

Upland Ecosystem Options: future landscapes at a farm scale.

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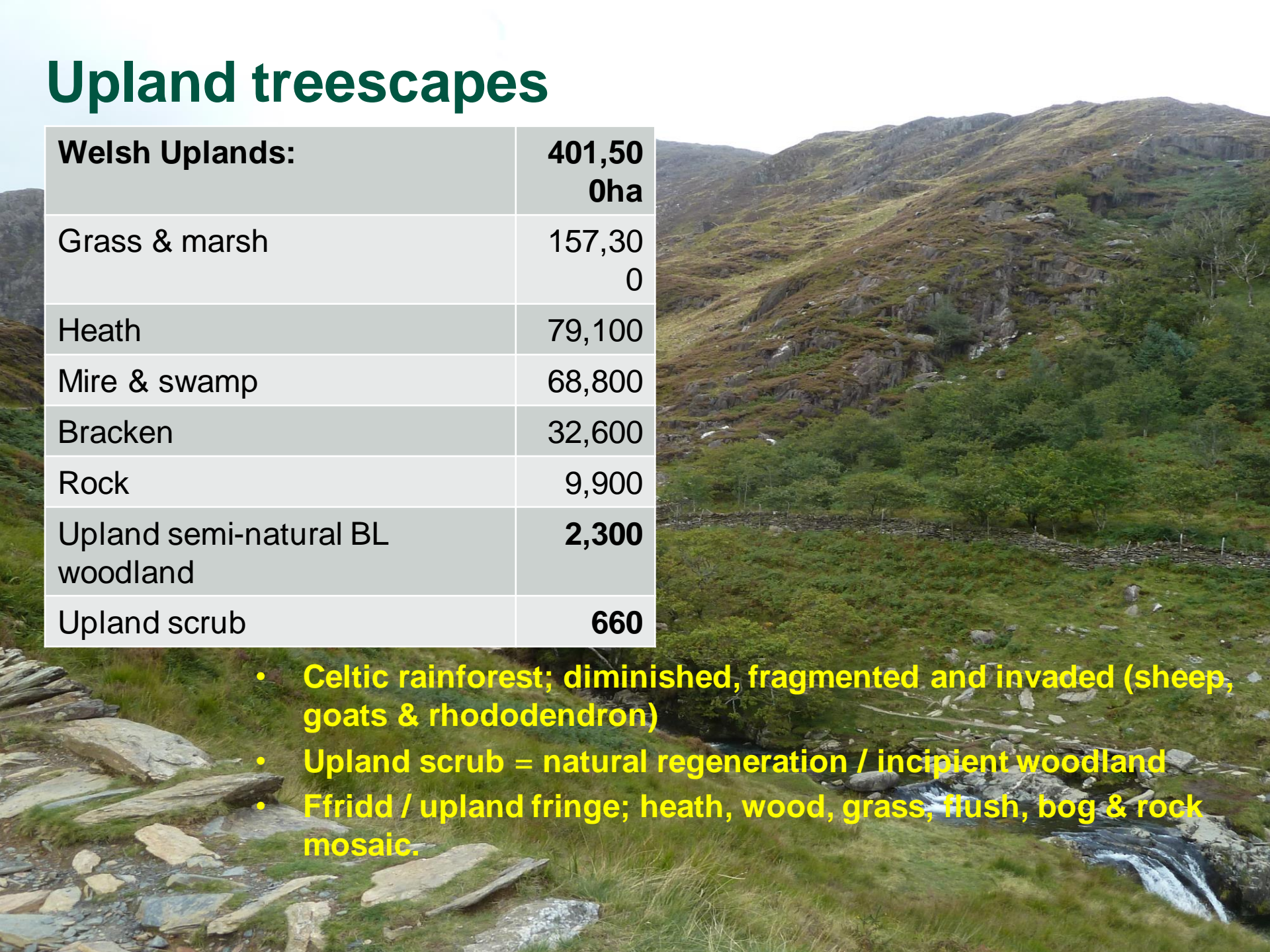
~~Trees or Peat~~ v *Trees and Peat*

- Both *trees and peat* deliver important ecosystem services.
- We want both; but trees can damage peatland and peatlands may not produce good for trees.
- “The right tree in the right place” - may be a cliché, but it remains true nonetheless.

Upland treescapes

Welsh Uplands:	401,500 ha
Grass & marsh	157,300
Heath	79,100
Mire & swamp	68,800
Bracken	32,600
Rock	9,900
Upland semi-natural BL woodland	2,300
Upland scrub	660

- **Celtic rainforest; diminished, fragmented and invaded (sheep, goats & rhododendron)**
- **Upland scrub = natural regeneration / incipient woodland**
- **Ffridd / upland fringe; heath, wood, grass, flush, bog & rock mosaic.**



Land resource planning



Land Resource Planning; *"systematic assessment of land potential and land-use alternatives for achieving optimal land uses and improved socio-economic conditions"* (FAO)

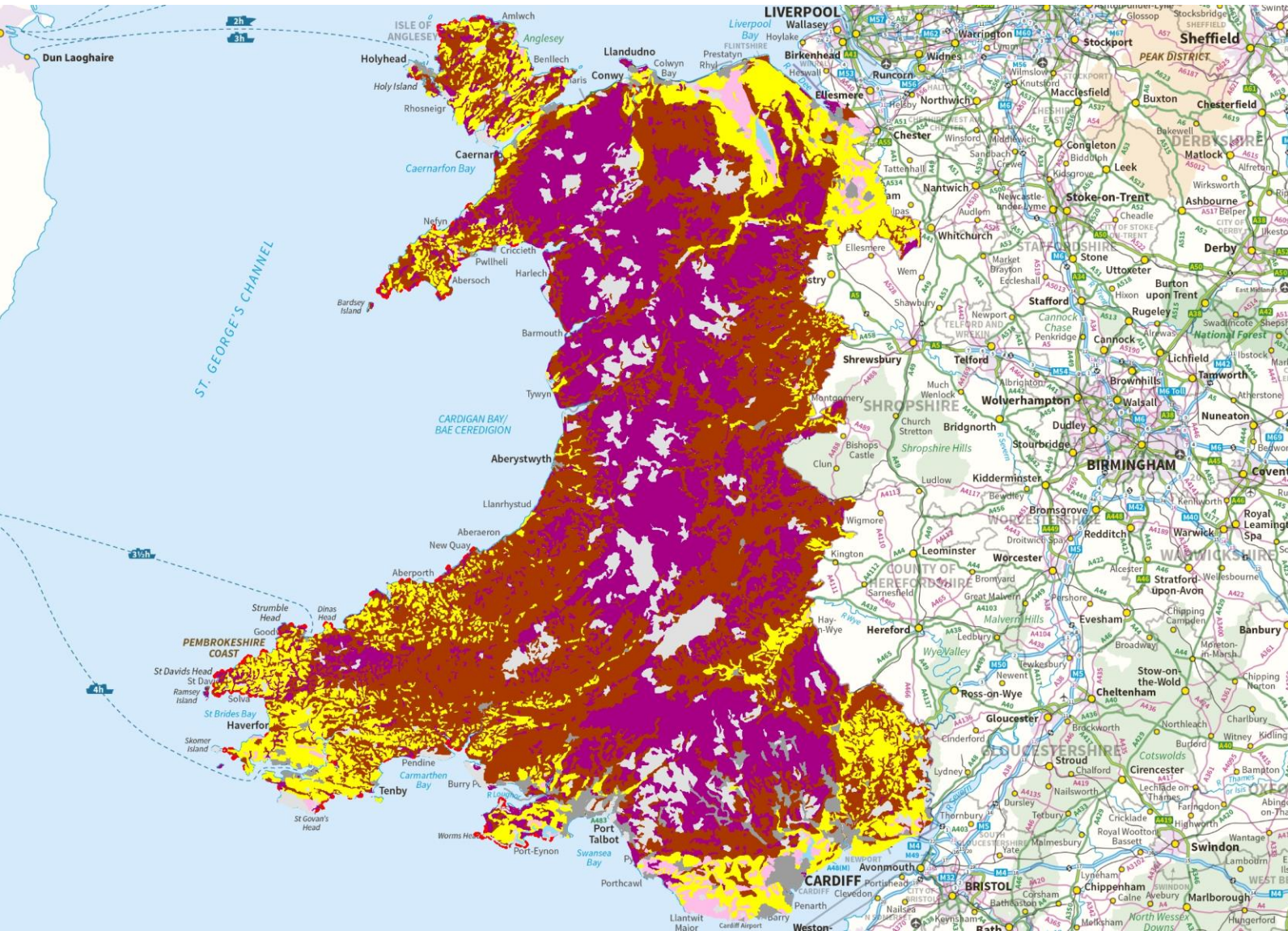
- 1. Agricultural Land Capability classification (ALC)**
- 2. Projected ALC**
- 3. Projected tree crop capability**
- 4. Opportunity mapping,**
- 5. Working with Natural Processes**
- 6. Upland Ecosystem options.**

Land Resource Planning

Agricultural land classification

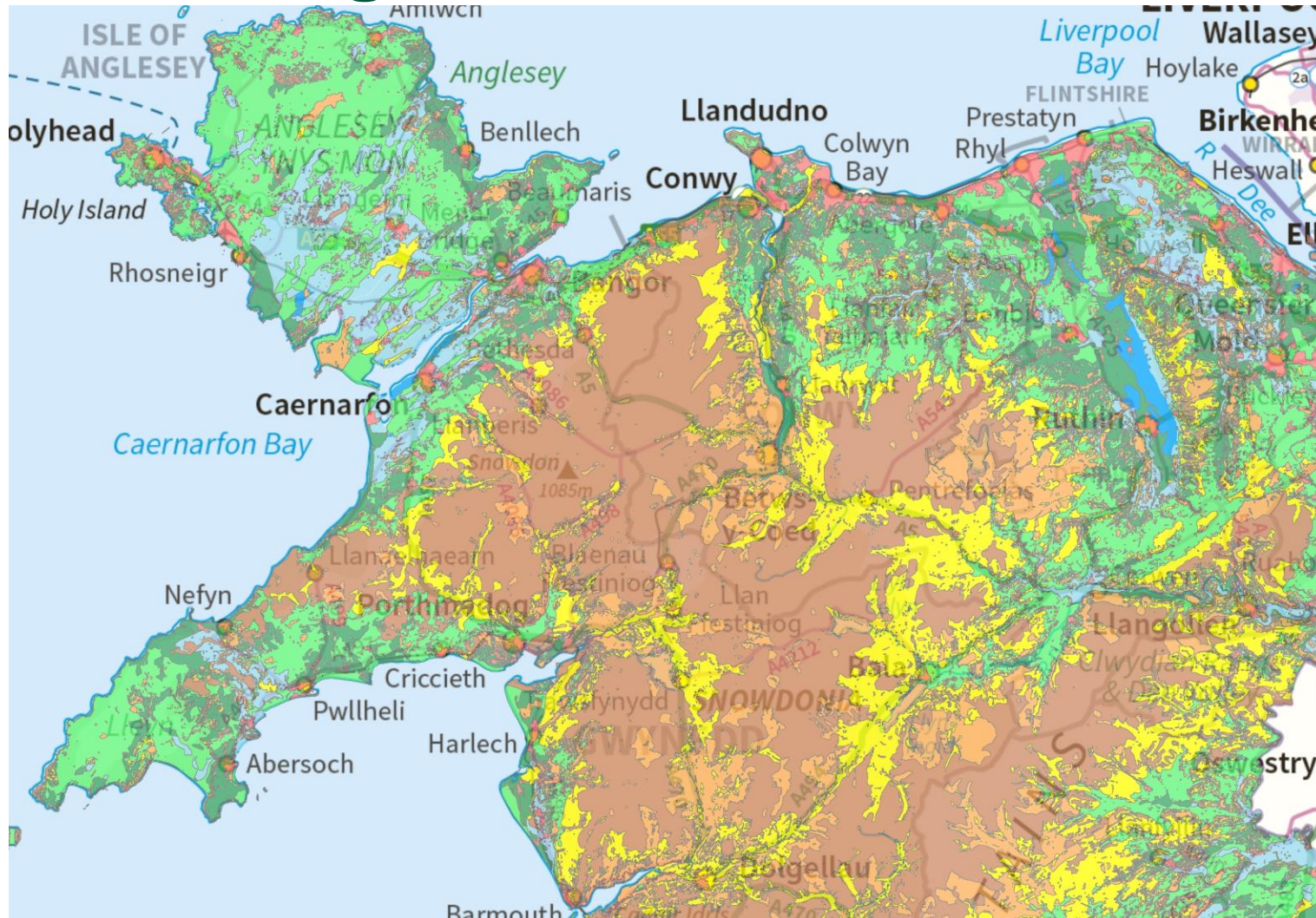


Cyfoeth
Naturiol
Cymru
Natural
Resources
Wales



Land Resource Planning

Predictive Agricultural land Classification



Land Resource Planning

Biophysical constraints for Sessile Oak

Present day



2080 high emissions scenario

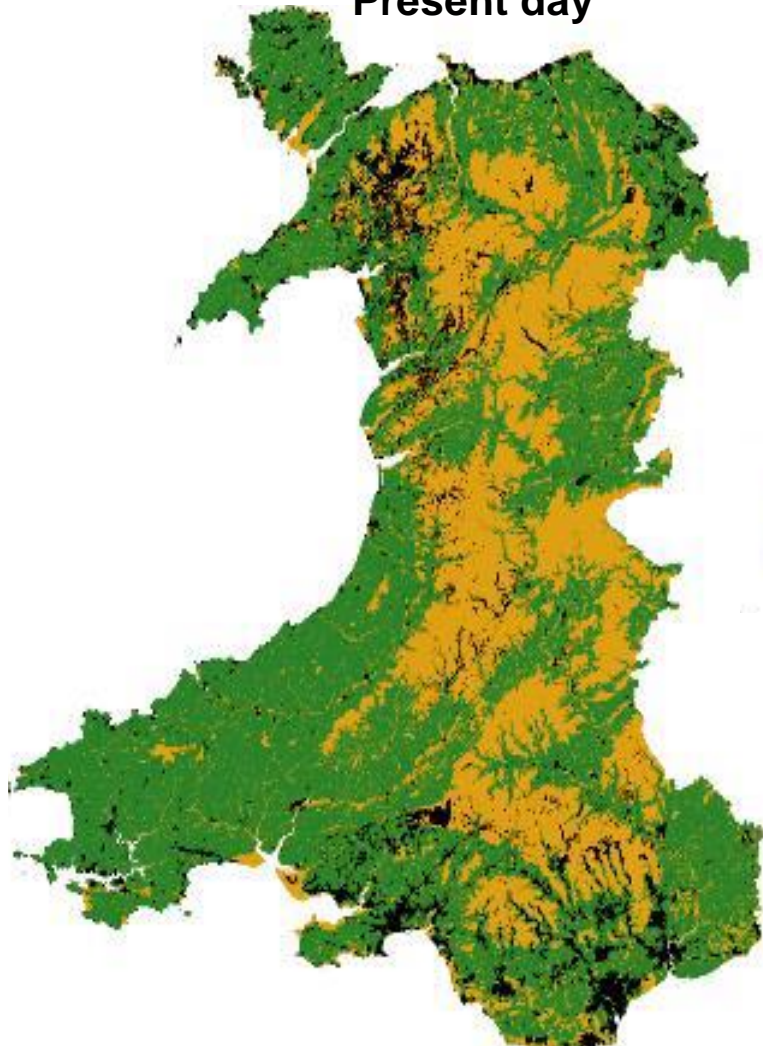
Legend
 Suitable
 Limited
 Unsuitable



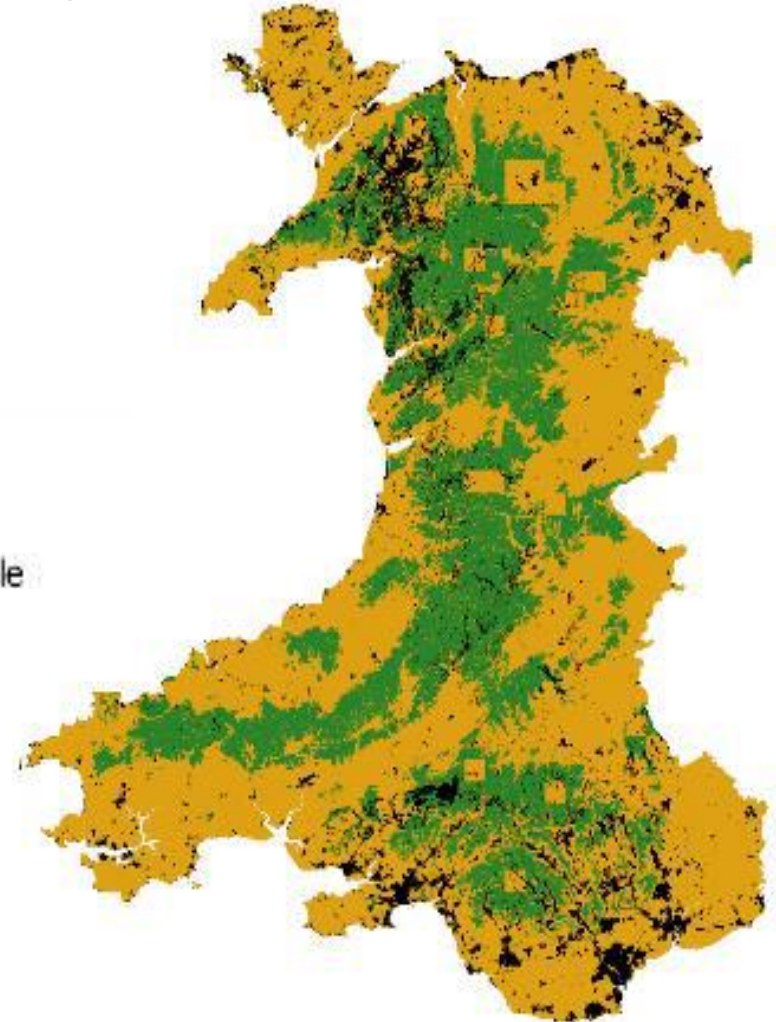
Land Resource Planning

Biophysical constraints for Sitka

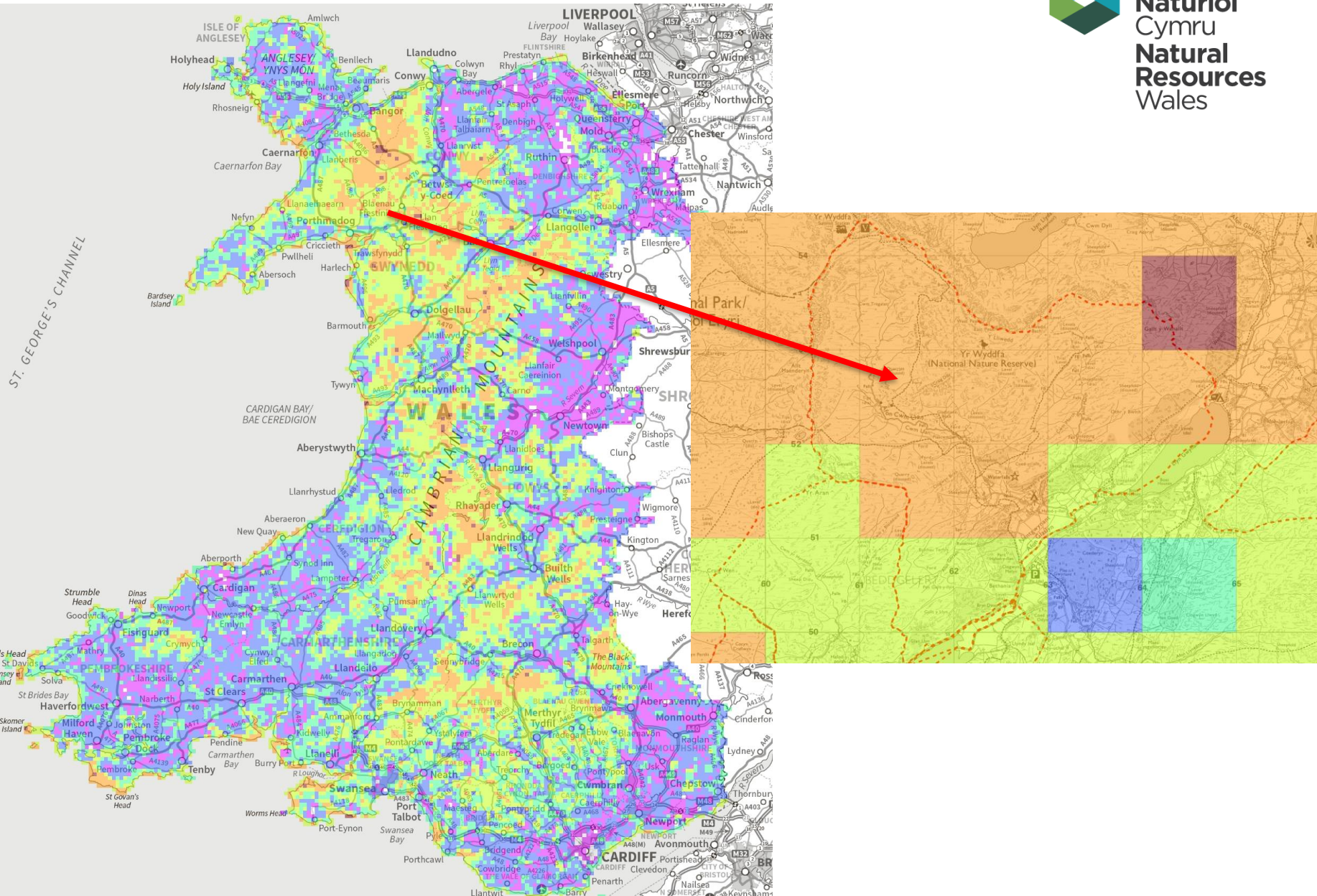
Present day



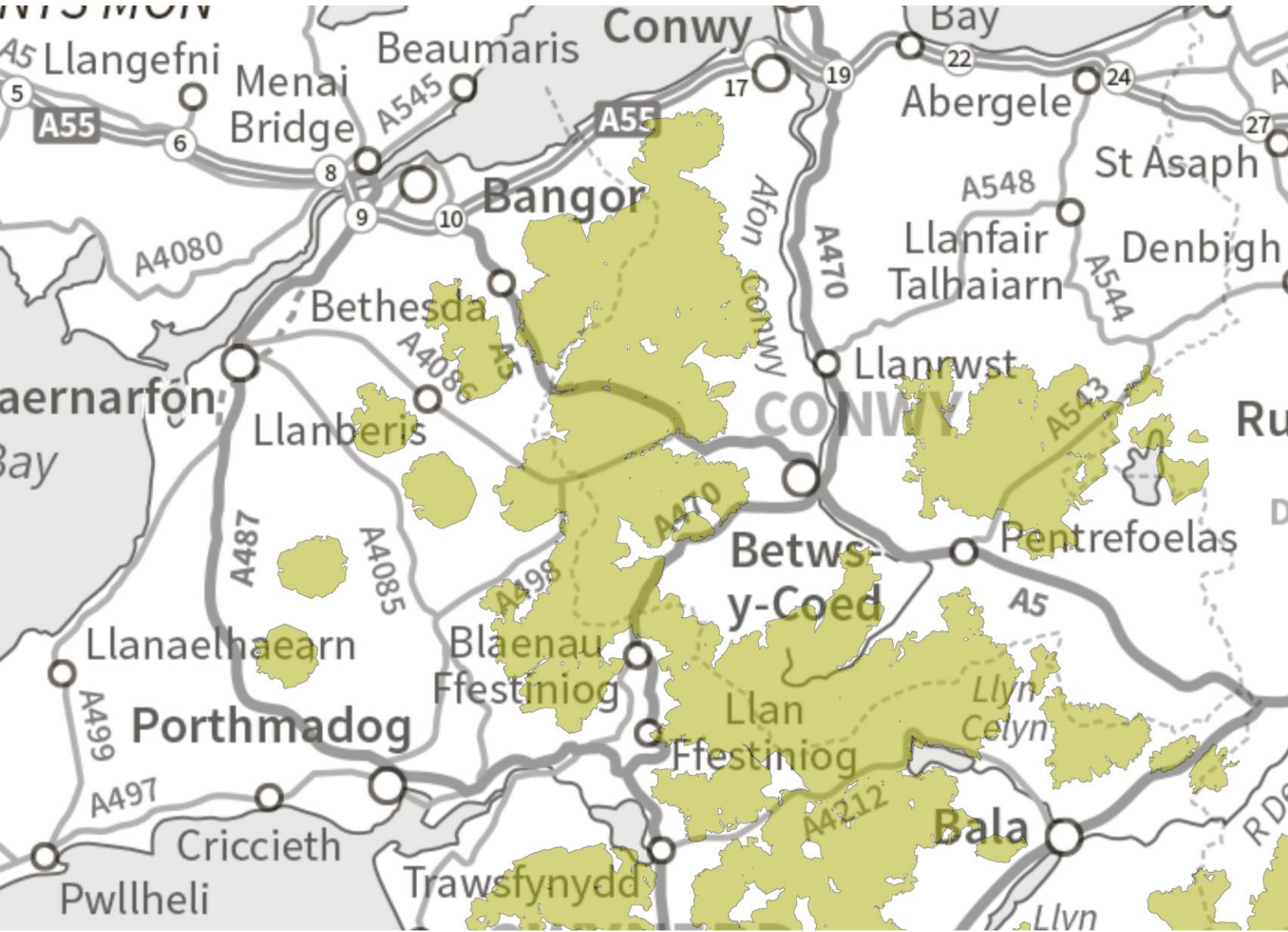
2080 high emissions scenario



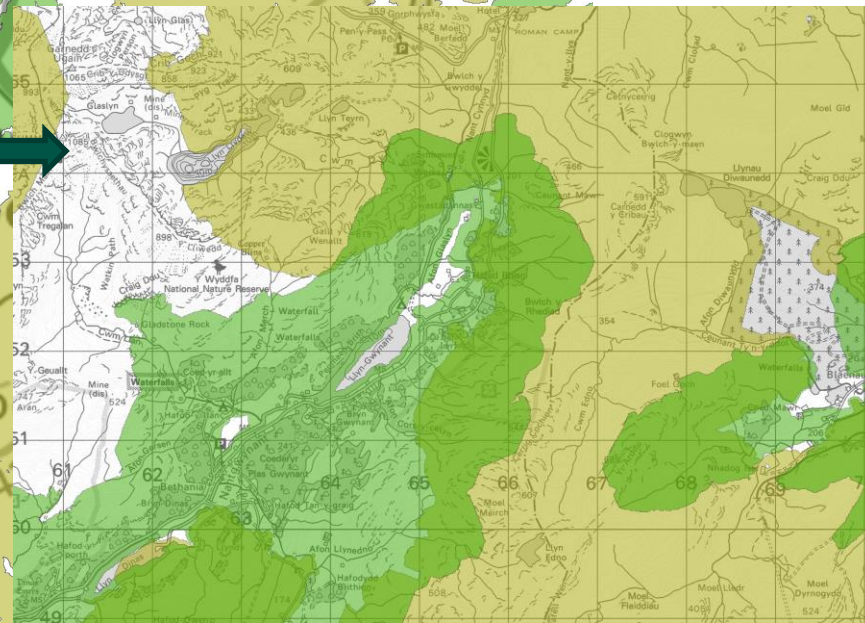
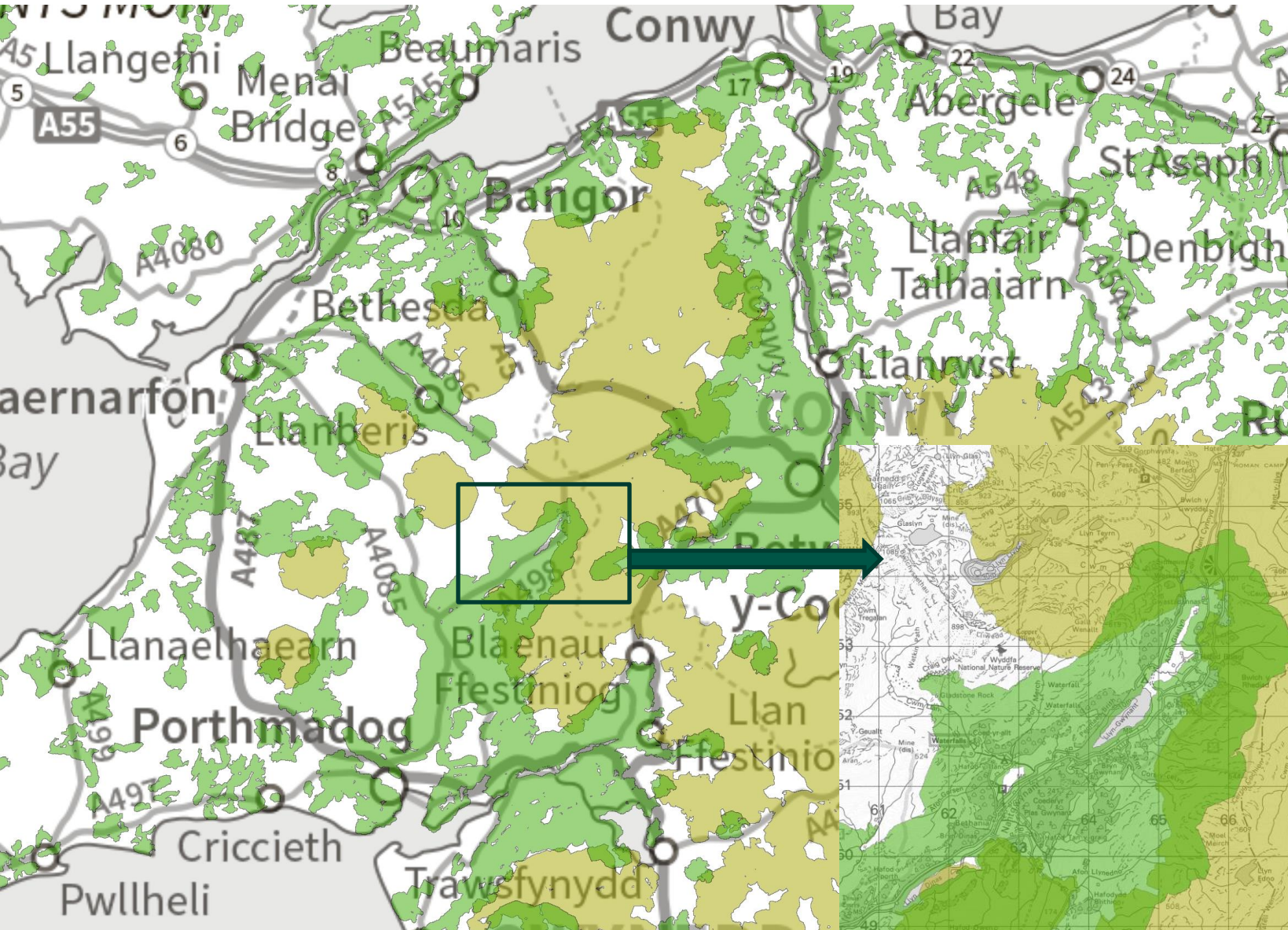
Resilience Mapping



Habitat Connectivity - bog



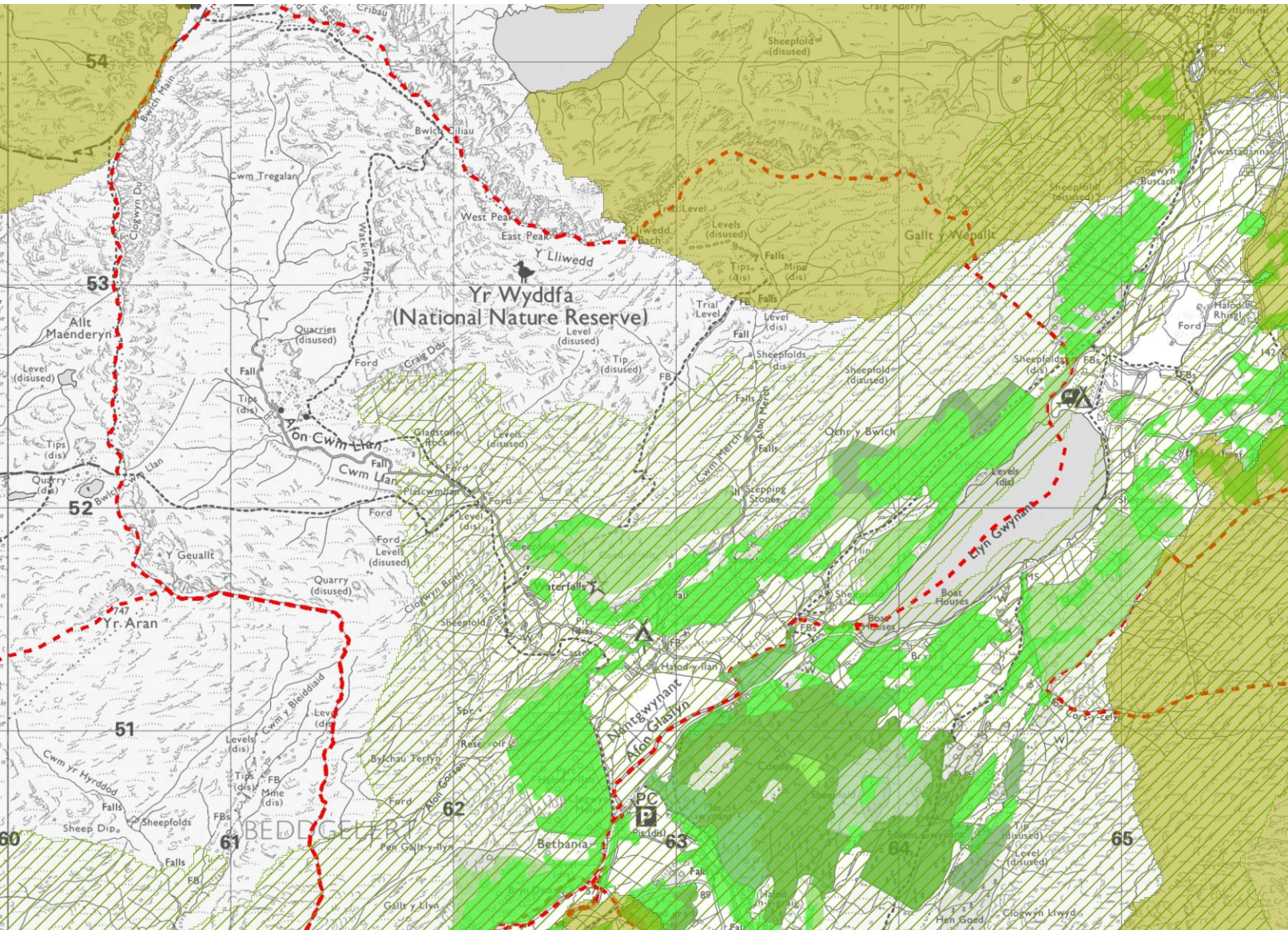
Habitat Connectivity – bog & wood



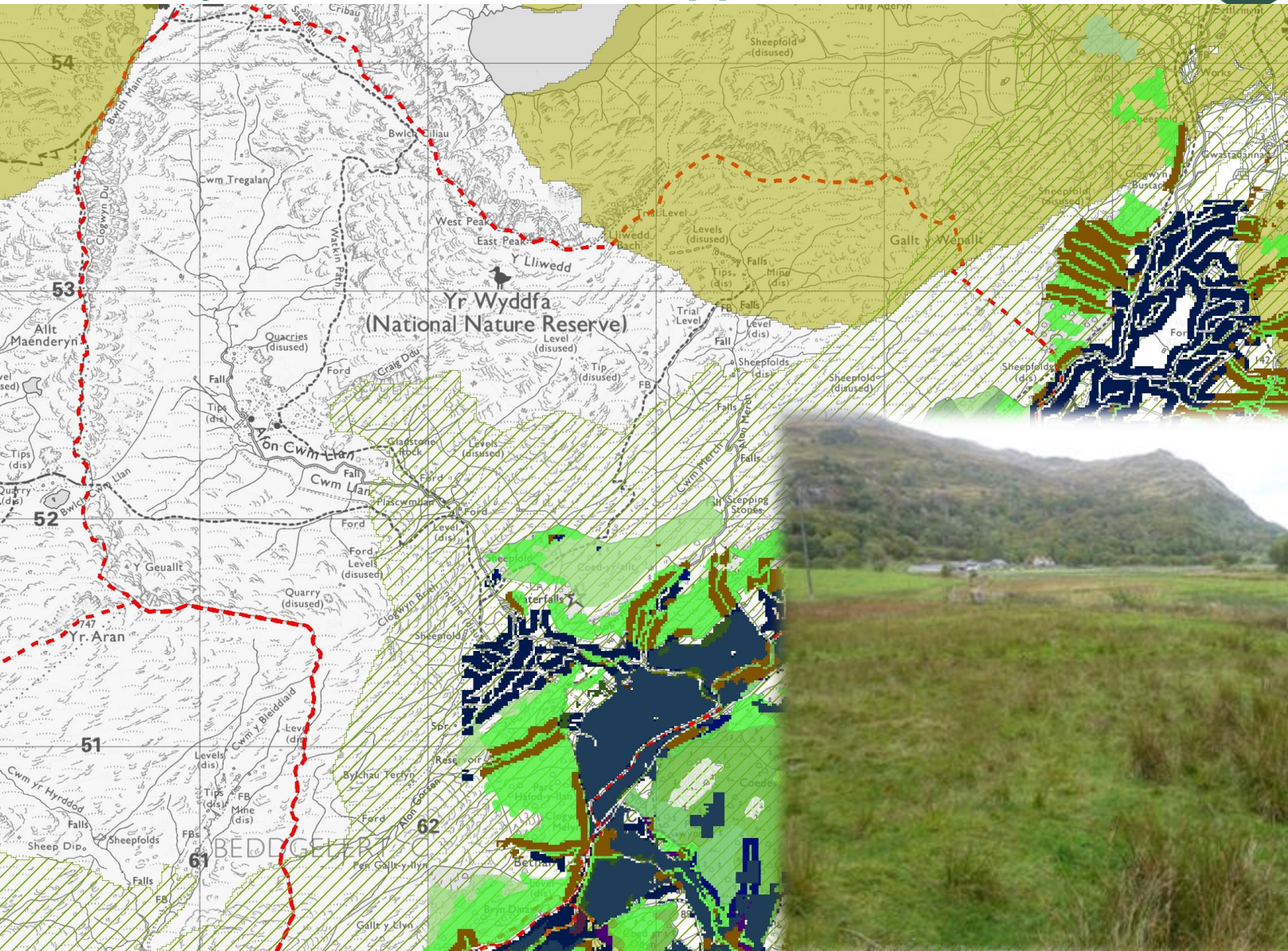
Hafod y Llan



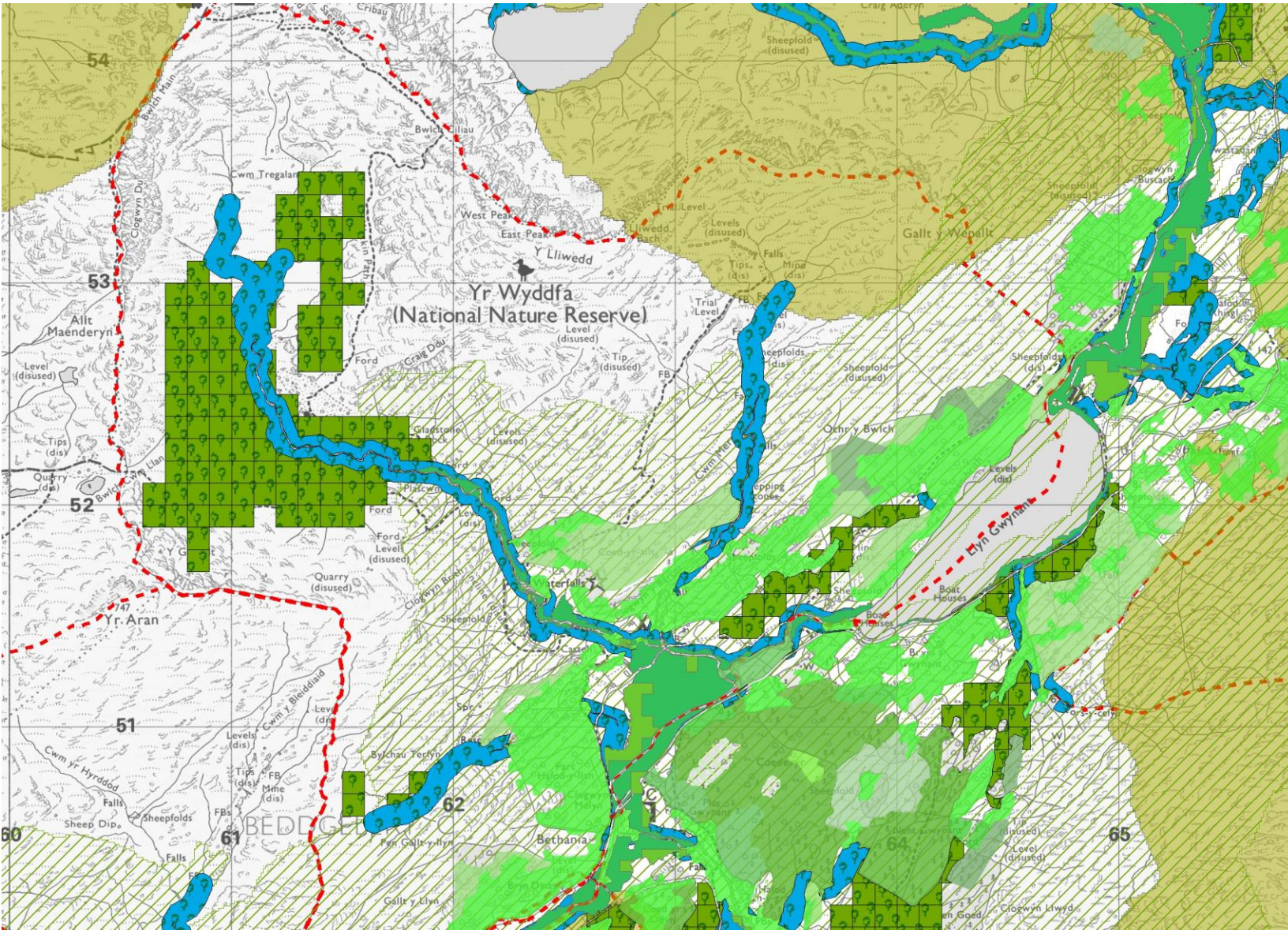
Hafod y Llan – woodland



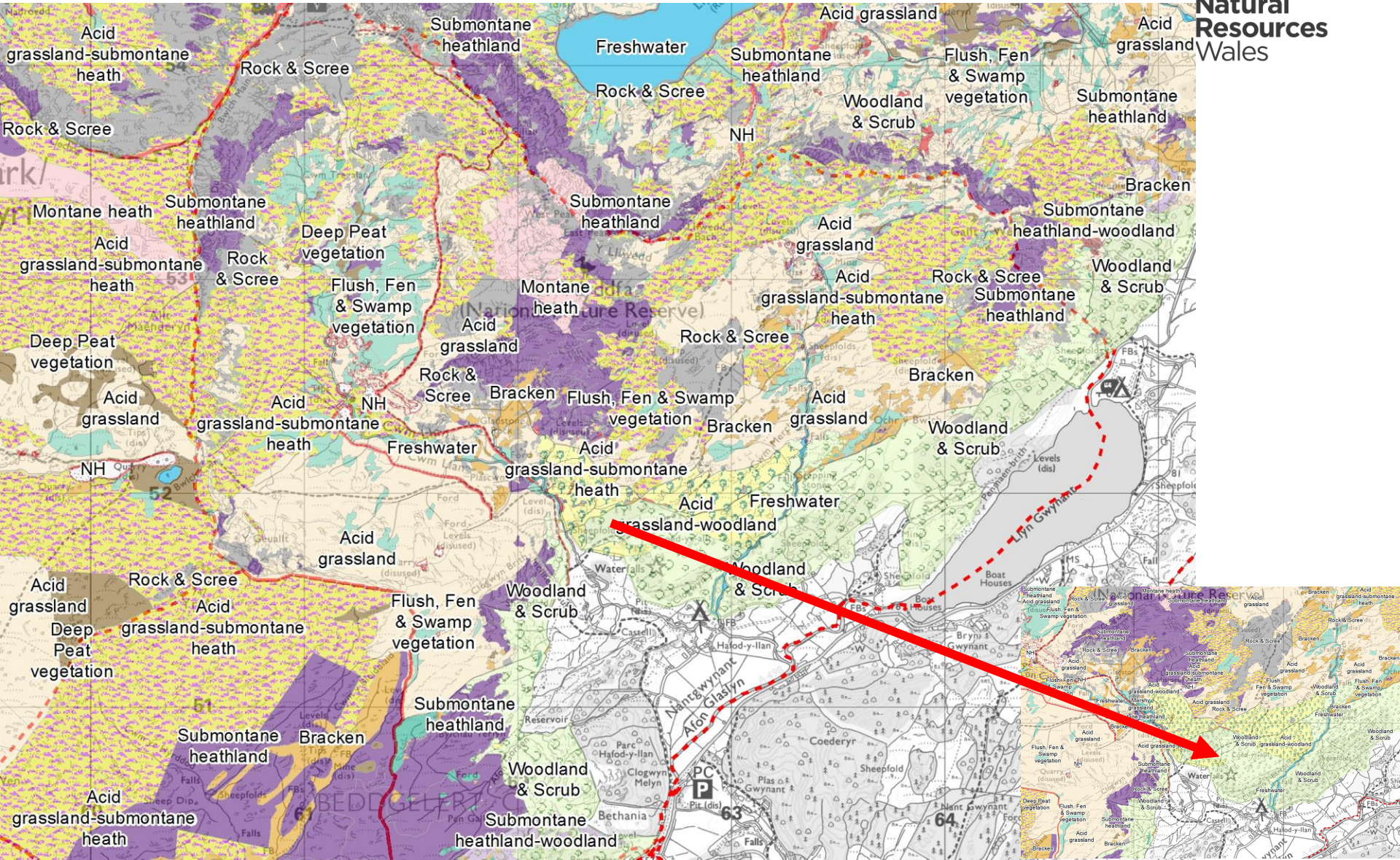
Hafod y Llan – woodland opportunities



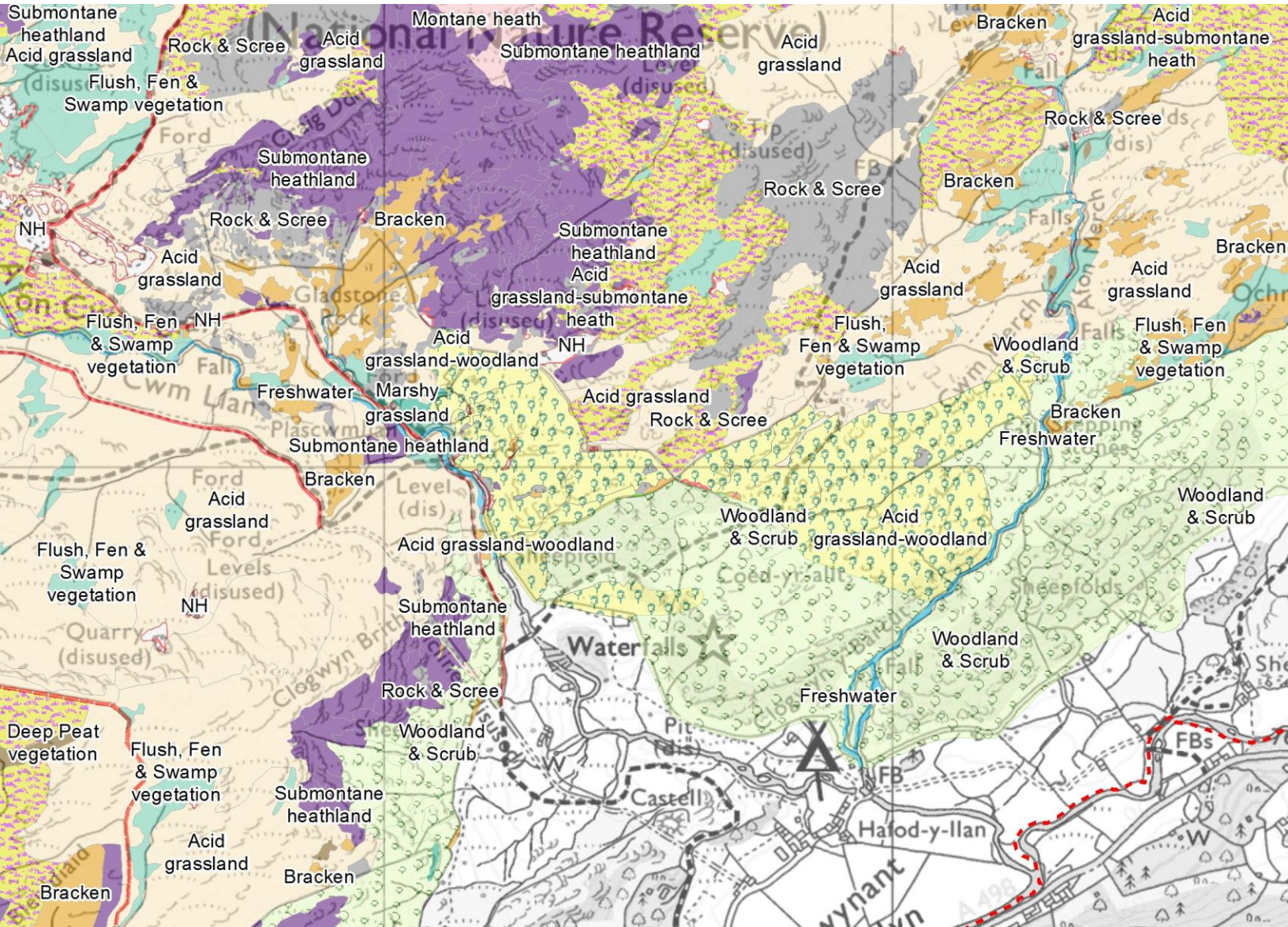
Hafod y Llan – woodland opportunities “Working With Natural Processes”



Upland Ecosystem Options



Upland Ecosystem Options



Land resource planning From Policy to Farm

1. Agricultural Land Capability classification (ALC)
2. Projected Agricultural Land Capability
3. Projected crop capability
4. Opportunity mapping, including Working with Natural Processes
5. Upland Ecosystem options
6. Skilled interpretation
7. Imagination / inspiration!