Green Infrastructure Action Plan for Pollinators

In SE Wales

Jo Wall *TACP (UK) Ltd*
Kate Stinchcombe *Monmouthshire County Council*





The Green Infrastructure Action Plan for Pollinators in SE Wales

- Welsh Government's *Nature Fund*
- Part of the larger '*Pollinators for Life*' project
- Seeks to address the decline of pollinators throughout the study area and UK

Ariennir gan
Lywodraeth Cymru
Funded by
Welsh Government

Project Team

Ariennir gan **Lywodraeth Cymru**
Funded by **Welsh Government**

Torfaen County Borough	Monmouthshire	Blaenau Gwent	Caerphilly
Andrew Osborne *Andrew Nevill* *Donna Edwards-John*	*Colette Bosley* *Kate Stinchcombe*	*Chris Engel* *Katie Partington*	*Margaret Isles* *Philip Griffiths*

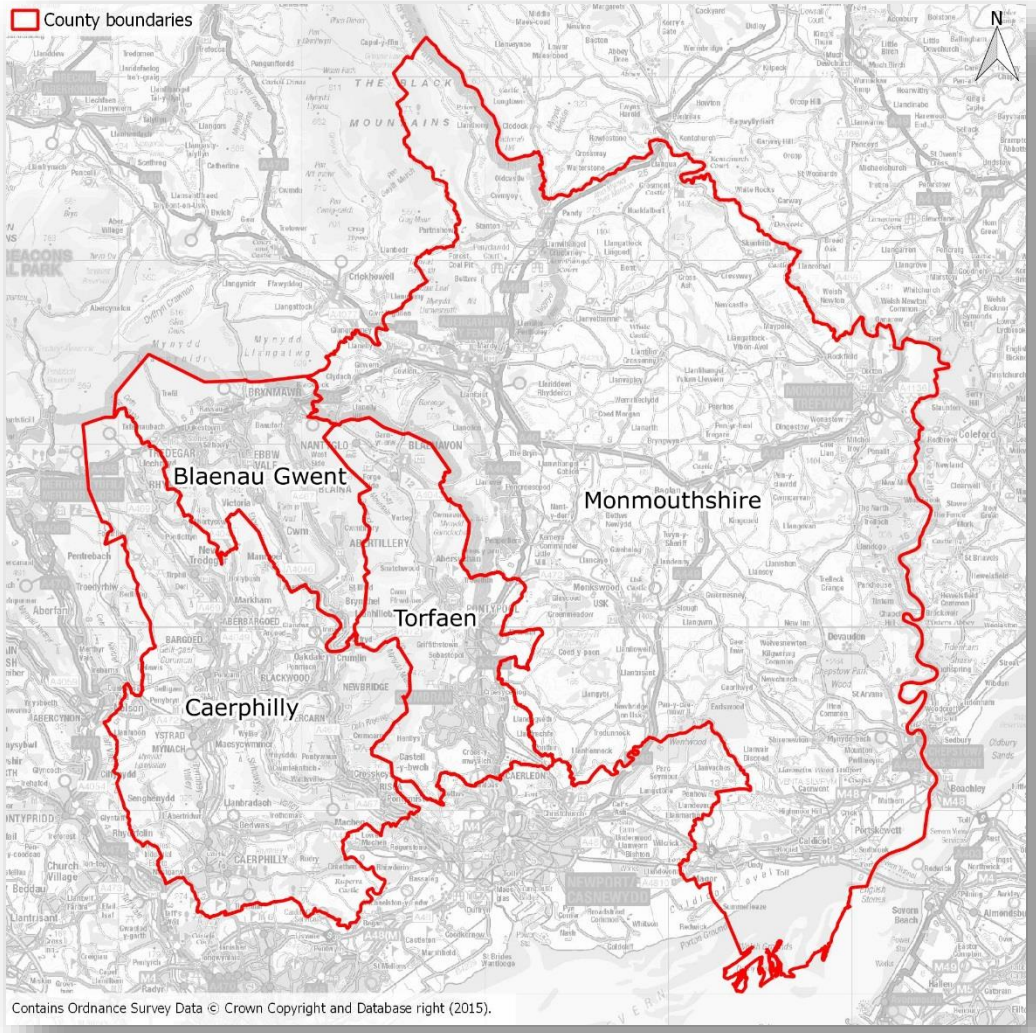
Mackley Davies Associates
(Project Manager)
Gill Mackley

TACP
Simon Fagg
Jo Wall
Dr Tim Rich (now Tim Rich Botanical Consultancy)
Tim Wroblewski
Emily Rui Wang

Partners, including:

Tai Calon Community Housing; Monmouthshire Housing Tai Sir Fynwy; Bron Afon; Llywodraeth Cymru Welsh Government; GIG Cymru NHS Wales; South Wales Fire and Rescue Service; Gwasanaeth Tân ac Achub De Cymru

The Green Infrastructure Action Plan for Pollinators in SE Wales



monmouthshire
sir fynwy

Cyngor Bwrdeisdref Sirol
Blaenau Gwent
County Borough Council

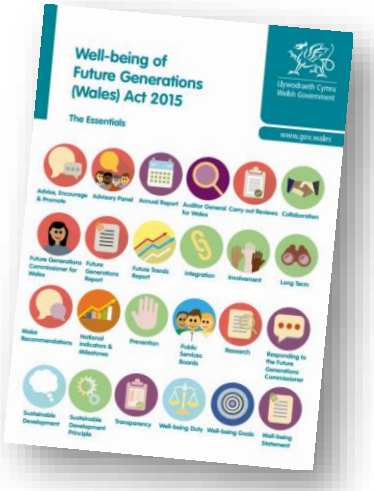
CAERPHILLY
COUNTY BOROUGH COUNCIL
CYNGOR BWRDEISTREF SIROL
CAERFFILI

TORFAEN
COUNTY
BOROUGH
BWRDEISTREF
SIROL
TORFAEN

A delivery mechanism

- Action Plan for Pollinators in Wales (July 2013)
- Welsh Government Bee Friendly Initiative
- Well-being of Future Generations (Wales) Act 2015
- Environment (Wales) Act 2016
- Monmouthshire Pollinator Policy (January 2014)
- Wales Nature Recovery Plan (December 2015)
- Southeast Wales Uplands Natural Resource Management Plan

Caru Gwenyn
Bee Friendly



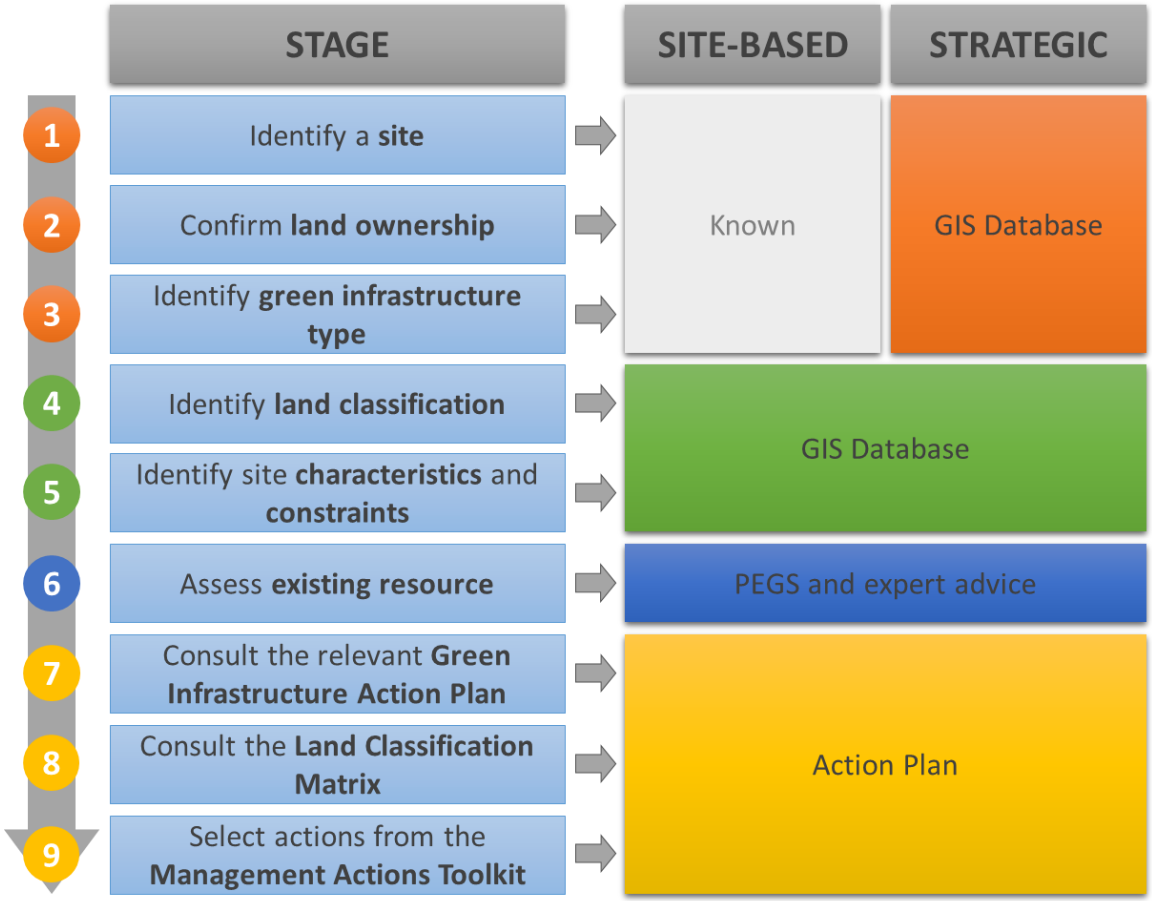
Why Manage for Pollinators?

- Pollination by bees worth **£430 million per year** to British agricultural production
- Horticultural business, fruit and vegetable production, allotments and gardens
- Pollinate many flowering plant species = long term maintenance of habitats
- Intrinsic value of wildlife to people, and part of our natural heritage

Collaborative Working

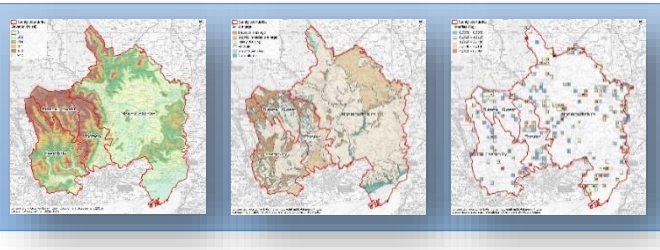
- Recognises the importance of the urban environment for pollinators
- Integration of landscape science, design and management
- Landscape design with ecological principles
- Promotes landscape-scale thinking
- Provides value to pollinators throughout the year
- Applicable to all sites irrespective of ownership or size
- Encourages cost savings and efficiencies through cross sector/border working
- Empowers communities to take ownership of their local green spaces

The Action Plan



Tools

Geographic Information System (GIS)



Pollinator Evaluation and Grading System (PEGS)

Score	Value for pollinators
0-3	Poor value for pollinators, high potential for improvements
4-7	Moderate value for pollinators, room for some improvement
8-12	Good value for pollinators

Case Studies

Offices | LA/social housing partnership | Historic | Education

Guidance booklets

Identify a site

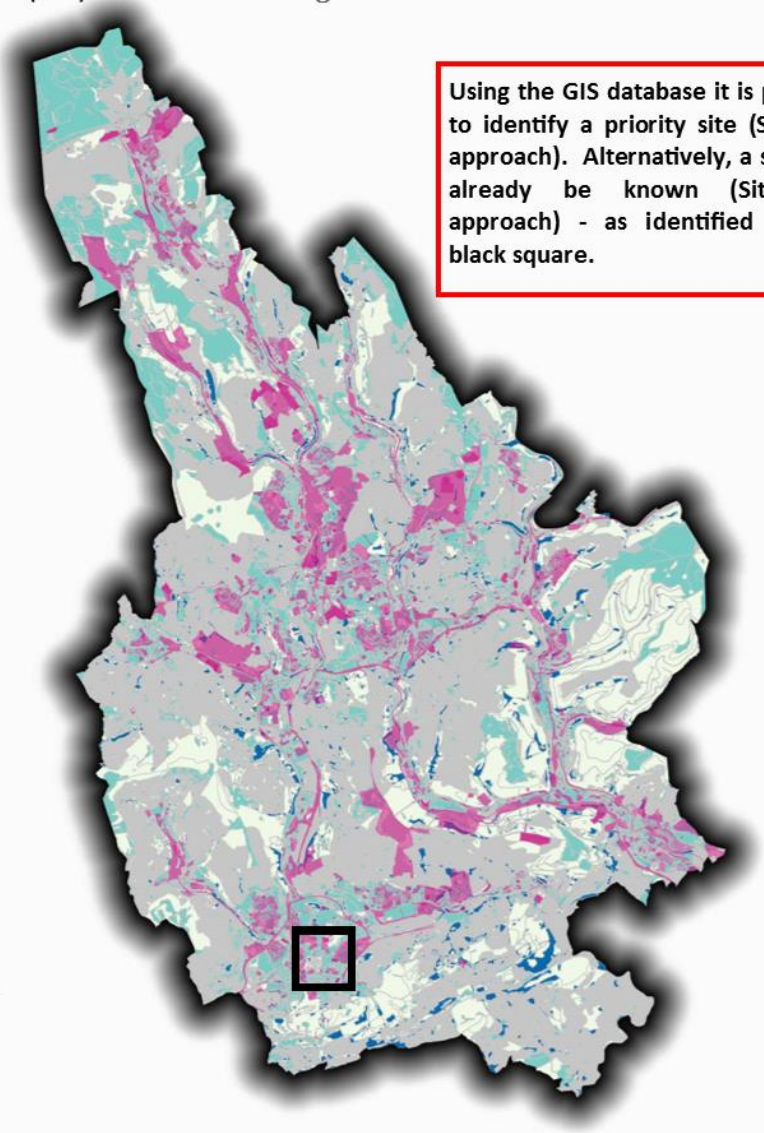
1
2
3
4
5
6
7
8
9

Case study 01 - Caerphilly Castle surroundings
CCBC

Site selection

N

Using the GIS database it is possible to identify a priority site (Strategic approach). Alternatively, a site may already be known (Site-based approach) - as identified by the black square.

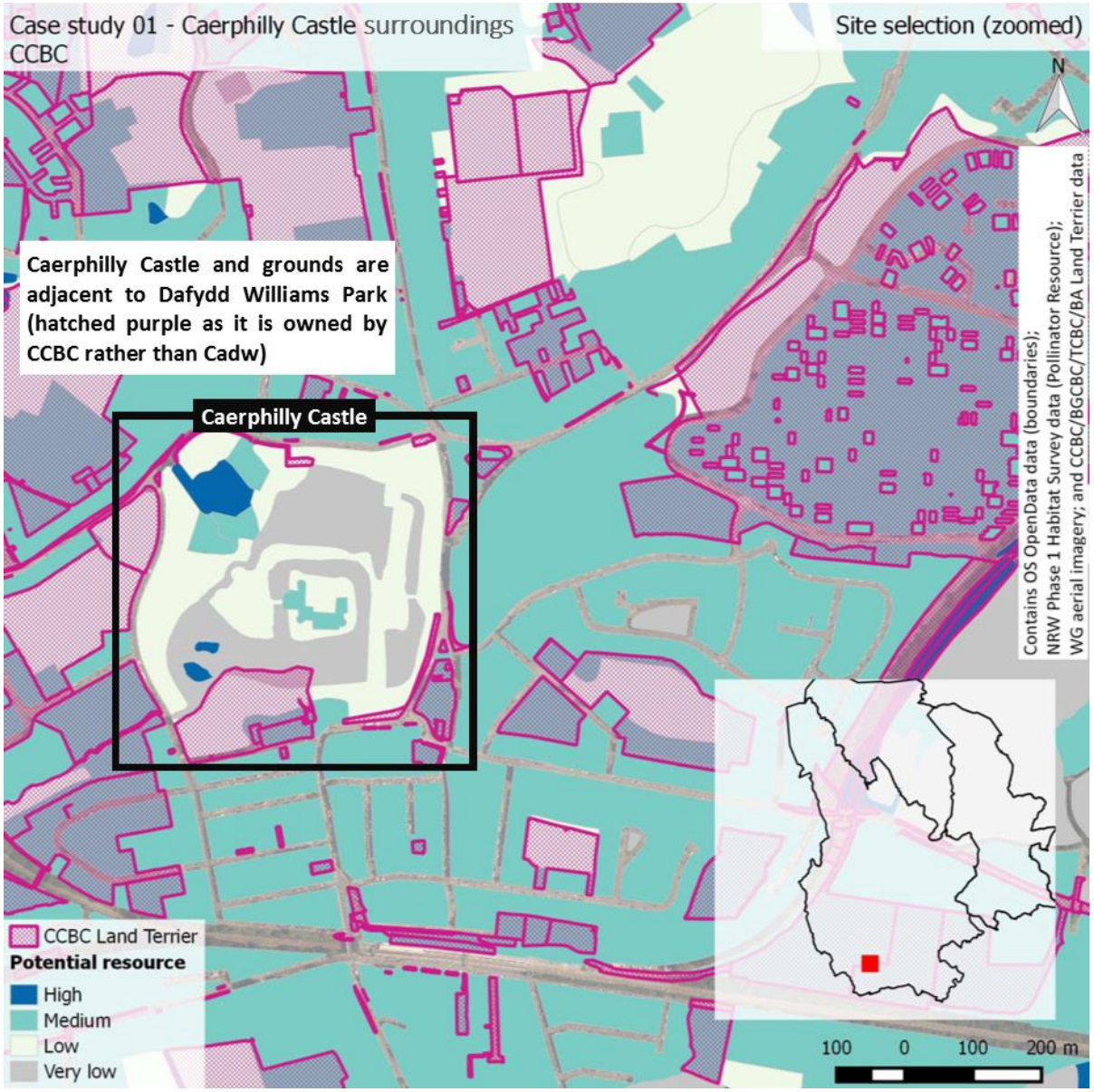


CCBC Land Terrier
Potential resource
High
Medium
Low
Very low

Contains OS OpenData data (boundaries and roads);
NRW Phase 1 Habitat Survey data (Pollinator Resource); and CCBC/BGCBC/TCBC/BA Land Terrier data

Confirm land ownership

1
2
3
4
5
6
7
8
9

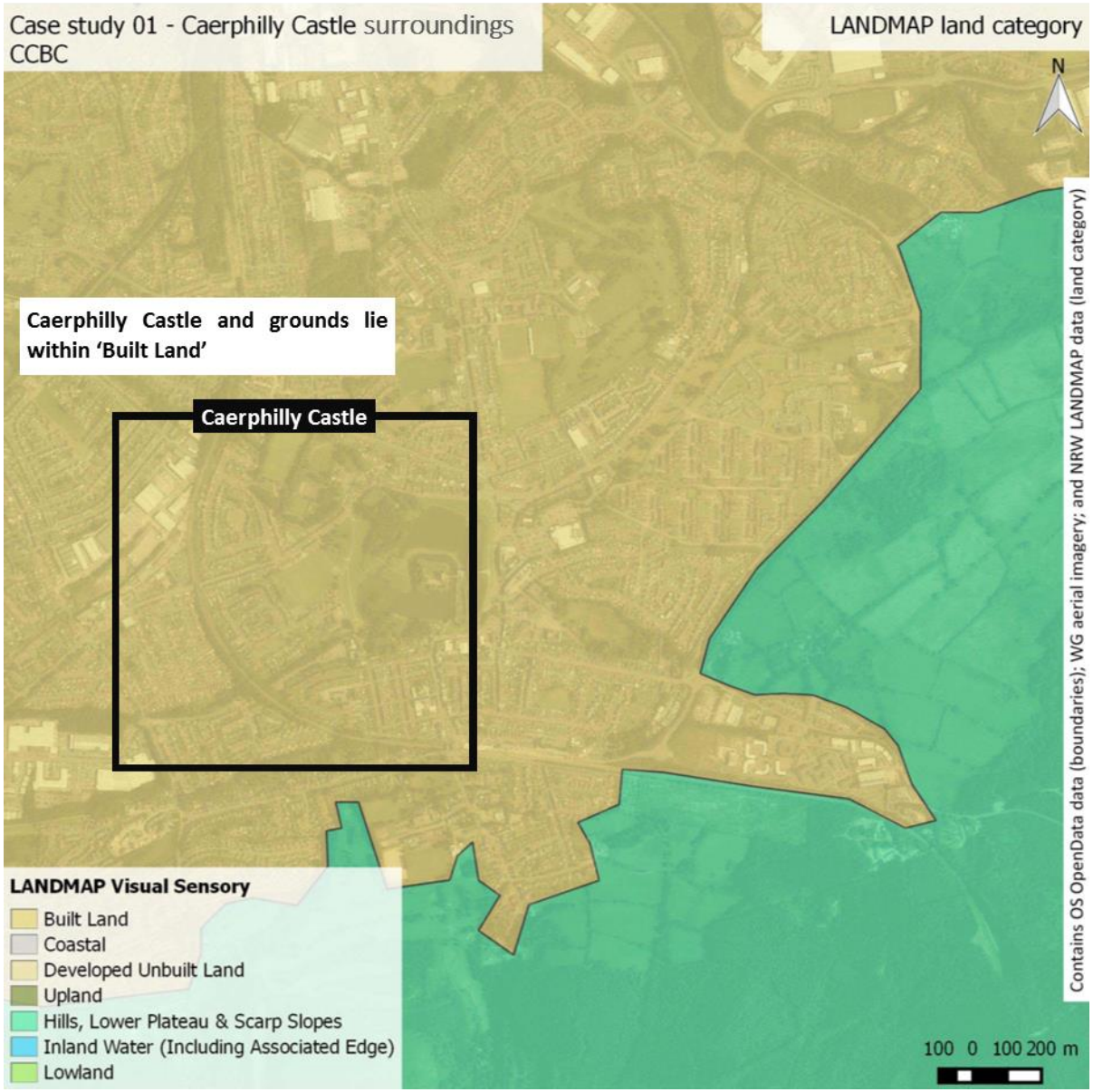


Identify green infrastructure type

1
2
3
4
5
6
7
8
9

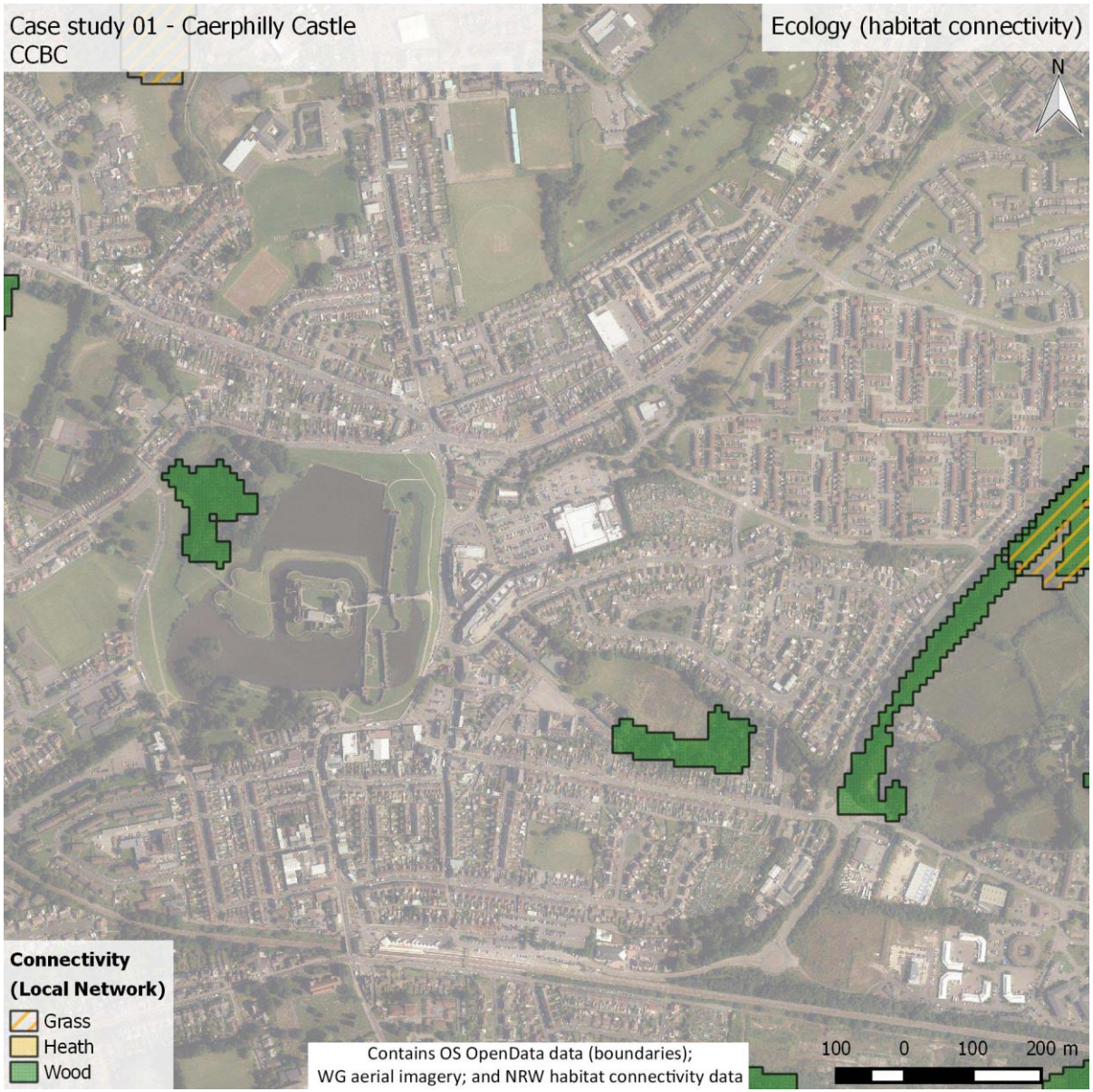
Identify land classification

1
2
3
4
5
6
7
8
9



Identify site characteristics and constraints

1 2 3 4 5 6 7 8 9

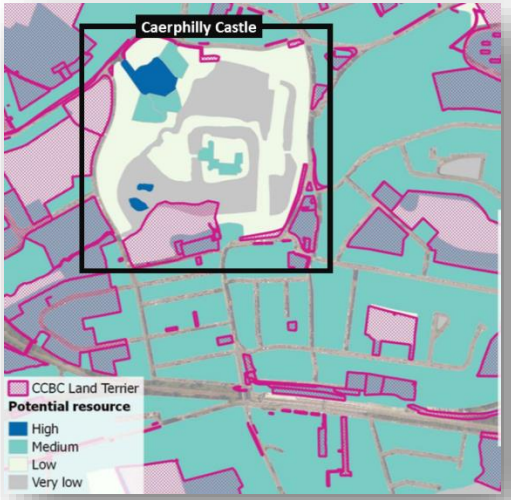


- Designations – **Scheduled Ancient Monument**
- Elevation - **low altitude**
- Temperature – **warm**
- Rainfall – **moderate**
- Slope – **predominantly flat**
- Soil fertility – **low fertility soils**
- Connectivity - **opportunities to build and enhance connectivity with surrounding areas**

Assess existing resource

1 2 3 4 5 6 7 8 9

Phase 1 habitat survey indicates the area is mostly of low value for pollinators



There is considerable potential to improve the site for pollinators

PEGS can also be used

Consult the relevant Green Infrastructure Action Plan

Green Infrastructure type: Historic Sites	

Aims	• Manage historic sites in a way which provides greater benefit for pollinators
	  ○ Ensure historic context and features are maintained
	  ○ Ensure public amenity needs are still met
	  ○ Manage some areas of site, especially grassland, for pollinators
	• Avoid increases or reduce cost of maintenance

Desired Outcomes	• Historic sites with a diversity of sward types for grass areas, and featuring a range of flowering species throughout the year. • Areas that are attractive to the public and offer the opportunity to interact with and learn about both the historic and natural environment
Assessment steps	• Check if site is already designated for its historical importance (eg Listed, SAM), and if proposed changes in management will support or conflict with those designations • Assess constraints (such as public use of space, e.g. re-enactments) and maintenance of historic value • Assess value of existing biodiversity and pollinator resources • Assess where pollinator provision could be accommodated • Assess resources/options available for on-going management • Consult with stakeholders

1 2 3 4 5 6 7 8 9

18 action plans:

- Roadside verges
- Public parks and gardens
- Outdoor sports facilities
- Car parks, office grounds etc.
- Historic sites
- Civic spaces
- Housing green space
- School grounds
- Managed gardens, care homes etc.
- Other amenity green space
- Allotments and community gardens
- Churchyards and cemeteries
- Water margins
- Derelict land and demolition sites
- Provision for children and young people
- Cycle routes and other non-motorised route ways

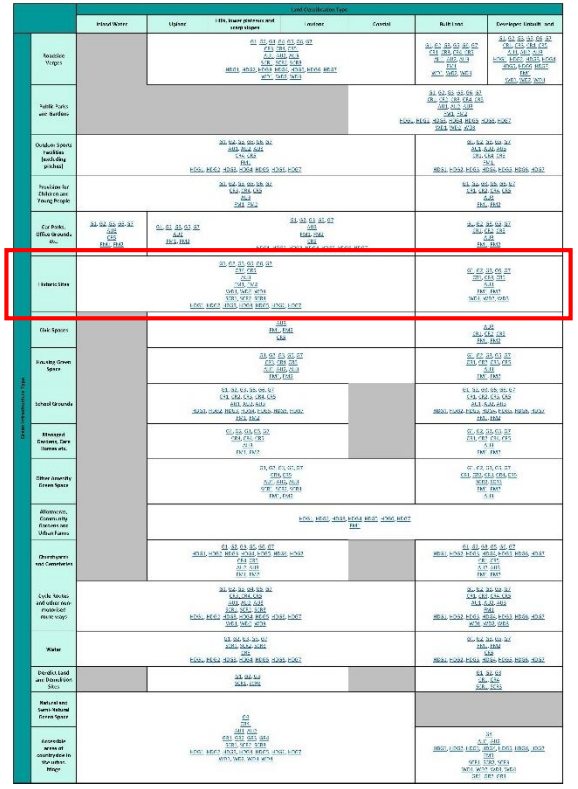
Consult the relevant Green Infrastructure Action Plan

1
2
3
4
5
6
7
8
9

Main options for site	• Grasslands
	  ○ Alter mowing regimes:
	  ▪ Reduce cutting frequency (G1)
	  ▪ Increase cut height (G2)
	  ▪ Introduce rotational mowing (G3)
	  ▪ Delay first cut (G7)
	  ○ Augmentation of diversity:
	  ▪ Collect cut material from local donor meadow and spread on recipient site to introduce seed etc. (Green Hay) (AU1)
	• Medicinal herb gardens
	  ○ Medicinal herbs often good context for historic site and also good for pollinators, but may have health risk to public
	• Kitchen herb garden
	  ○ Again may be good for context and pollinators, though in this case for display not food production
	• Bee keeping
	  ○ There may also be historic links to honey as a sweetener and traditional beekeeping

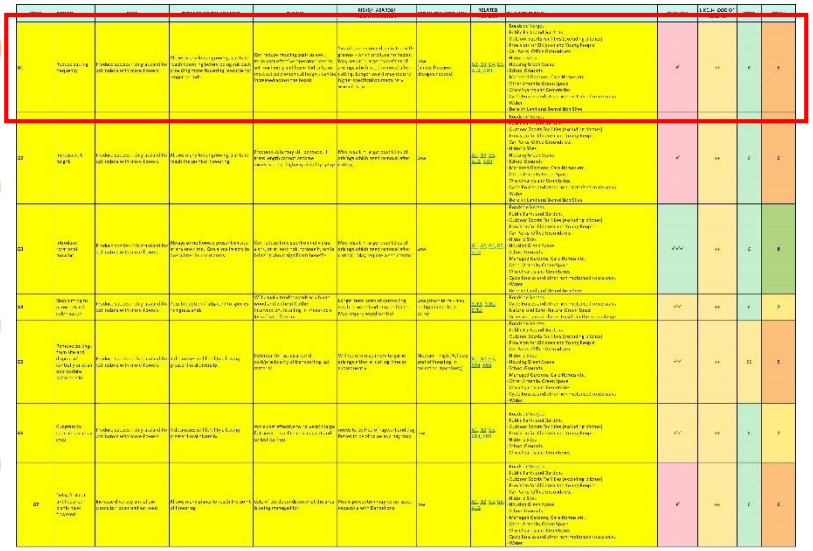
Relevant Management Action Plans	G1, G2, G3, G6, G7, CR1, CR4, CR5, AU3, FM1, FM2, WD1, WD2, WD3, WD4, SCR1, SCR2, SCR3, HDG1, HDG2, HDG3, HDG4, HDG5, HDG6, HDG7
Risk Appraisal	• Ivy is very good for pollinators but can be damaging to old masonry • Historic tree avenues (e.g. lime avenues) should be maintained rather than augmented with other tree species • Public may regard pollinator areas as unkempt; signage may be appropriate
Key stakeholders	• Cadw • Friends groups • LA Conservation Officer and Parks Department

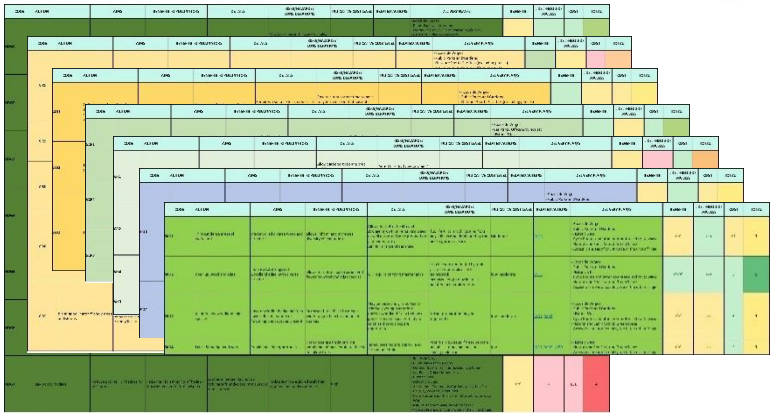
Consult the Land Classification Matrix



Green Infrastructure Type	Land Classification Type						
	Inland Water	Upland	Hills, lower plateaux and scarp slopes	Lowland	Coastal	Built Land	Developed Unbuilt Land
Historic Sites	G1, G2, G3, G6, G7 CR4, CR5 AU3 FM1, FM2 WD1, WD2, WD3, WD4 SCR1, SCR2, SCR3 HDG1, HDG2, HDG3, HDG4, HDG5, HDG6, HDG7					G1, G2, G3, G6, G7 CR1, CR4, CR5 AU3 FM1, FM2 WD1, WD2, WD3, WD4	

Select actions from the Management Actions Toolkit



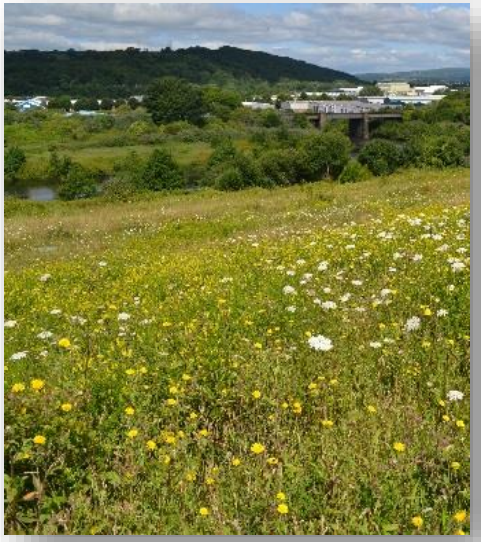


8 categories of management actions
35 management actions

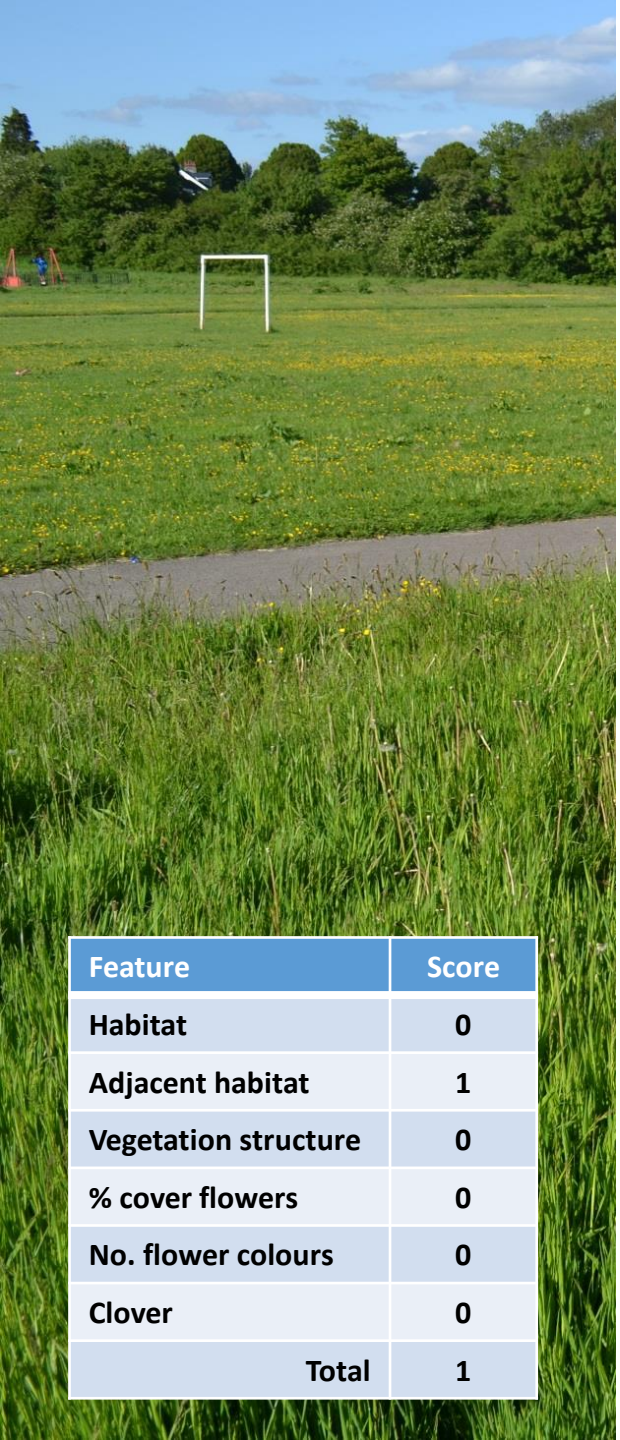
CODE	ACTION	AIMS	BENEFITS TO POLLINATORS	DETAILS	RISKS/HAZARDS/ CONSIDERATIONS	INDICATIVE COST LEVEL	RELATED ACTIONS	DELIVERY PLAN/S	BENEFITS	LIKELI-HOOD OF SUCCESS	COST	TOTAL
G1	Reduce cutting frequency	Produce species rich grassland for pollinators with more flowers	Allows many lower growing plants to reach flowering before being cut back providing more flowering resource for longer periods	Can reduce mowing costs as well, to be cost effective operator need to set machinery and leave it ideally, so most suitable when cut heights can be increased across the board.	Sward can become dominated with grasses - which produce no nectar. May result in larger quantities of arisings which need removal after cutting. Longer sward may require higher specification machinery when it is cut.	Low (unless frequent changes needed)	G2, G3, G4, G5, AU2, AU3	-Road verge management -Public Parks and Gardens -Outdoor Sports Facilities -Provision for Children and Young People -Car parks, Office Grounds etc. -Historic Sites -Housing green space -School Grounds -Managed gardens, care homes etc. -other amenity green space -Allotments and community gardens -Churchyards and cemeteries -Cycle routes and other non-motorised route ways -Derelict land and demolition sites -Natural and Semi-natural Green space -Accessible areas of countryside in the urban fringe	✓	++	£	6

Pollinator Evaluation and Grading System (PEGS)

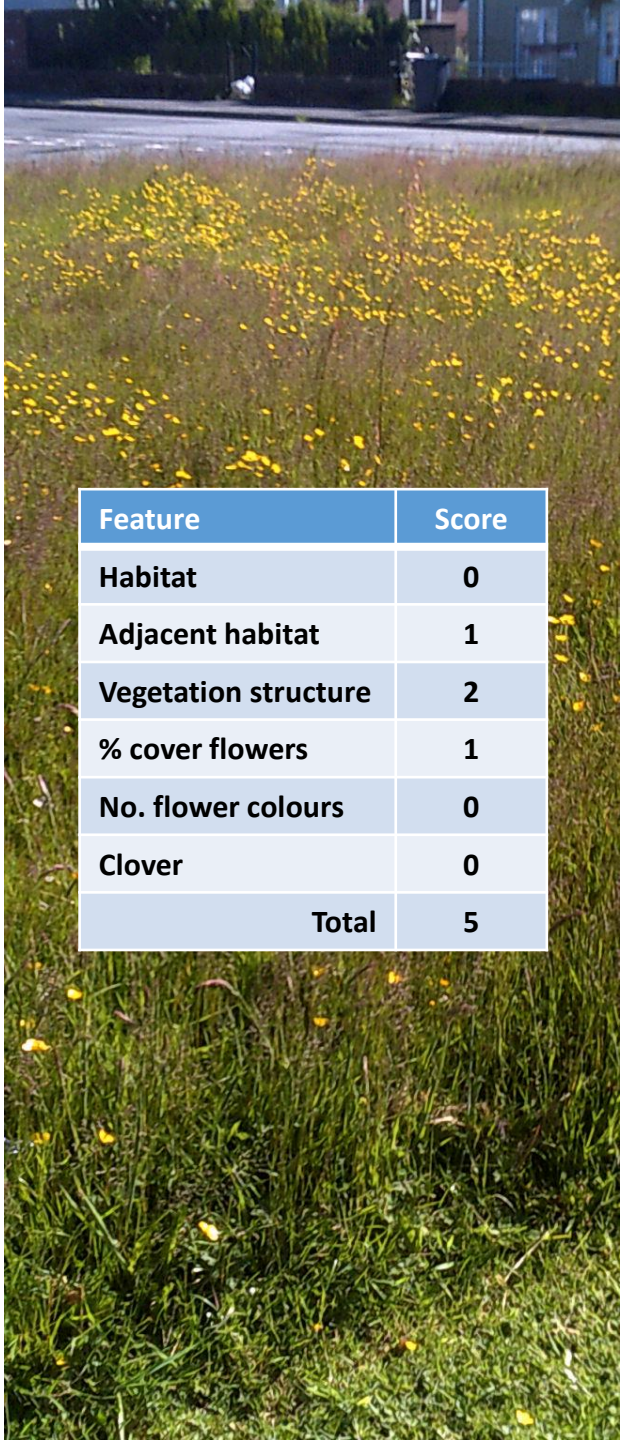
POLLINATOR EVALUATION AND GRADING SYSTEM (PEGS)				
Site:		Grid reference:		
Surveyor/s:		Date:		
Site Description:				
Feature	**0**	**1**	**2**	**Score**
Habitats	Amenity grassland Bracken Cereal crops Conifer plantation Improved grassland Bare rocks, stone, earth, etc. (less than 10% vegetation cover) Open water	Flowering crops Heathland Hedges Marsh and swamp Mires, fen and bogs Mixed woodland Railway Riverbank Road verge Saltmarsh Semi-improved grassland Urban (including gardens, parks, churchyards, etc.)	Broadleaved woodland and scrub Orchards Sand dunes Sea cliffs Shingle Tall weedy areas Unimproved grassland Waste ground	
Adjacent habitats within 25 m	Score as for habitat; select highest score	Score as for habitat; select highest score	Score as for habitat; select highest score	
Vegetation structure	Uniform, all one height and cover	Variable in height or in patchiness (not both)	Varied in height and lots of different patches	
% vegetation covered with flowers	Less than 5%	5-20%	More than 20%	
No. different colours of flowers present (e.g. blue, pink, red, yellow)	0 or 1 colour only	2-3 colours	4 colours or more	
Clover (all types)	Absent	Small amounts present	Lots present	
			Total score:	



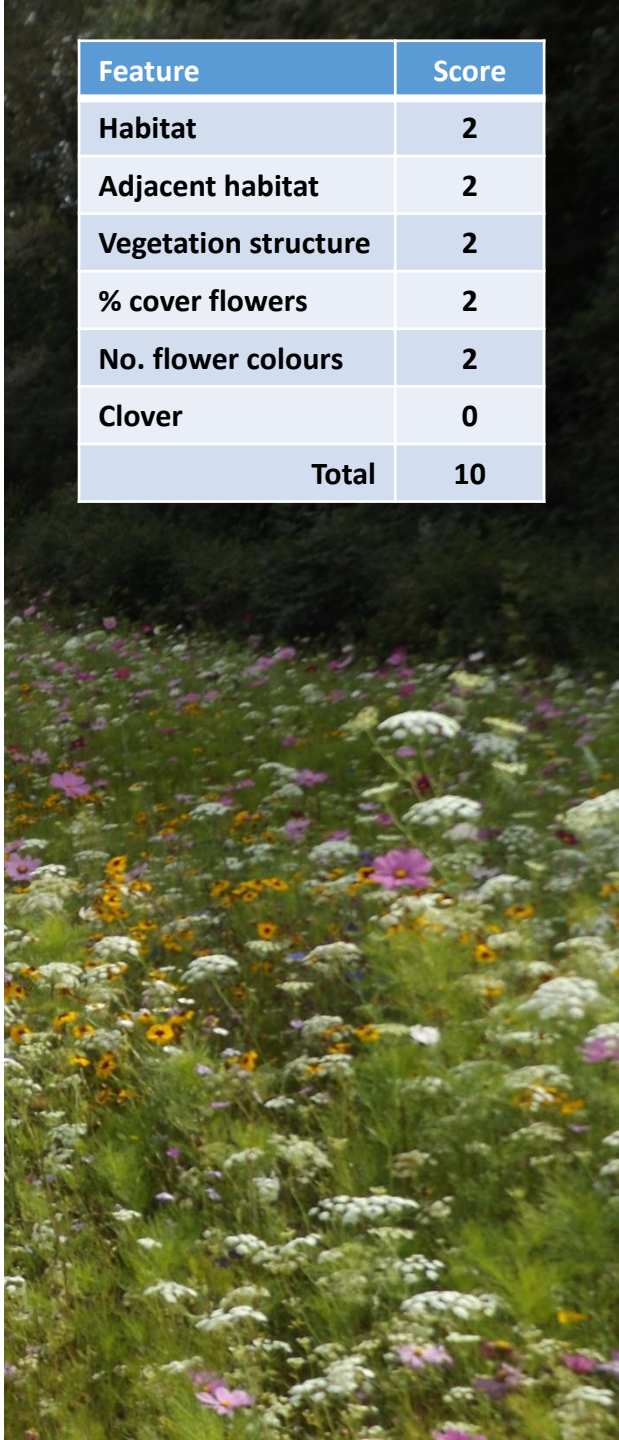
Evaluation: total score
0-3 Poor
4-7 Moderate
8-12 Good



Feature	Score
Habitat	0
Adjacent habitat	1
Vegetation structure	0
% cover flowers	0
No. flower colours	0
Clover	0
Total	1



Feature	Score
Habitat	0
Adjacent habitat	1
Vegetation structure	2
% cover flowers	1
No. flower colours	0
Clover	0
Total	5



Feature	Score
Habitat	2
Adjacent habitat	2
Vegetation structure	2
% cover flowers	2
No. flower colours	2
Clover	0
Total	10

Identify green infrastructure type

Feature	Score
Habitat	0
Adjacent habitat	1
Vegetation structure	0
% cover flowers	0
No. flower colours	0
Clover	1
Total	2 (poor)

Case Studies

Historic Sites

Green Infrastructure Action Plan

School Grounds

Other Amenity Green Space

PEGS

Car Parks, Office Grounds etc.

GIS Database

Guidance booklets

Green Infrastructure Action Plan for Pollinators in SE Wales

Pollinators in Action

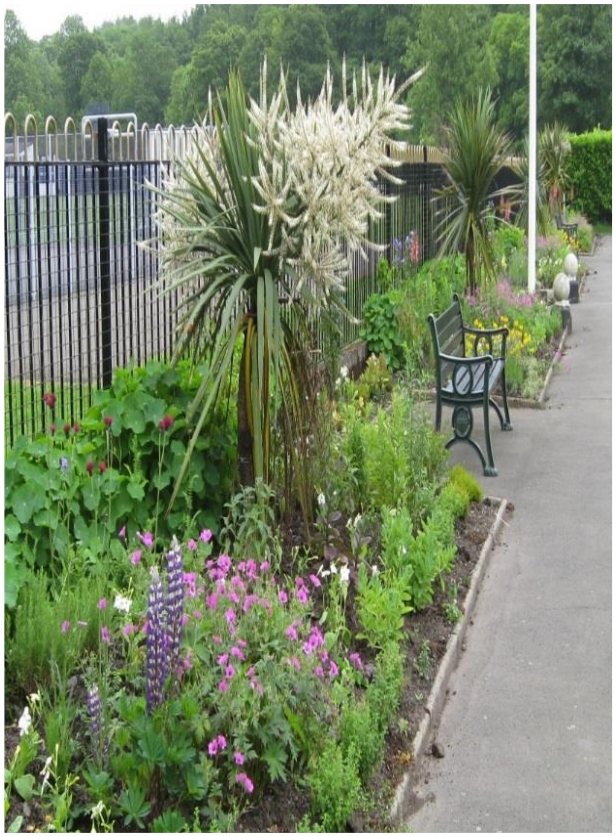
Blaenau Gwent County Borough Council

Ebbw Vale former steel works site

Sirhowy Community Orchard

Caerphilly County Borough Council

Pollinator Friendly Formal Parks



Torfaen County Borough Council

Wildlife corridors

Monmouthshire County Council

Site management rationale

Monmouthshire County Council

Exemplar site for pollinators and

‘Nature isn’t Neat’

Legacy

- Reverse decline in pollinator provision
- Development of multi-functional spaces
- Promotion of health and wellbeing
- Support for greater ecosystem resilience
- Cross-border working and collaboration
- Community engagement and outreach
- Partnerships with schools delivering education programmes
- Rationale for pollinator friendly landscape design