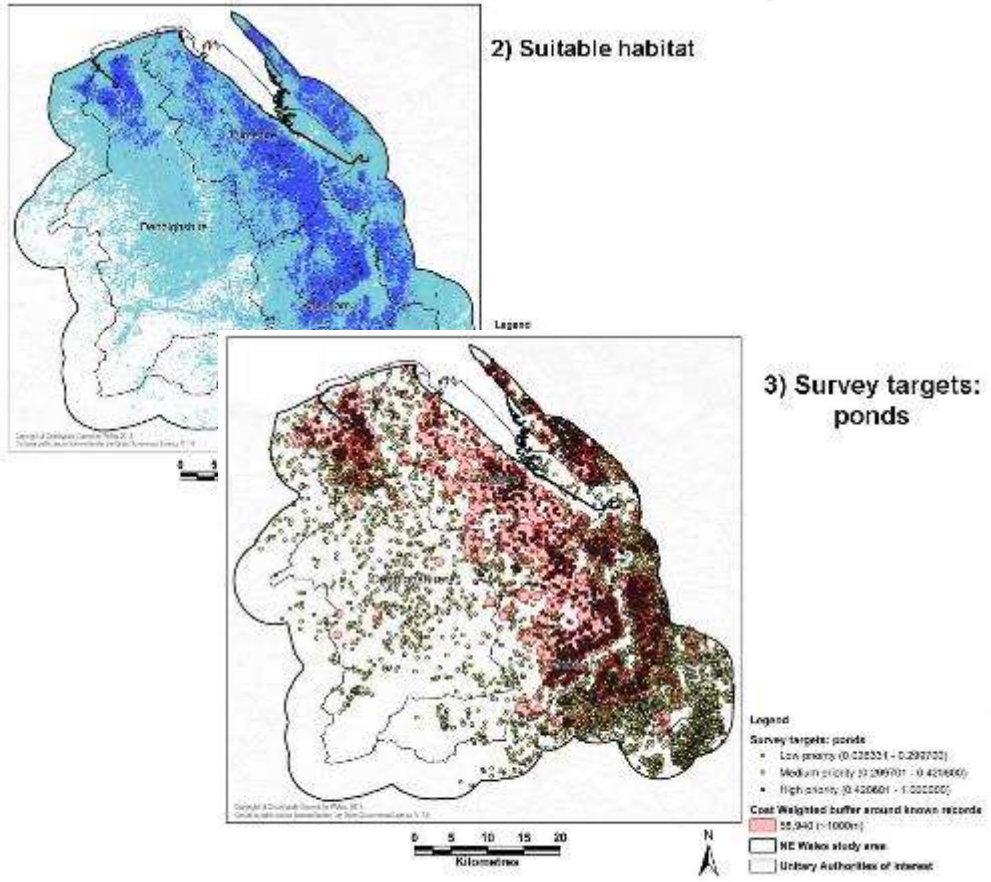
Model Applications 1
Understanding Conservation Status



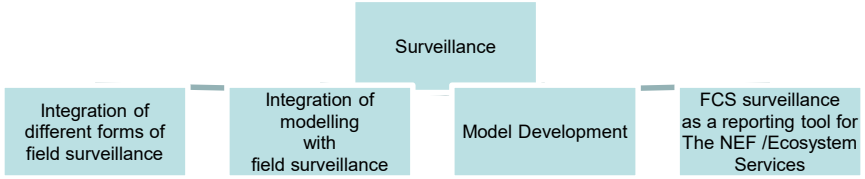
- Help determine current conservation status at local and national levels
- Assist determination of ‘favourable’ objectives.
- Inform spatially based conservation plans . Plans have been drafted for three counties.
- Potentially pivotal for informing land use, land management and landuse change
- Helps address fragmentation issues

Spatial Conservation Plans proposed link with Area Statements and Local and National Nature Recovery Plans

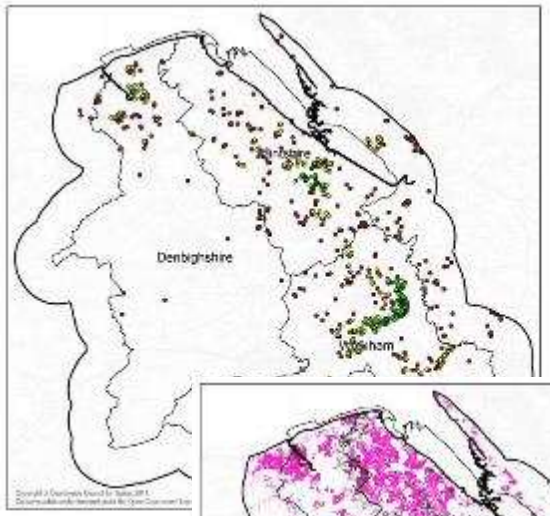
Model applications 2: Targeting Field Surveillance



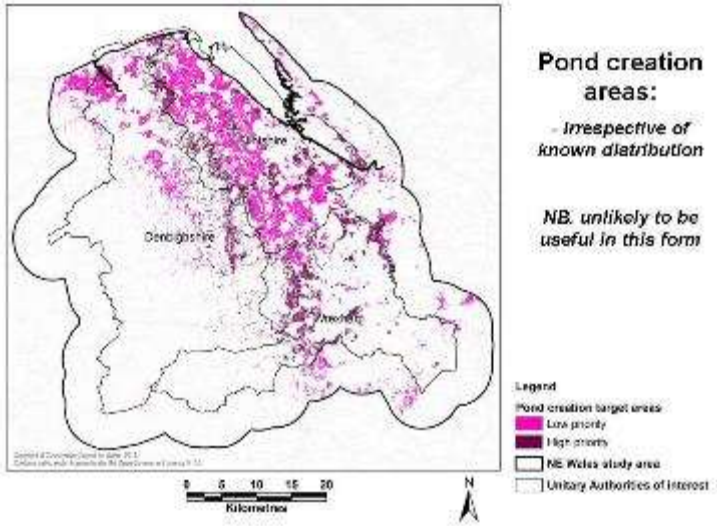
- Modelling could be used to
  - Target field survey
  - Justify surveillance requirements
- Field survey to ground truth and update models



Model Applications 3: Targeting Conservation Action



4) Important populations for metapopulation connectivity



Pond creation areas:

- *Irrespective of known distribution*

NB. unlikely to be useful in this form

Legend
Pond creation target areas
Low priority
High priority
NE Wales study area
Unitary Authorities of interest

- Highlight areas for pond creation
- Tools for informing agri-environment
- Possible link with the implementation of ‘Area Statements’ in Wales

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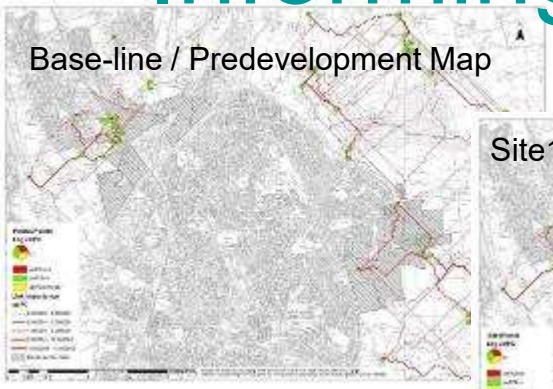
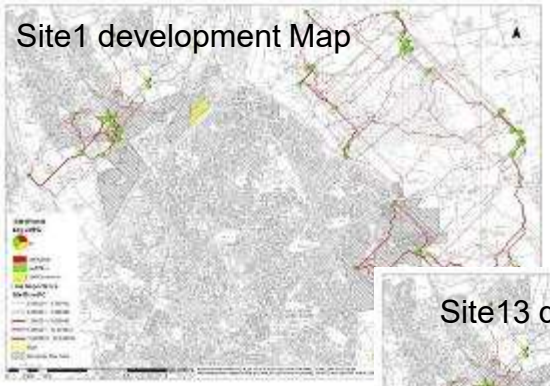
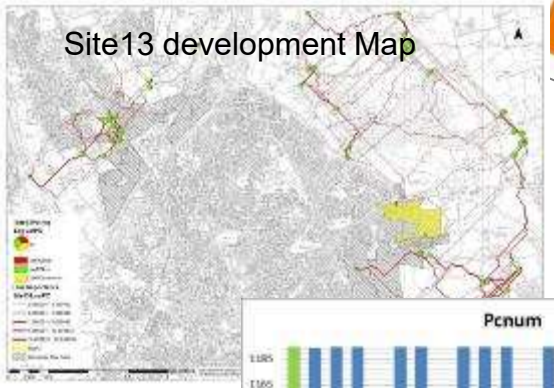
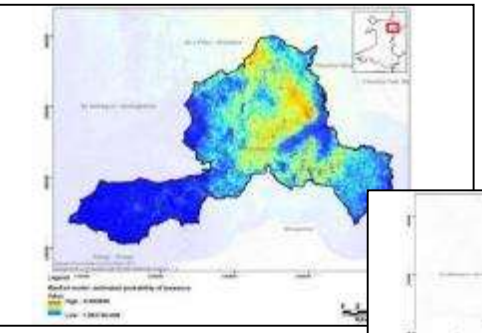
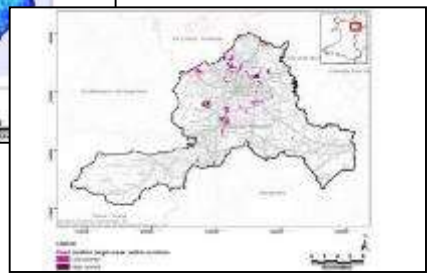
Model Applications 4
Informing forward plans

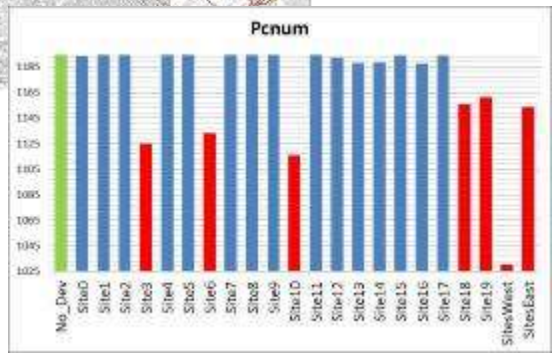








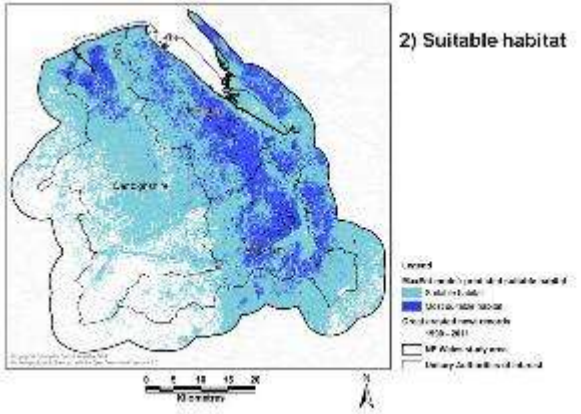




Wrexham CBC Case Study

Model Applications 5: Development Management:

- Informing justification for survey
- Assessing Impacts
- Inform mitigation/compensation (Traditional)
- Inform new approaches to Mitigation/Compensation (eg Strategic/composite approaches; offsetting; green infrastructure; ecosystem provision
- Planning Policy (TAN 5) and BS 42020 identifies the need for field survey



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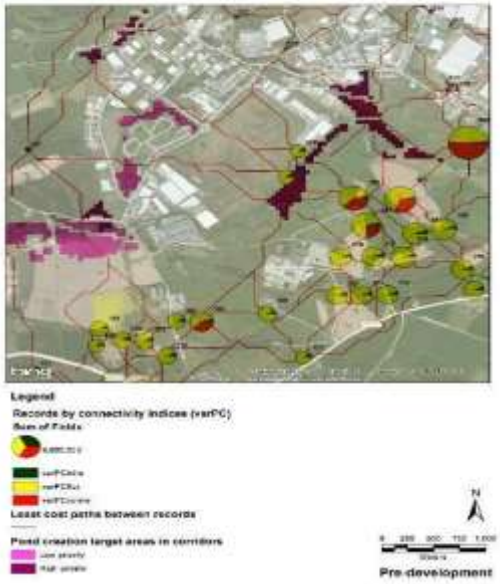
Model Applications 5: Development Management (Impact Assessment)

Practical application: **before** development

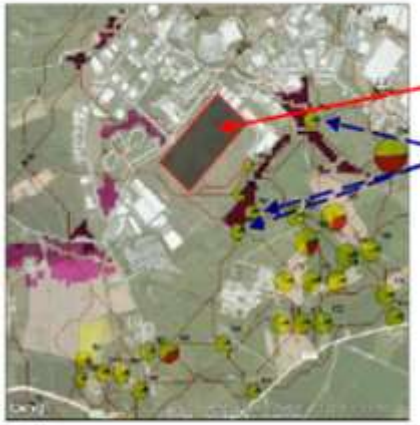


- Pilot testing: Wrexham Industrial Estate
- Pie chart size indicates importance to metapopulation connectivity (varPC indices from graph theory software)
- To mitigate development impact, we trialled modelling new ponds placed in pond creation target areas

•Figure showing connectivity assessment pre-development for great crested newt occupied ponds (recent records) using graph theory software.

amphibian and reptile conservation

after development



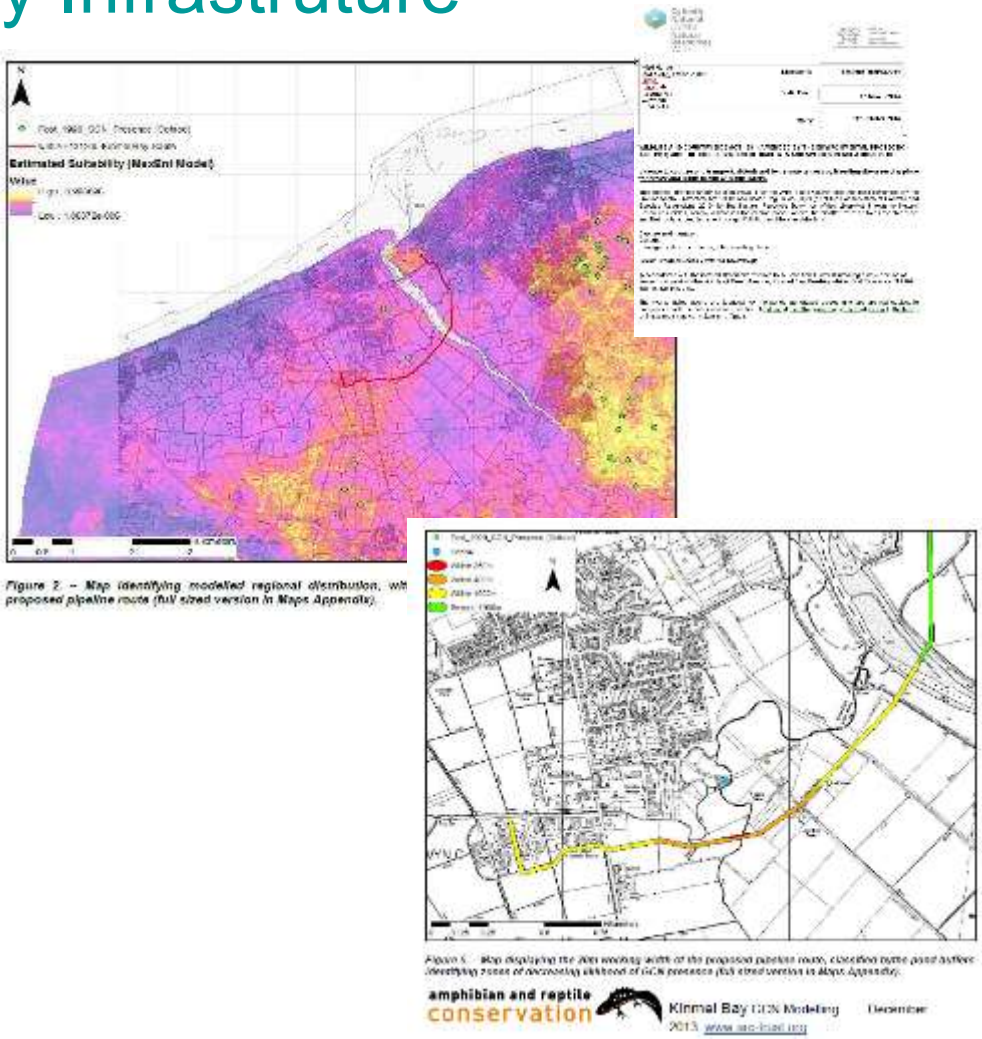
- Proposed development
- Mitigation ponds appear as important as impacted ponds
- Potentially useful when faced with making decisions between mitigation options

•Figure showing connectivity assessment pre-development for great crested newt occupied ponds (recent records) using graph theory software.

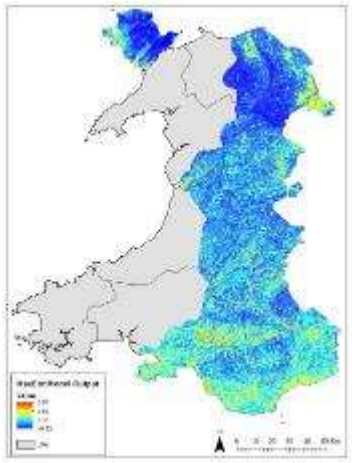
amphibian and reptile conservation

Model Applications 6 –
Informing species license maintenance of Utility Infrastruture

- Pipeline replacement near Kinmel Bay (linear utility)
- Model informed assessment of impact.
- Licence information, and mitigation scheme and FCS assessment based on modelling.
- Historic information was known.
- Further survey not likely to have changed the methodology or conclusions of the FCS Assessment.

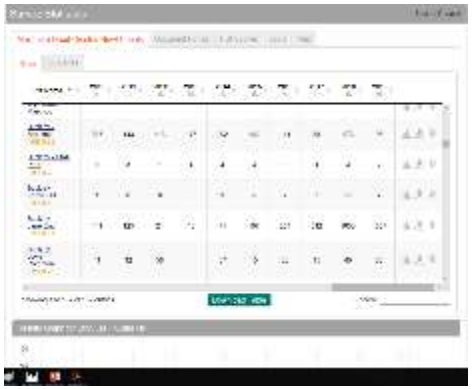


Modelling Applications 7: Quantifying the status of great crested newts at a Wales Spatial Scale

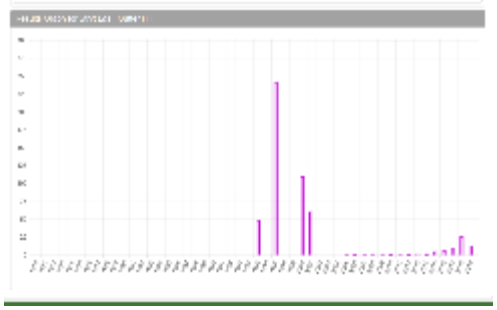


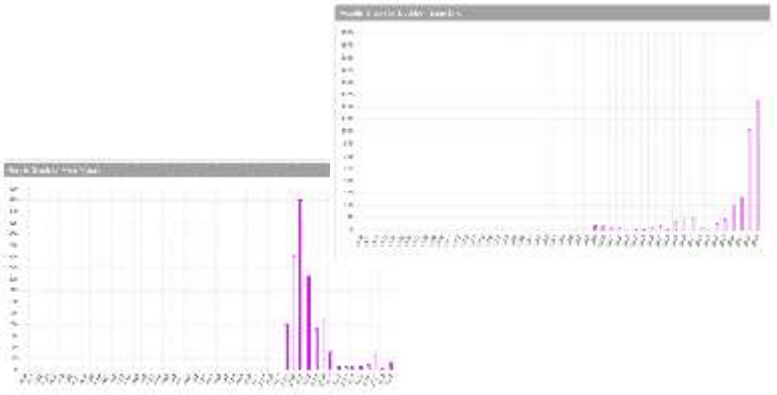
Metric	Value JNCC (Wales)	Value ARC 2014 in prep
Range	n/a	7,312 km^2
Population	4,371 (3,161-29,275)	3,271 occupied ponds
Habitat for the species	1,829	2,2170 km^2
Habitat quality measure	n/a	810 high quality ponds

Monitoring & Surveillance



- A range a surveillance action is carried out for a variety of purposes: designated site, mitigation and academic
- Historically no integration of data sets
- 2010 EU complaint re GCN surveillance. Defra Task Force and work by WG re surveillance
- Online Wales GCN Monitoring database launched in 2016 as a SMART (**S**ingle-entry **M**ultiple **A**pplications for **R**eporting **T**rends) one stop shop for long term surveillance data
- Database includes licensing information, statutory site surveillance, Habitat Suitability Index data and ability to upload negative records. Methodology is abundance based.
- Database now has over 30,000 amphibian records for 130 sites

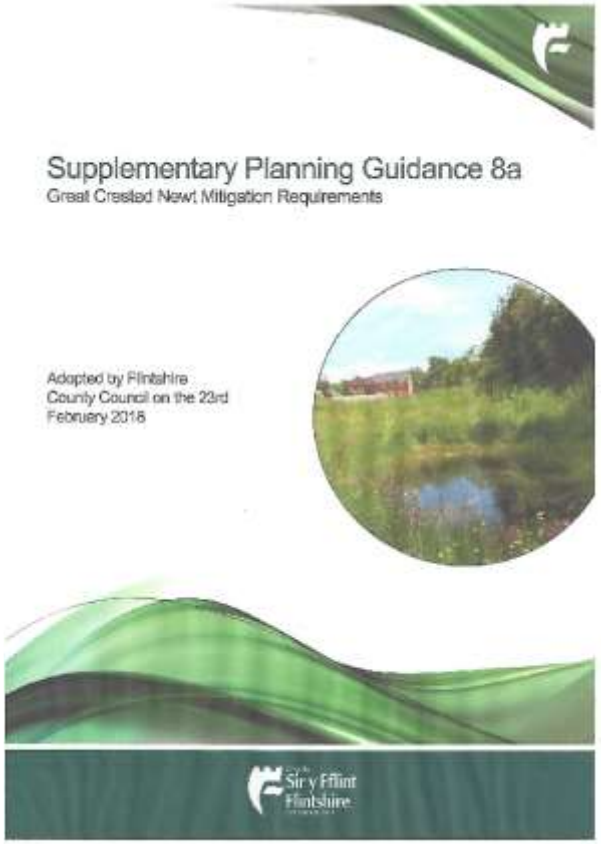




Building Wildlife – what is it?

- Voluntary charitable trust
- Working with planning authorities and developers
- S106 Planning Act 1990
- Collects, administers and manages financial contributions from predominantly small scale developers in mitigation for impacts on protected species and sites
- Supplementary planning guidance for developers
- Current predominant focus on small scale developments, particularly near GCN SAC's in north east Wales.

Supplementary Planning Context



Supplementary planning guidance has now been produced by Flintshire County and Wrexham County Borough Council

Building Wildlife – who is involved?

- Trustees – diversity of backgrounds
- Steering group with independent advisory bodies
- Local authority ecologists
- NRW officers

Building Wildlife – what area does it cover?

- Denbighshire,
- Flintshire,
- Wrexham
- ‘GCN’ SAC’s
  - Johnstown
  - Deeside & Buckley
  - Halkyn Mountain

Building Wildlife – what does it do?

- Receives financial contributions in mitigation for impact
- Pools the contributions
- Seeks suitable projects
- Assesses submissions
- Provides grants
- Reviews projects

Building Wildlife

Building Wildlife – what has it brought in?

- £100,000 of funds received from development since 2015
- Pond creation (no.4) and restoration (no.16)
- Land purchase
- Site management
- Interpretation

Building Wildlife – who benefits?

- Planning authorities
- Developers
- Transparency and accountability
- Local communities
- Species and habitats

ciria

Project of the Year - small scale Award

Redrow Homes

White Lion Nature Reserve

Redrow's Heritage Park development comprises of 55 high quality family homes and a popular 0.8 hectare Nature Reserve, maintained by the Amphibian and Reptile Trust with nature and people in mind. The development was shaped by the surrounding natural environment, and carefully landscaped and cultivated to preserve wildlife habitats and enhance biodiversity.

Project Team

Natural Resources Wales, Amphibian and Reptile Conservation (ARC) Trust, Flintshire County Council, Elan Homes (neighbouring developer), Building Wildlife Trust, Paul Sinclair Technical Director for Redrow Homes (NW).

Building Wildlife – where next?

- Review performance
- Smarter assessment of projects linked to Spatial Conservation Plans
- Support research
- Provide better feedback
- Widen the audience,
- Develop or support updated spatial conservation/action plan(s)
- Potential future role re delivery of ‘ecological enhancement’
- Potential to include additional species/habitats

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Building Wildlife

Diolch yn fawr am wrando
Thank you for listening

15 November 2019