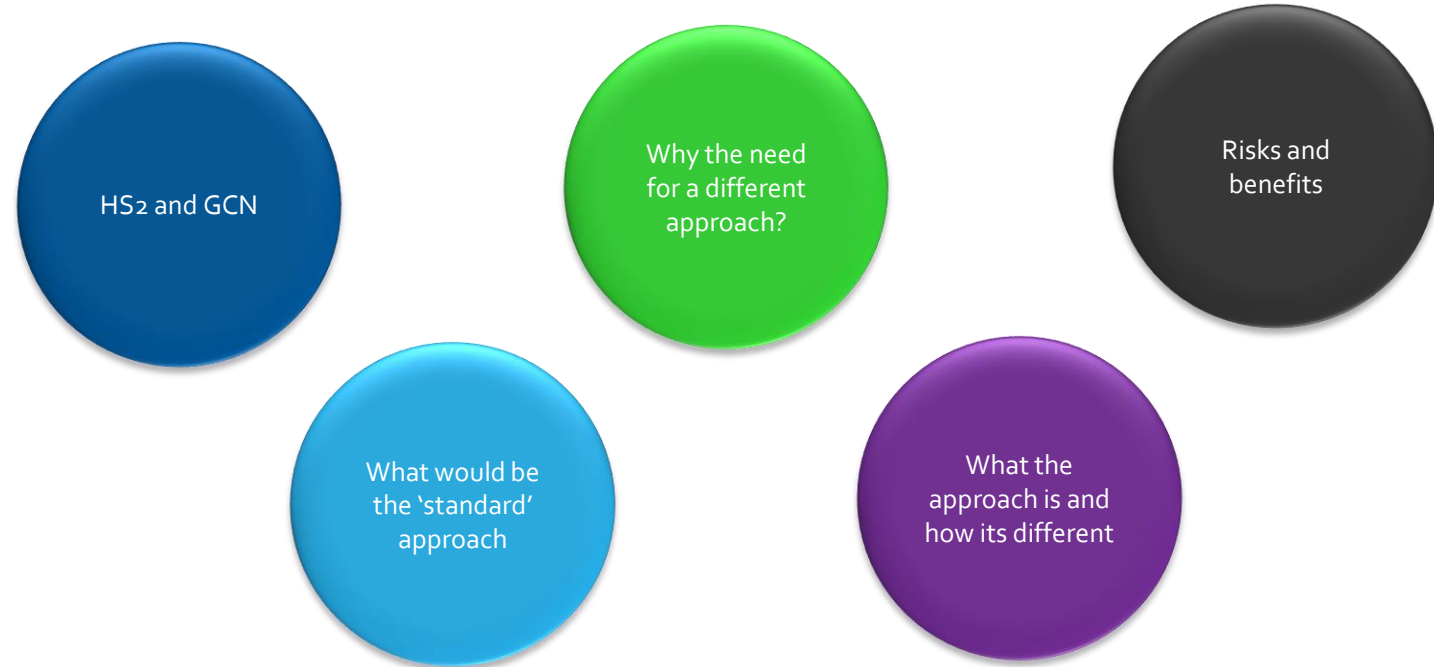


Great Crested Newt: Post-impact monitoring at HS2 – focussing on habitats

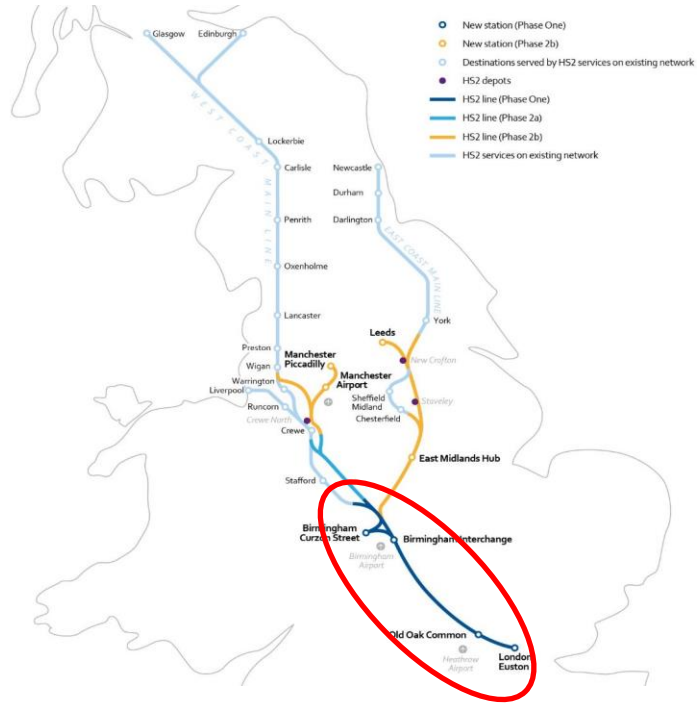
David Whitehorne, Ecology Lead, Phase One, HS2 Ltd &
Rebecca Lee, Senior Wildlife Adviser, Natural England

CIEEM Autumn Conference - Mitigation Monitoring and Effectiveness
November 2017

Summary

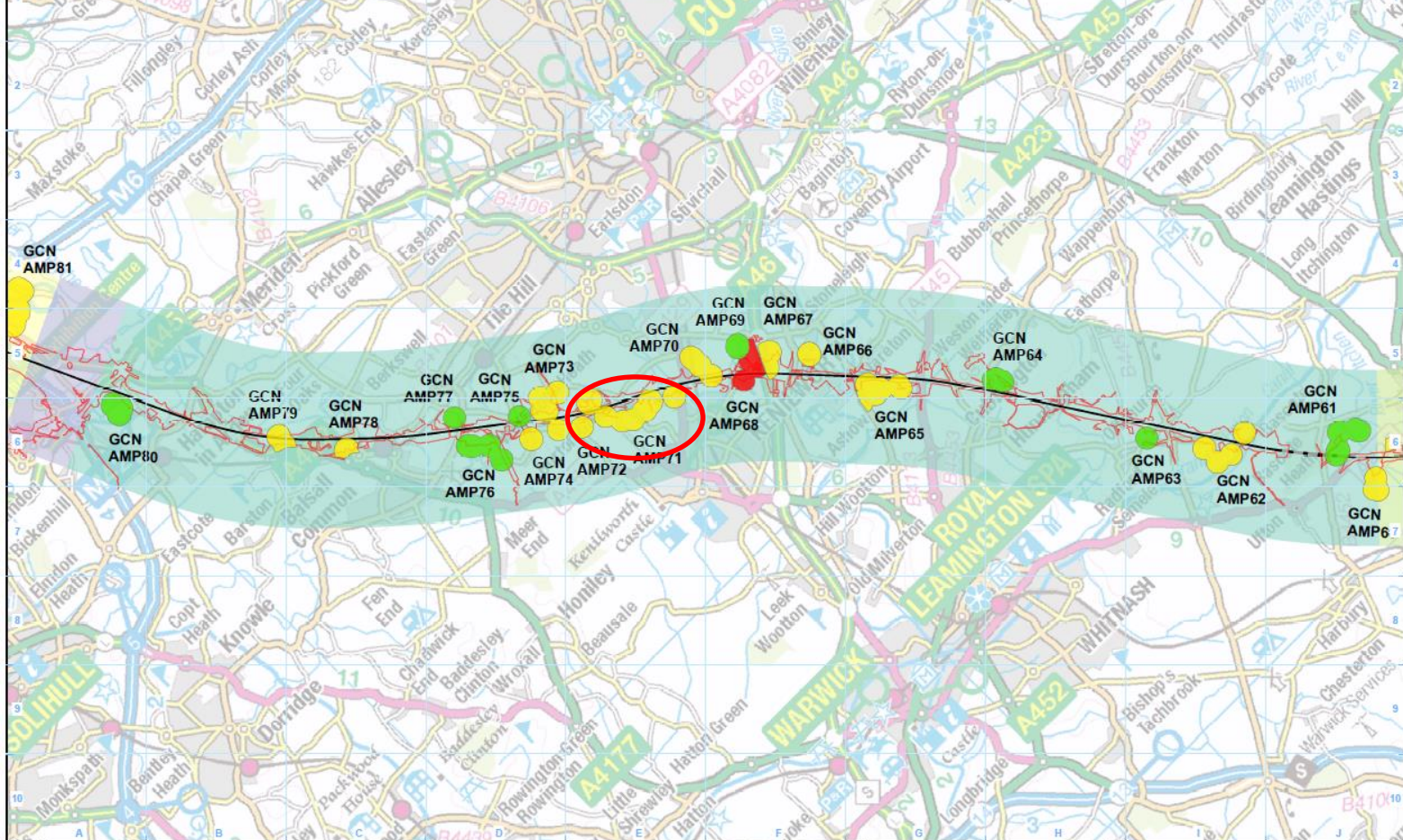


HS2: it's quite long.....!



What about the GCN?

- Complex requirements
 - Survey knowledge
 - Scale
 - Phasing
 - Timescale
- 105 GCN metapopulations (AMPs)
- Organisational licence
- 3 stages of impact assessment
- Route-wide assessment of licensing tests



Legend

- Route in tunnel
- Route on surface
- Land potentially required during construction
- Small GCN metapopulation size class
- Medium GCN metapopulation size class
- Large GCN metapopulation size class

HS2 Delivery sectors

- S1
- S2
- S3
- S4
- C1
- C2
- C3
- N1
- N2
- N3
- N4



Map Number: EC-30-006

Map Name: EC-30 - Great Orested Neat: Populations and Habitat Assessment Phase 1 Route Wide

AMP Overview

Sector: N1 & N3



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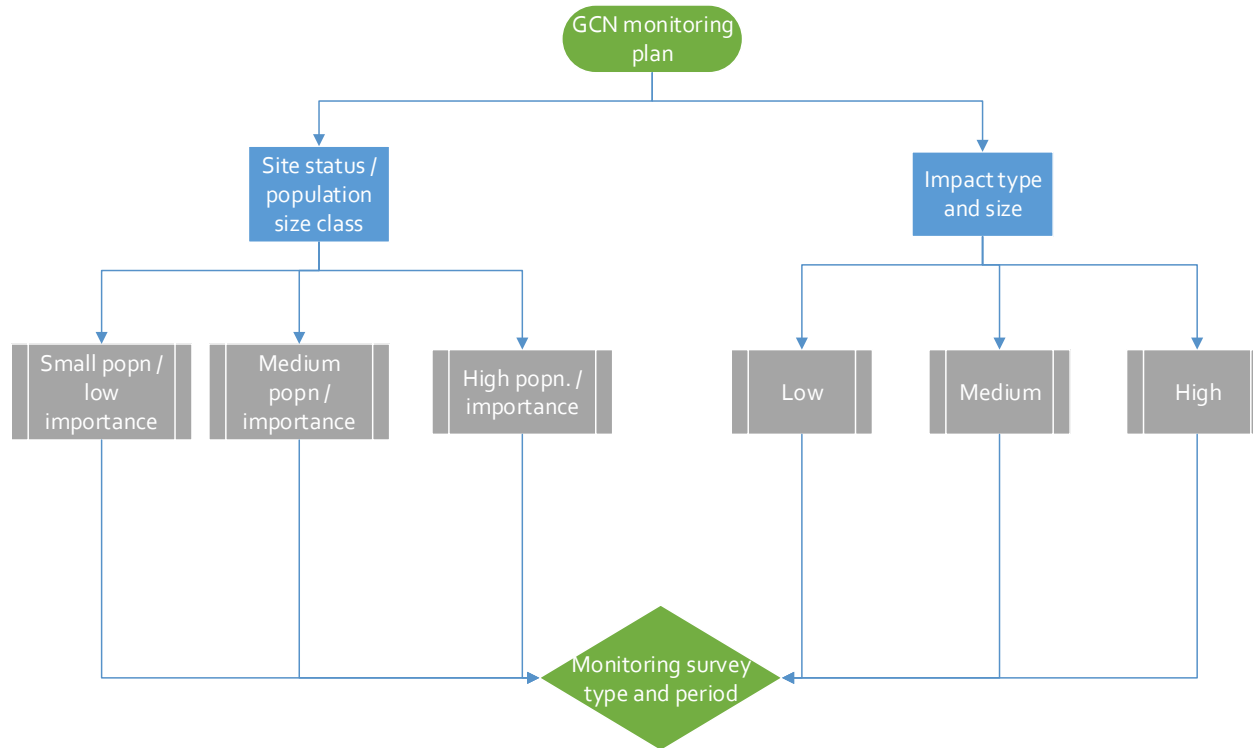
Scale at A3: 1:80,000

Date: 19/01/17



Monitoring...what would we
normally do?

“A monitoring plan should be put in place to assess whether the great crested newt population has responded favourably to the mitigation” GCN Mitigation Guidelines



Why the need for a different
approach....?

Scale.....

- 105 metapopulations.....!
- Licenced at route-wide scale
- Cost effectiveness and looking to optimise scale
- Landscape-scale thinking
- Developing approach from new Licensing Policies
- Localised adverse effects

The Monitoring approach

habitat assessment in combination with
proportionate population monitoring to
determine if the mitigation and
compensation provided has been
successful

Standard

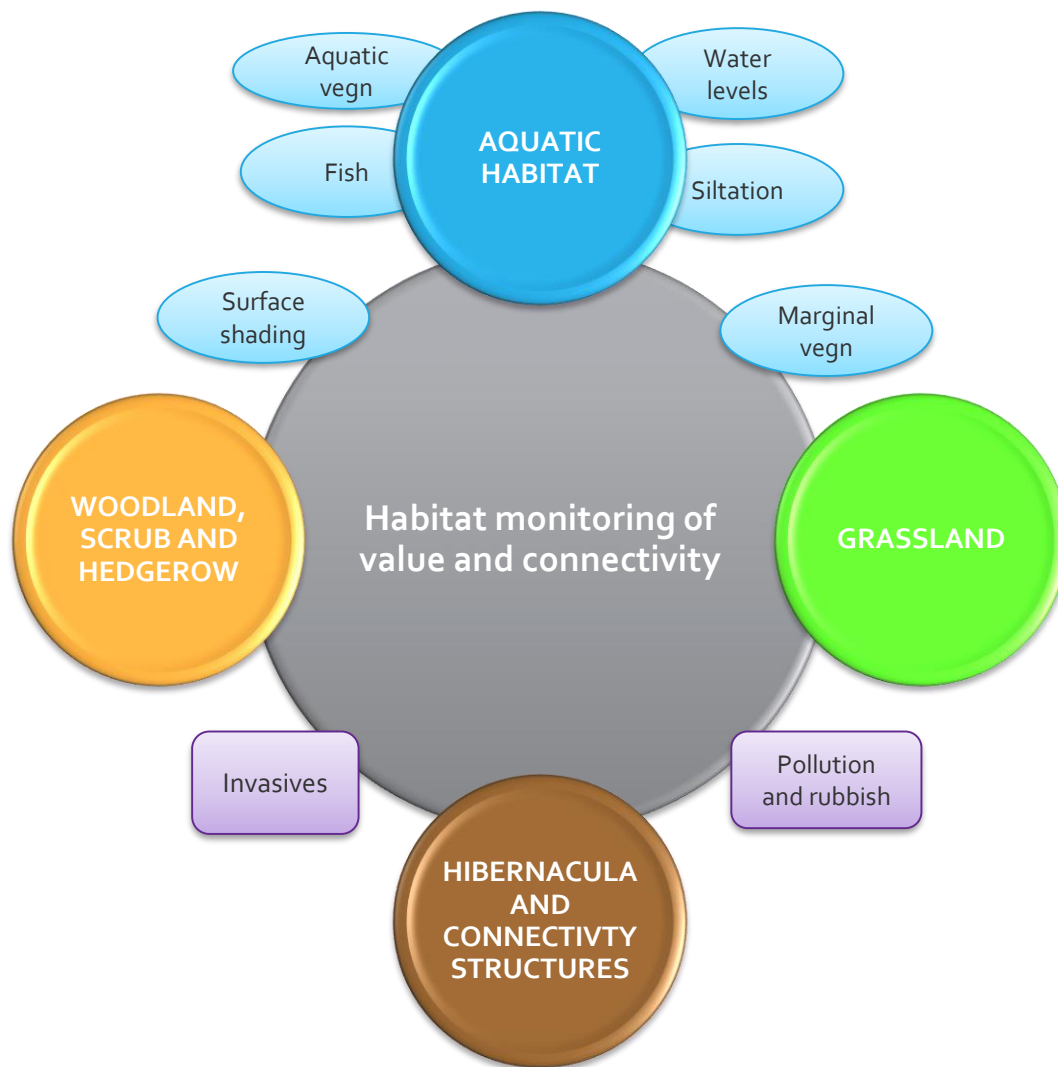
- **Exact** locations and areas
- **Detailed** prescriptions in the Method Statement
- **Work schedule** details dates and durations
- **All ponds** within impacted metapopulation monitored
- **Prescriptive** approach

HS2

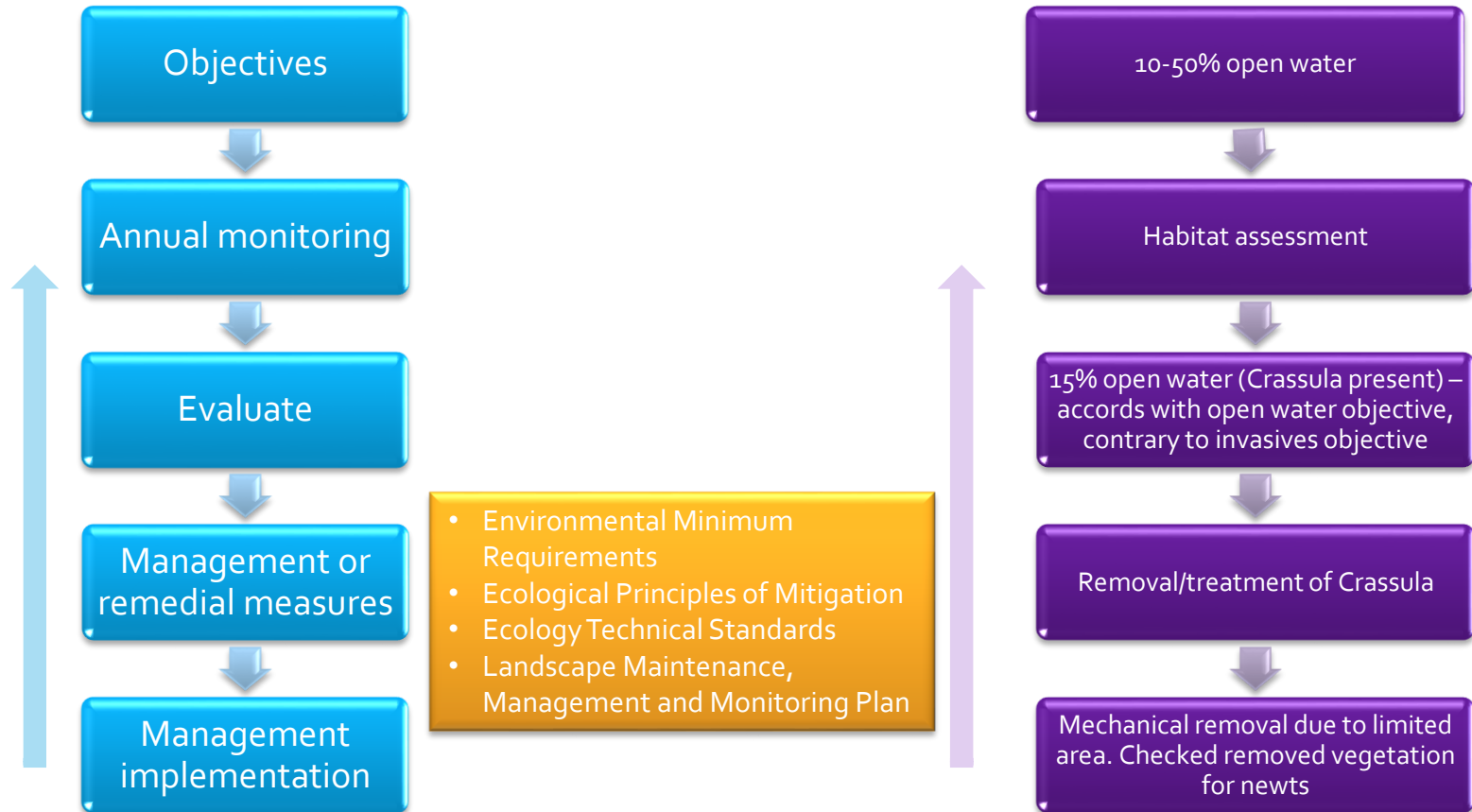
- **Outline** information on locations and areas
- **Scheme detailed design** confirms detailed prescriptions
- **Circumstances** where ponds (outside of scheme) need to be monitored
- **Judgement** based **proportionate** approach to measuring success

Applying the approach...

Habitats



Decision-making



Population monitoring

GCN population monitoring

Year after impact	Category A (low impacts on small or medium popn.)	Category B (medium impact on small popn., low impact on large popn.)	Category C (high impact on small popn.)	Category D (medium impact on med popn.)	Category E (high impact on med popn., medium impact on high popn.)	Category F (high impact on large popn.)
Year 1	HA only	P/A + HA	P/A + HA	PSC + HA	PSC + HA	PSC + HA
Year 2		P/A and/or HA only				
Year 3			P/A and/or HA only	PSC and/or HA only	PSC and/or HA only	PSC and/or HA only
Year 4		HA only	HA only	HA only		PSC + HA
Year 5						PSC and/or HA only
Year 6						PSC + HA
Year 7						HA only
Year 8						PSC and/or HA only
Year 9						
Year 10			P/A + HA	P/A + HA	PSC + HA	PSC + HA



Risks and benefits

- Risks
 - Relies on professional judgement
 - Consistency due to scale
- Benefits
 - Improved long-term safeguard
 - Flexibility
 - Cost
- Has the compensation been successful...?
- Evaluate success of compensation?

Thank you