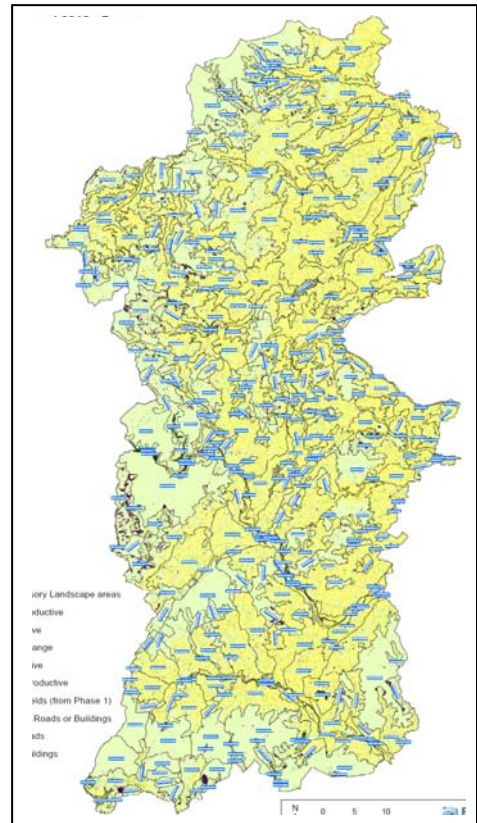


INTERPRETATION OF LANDMAP VISUAL & SENSORY CHANGE DETECTION PACKS: POWYS



Final Report

for

Natural Resources Wales

February 2014

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LANDMAP visual and sensory data change detection sheets

1. Introduction

1.1. Natural Resources Wales commissioned White Consultants in August 2013 to undertake the interpretation of LANDMAP Visual & Sensory aspect change detection packs for Powys and North Wales excluding the Isle of Anglesey. This study is for Powys including the Brecon Beacons National Park within the county. It is intended to provide the desk study evidence base to understand where changes may have occurred since the original LANDMAP assessments.

1.2. The tasks set out in the brief are as follows:

Stage 1

- Desk study of the Change Detection Pack data using techniques derived from the pilot study and the technical report guidance provided.
- Identification of areas of significant landscape change.
- Preparation of a tabulated excel table filling in columns 1-4 and 8.
- Map extracts to show potential boundary changes if appropriate for clarity

Stage 2a

- Review change questionnaire responses from local authorities provided by NRW.
- Preparation of a tabulated excel table filling in column 5 and amending 8 as necessary.

Stage 2b

- Review changes from other resources provided by NRW.
- Preparation of a tabulated excel table filling in column 6 and amending 8 as necessary.

Stage 2- report and check for Consistency report changes

- Checking if any changes have already been implemented in Consistency report changes on latest LANDMAP dataset
- Prepare a short summary report of key changes and influences for each authority.

1.3. The Change Detection Pack data provided includes the following:

- OS maps
- Existing Visual and Sensory layer
- Aerial photographs dated 2001 and 2010.
- Phase 1 Habitat Survey 2008/9
- Tranquillity Map of Wales
- Normalised Difference Vegetation Index [NDVI]
- Mastermap road and building change maps
- Segment Density/Complexity Maps [SD]
- Seasonal change derived from Phase 1 mapping
- Mega Change Map - incorporating key changes in a single map (based on simplified NDVI and Mastermap)

The information is in hard copy form and in GIS.

- 1.4. Other GIS data has been obtained including broadleaf planting from NRW which have proved invaluable in places.
- 1.5. Simon White has liaised with the client and Environment Systems. The method has been derived from the guidance and from previous monitoring experience in South Wales.
- 1.6. The most useful data used in the study have been the Mastermap road and built form change, NDVI, the Mega change map (see Figure) and 2001 and 2009/2010 aerial photographs. This has allowed assessment at a broad and detailed level with small scale changes to be identified in places.
- 1.7. The most detailed data are the aerial photos which have been used to verify indications of change in other data. The 2001 and 2010 photos are the most useful to identify and verify significant change but they have a very different colour balance and degree of contrast, and were flown at different times of year. This makes identification of change more difficult.
- 1.8. Input has been received for the National Park which has been very useful but not for the rest of Powys so changes which cannot be detected remotely here are not covered and so reinforces the need for a thorough site survey of all aspect areas.
- 1.9. The purpose of the study is not to refine/improve the current Collector text or aspect area GIS boundaries. It is only to monitor and note potential change. This can then be verified in the field. There are limitations to this desk based stage. It is possible that some noted changes may not be perceptible, eg young broadleaf planting in conifer plantations, and some may not be regarded as significant at the Level 3 scale of the assessment/aspect area. Other changes may affect a wider area than noted at the desk study eg the effect of wind farms on nearby aspect areas. Some changes may not be perceptible at the desk study level but are apparent on site. An example could be single wind turbines. Therefore, the site survey element of the study is essential, particularly for the visual and sensory aspect, where perception and changes at key points for public access can be very important.
- 1.10. The tabulated list of potential changes drawn from the analysis for each relevant aspect area is set out in the Appendix and is available as a separate excel table.
- 1.11. The issues that have arisen from the study of this specific area are discussed in Section 2.0.

2. Potential changes in the study area

- 2.1. Within the Brecknockshire study area including the Brecon Beacons National Park the key changes appear to be:
 - Effects on views and tranquillity from wind energy developments in adjacent areas eg the effect of Maesgwyn wind farm on the Nedd Fechan and Mellte valleys- this is likely to increase over time as other wind farms in Strategic Search Areas E and F are implemented.
 - Expansion of settlements.
 - Implementation of bypasses and town improvements eg Bronllys and Talgarth respectively.
 - Expansion of commercial development areas eg Three Cocks.
 - Continued/expanding opencast mining and reclamation at Nant Helen.

- Forest plantation felling and broadleaf plantings which may change the character eg Crownon Valley, Usk valley hills, Irfon Forest.
- Felling to deal with Phytophthora and Chalara- Carnafell and Talybont Forest.
- Removal/management of bracken in some areas- moorland and ffridd eg Brecon Beacons.
- Path erosion and repair in well used areas, especially around the main peaks of the Brecon Beacons and Black Mountains and in the Nedd Fechan valley.
- Tir Gofal management is likely to be changing the vegetation cover of some upland areas but the extents of these areas are unknown and would rely on site assessment to evaluate any significant character changes.

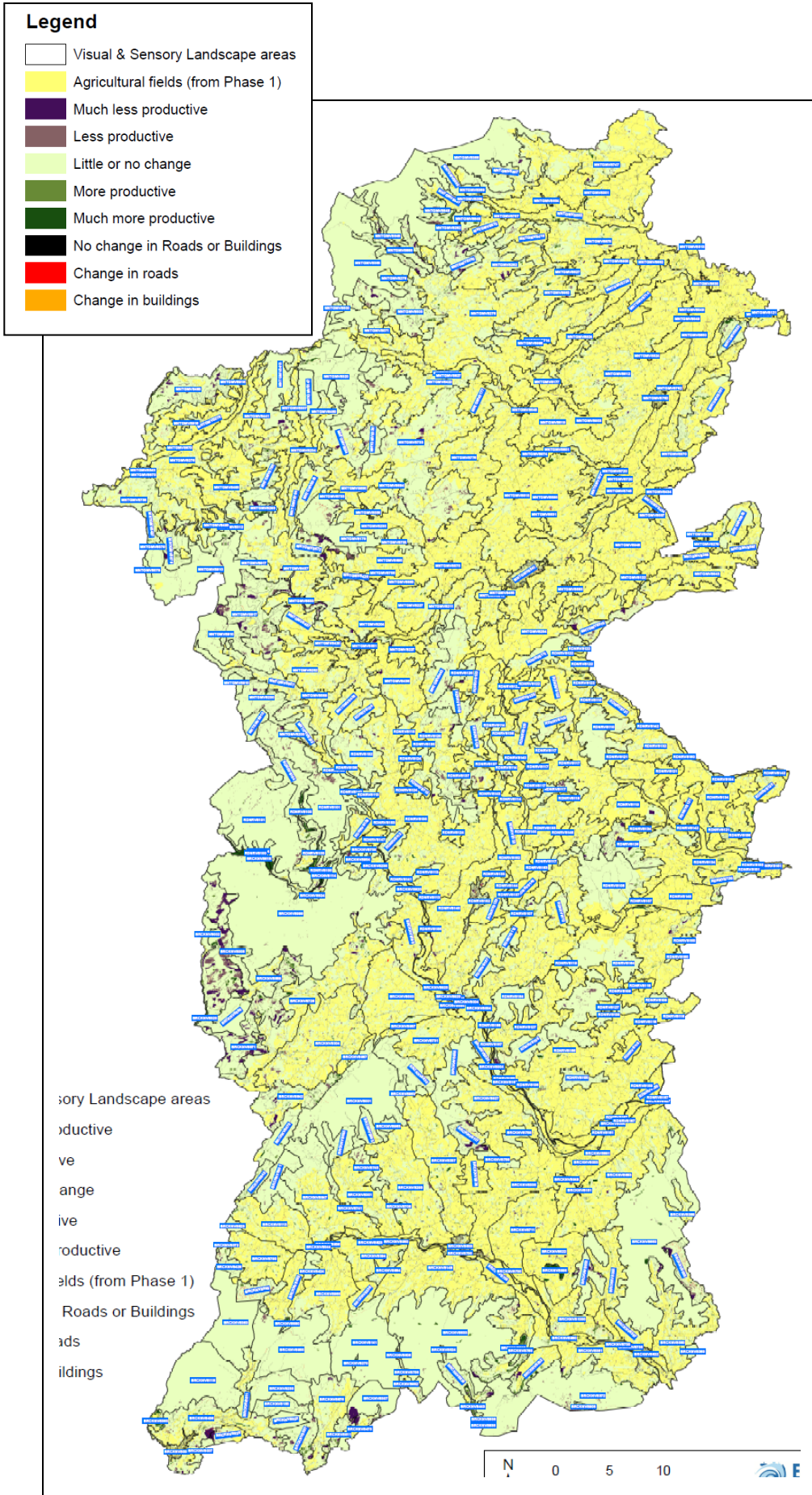
2.2. Within the Montgomeryshire study area the key changes appear to be:

- Effect of onshore windfarms, directly and indirectly, especially around Strategic Search Areas B and C. These will affect character, views and tranquillity. This is likely to increase as the areas are further developed.
- Expansion of settlements eg Newtown.
- Expansion of commercial development areas eg Llanidloes, Welshpool.
- Forest plantation felling and broadleaf plantings which may change the character eg Forests of Dovey, Dyfnant and Hafren, Vrynwy and Tannat woodlands.
- Potential changes vegetation complexity on uplands which may indicate a change in vegetation cover eg Berwyn Uplands.
- Expansion of caravan parks eg Banwy, Pont Llogel.


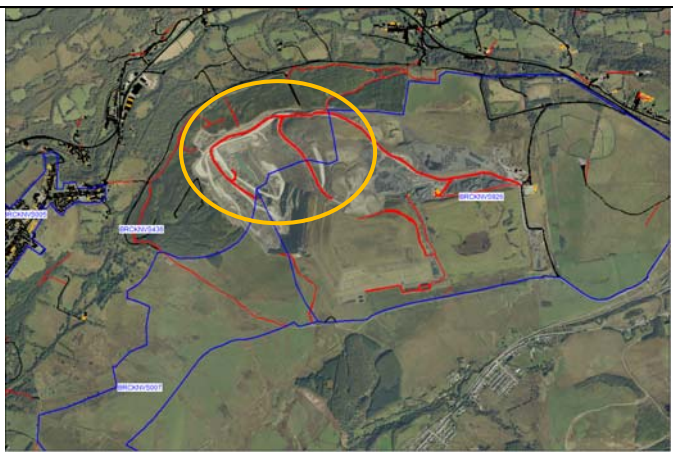


2.3. Within the Radnorshire study area the key changes appear to be:

- Expansion of settlements eg Rhayader, Clyro.
- Forest plantation felling and broadleaf plantings which may change the character eg Bryn y Sarnau, Radnor Forest.
- Potential changes vegetation complexity on uplands which may indicate a change in vegetation cover eg Cambrian Mountains plateau tops.
- Encroachment of bracken in some areas- moorland east of Ithon.





2.4. Some of these changes are illustrated by maps and aerial photos on the following pages.

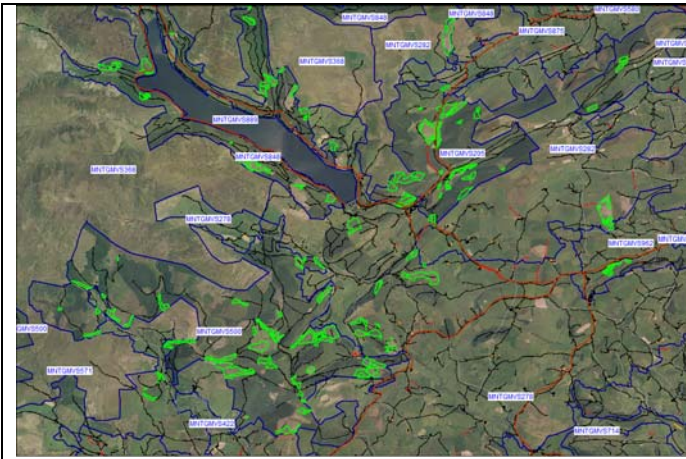


Mega change map

Brecknockshire: Aerial view of change	Potential/actual change
	<p>BRCKNVS151 Talgarth improvements</p>
	<p>BRCKNVS296 Penrhos- expansion of opencast</p>
	<p>BRCKNVS527 Expansion of Hay-on-Wye</p>
	<p>BRCKNVS622 Expansion of Crickhowell</p>

	<p>BRCKNVS633 Expansion of Brecon</p>
	<p>BRCKNVS684 Expansion of Builth Wells</p>
	<p>BRCKNVS735 Expansion of Llangattock</p>
	<p>BRCKNVS871 Felling of conifer forest plantation and broadleaf planting (green bordered areas)- Irfon Forest</p>

	<p>BRCKNVS891 Expansion of Three Cocks</p>
	<p>BRCKNVS949 Bronllys bypass</p>
<p>Montgomeryshire: Aerial view of change</p>	
	<p>MNTGMVS119 Caravan park expansion at Banwy</p>
	<p>MNTGMVS179 Carno 2 wind farm- extending the spread of wind energy over upland area</p>



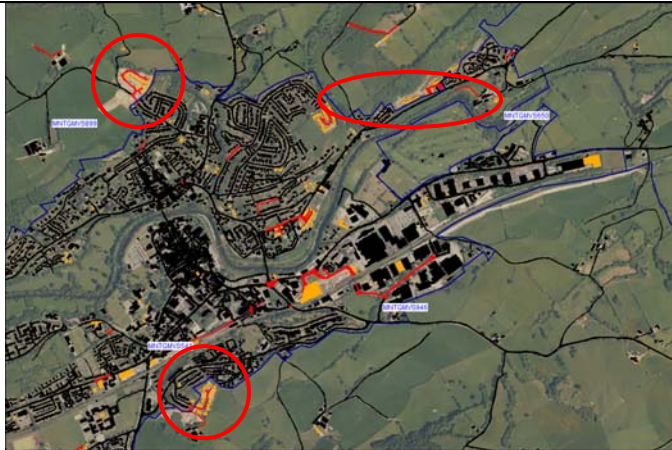
MNTGMVS205 MNTGMVS500
MNTGMVS848
Conifer plantation felling and replanting with broadleaves in places (green bordered areas)- Dyfnant Forest, Llechwedd Llwyd Woodland and Vrynwy and Tanant Woodlands



MNTGMVS507
Expansion of Montgomery



MNTGMVS524
Expansion of Guilsfield



MNTGMVS541
Expansion of Newtown



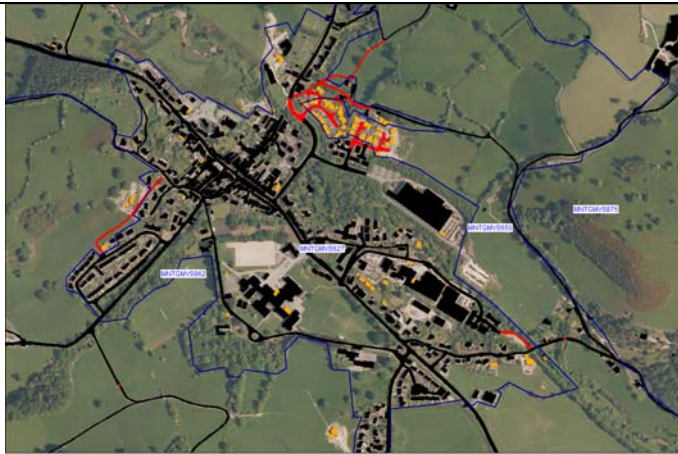
MNTGMVS548
Expansion of Llanfair Caereinion



MNTGMVS551
Expansion of Llanidloes





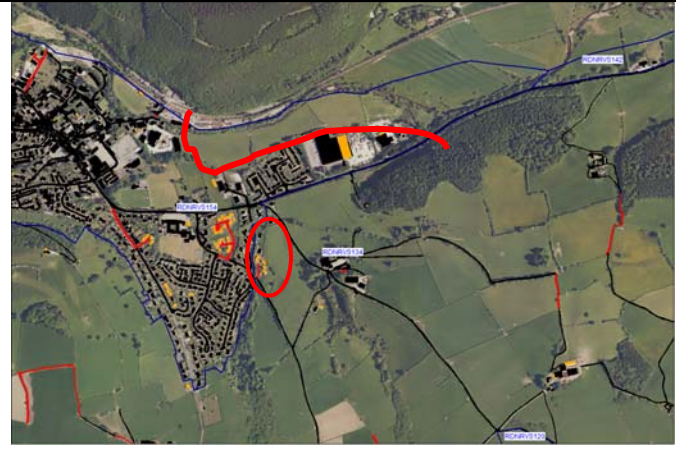
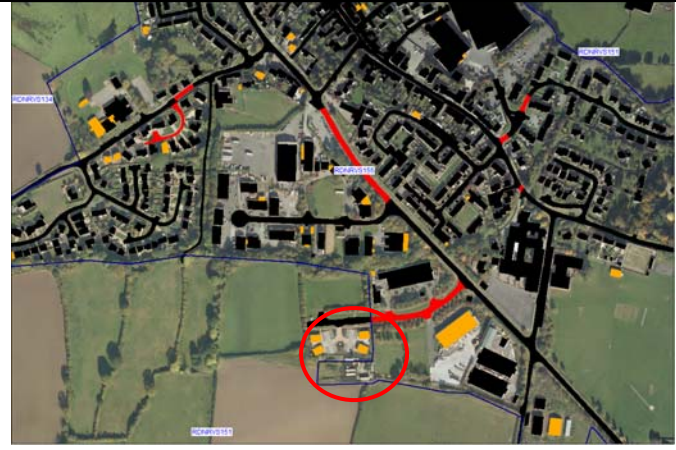
MNTGMVS556
Expansion of Carno



MNTGMVS627
Expansion of Llanfyllin

	<p>MNTGMVS635 Expansion of Four Crosses</p>
	<p>MNTGMVS733 Mynydd Clogau wind farm- extending the spread of wind energy over upland area</p>
	<p>MNTGMVS762 Expansion of Welshpool</p>
	<p>MNTGMVS815 Expansion of Tregynon</p>

	<p>MNTGMVS917</p> <p>Felling of conifer forest plantation and broadleaf planting (green bordered areas)- Hafren Forest</p>
	<p>Existing and consented windfarms (defined in pink) will influence the tranquillity of the areas in which they are located and those areas adjacent. The areas affected (in brown and cream) are likely to be extended.</p>
<p>Radnorshire: Aerial view of change</p>	<p>Potential/actual change</p>
	<p>RDNRVS125</p> <p>Felling of conifer forest plantation and broadleaf planting (green bordered areas)- Bryn y Sarnau forest slopes</p>
	<p>RDNRVS125</p> <p>Felling of conifer forest plantation and broadleaf planting (green bordered areas)- Bryn y Sarnau forest slopes</p>

	<p>RDNRVS152 Expansion of Llandrindod Wells</p>
	<p>RDNRVS153 Expansion of Rhayader</p>
	<p>RDNRVS154 Expansion of Knighton and consideration of tightening the boundaries of the settlement in the river valley</p>
	<p>RDNRVS155 Expansion of Presteigne</p>



RDNRVS158
Expansion of Norton



RDNRVS159
Expansion of Clyro

APPENDIX

LANDMAP VISUAL AND SENSORY DATA CHANGE DETECTION SHEETS: POWYS

Aspect area		Change- indicated by:					Stage 2c	
UID	Name	OS data, aerial photos and roads and buildings	Complexity maps (segment density) and NVDI	Phase 1 and seasonal change	LPA workshop/questionnaire	Other resources	Field-work	Recommended LANDMAP amendment- GIS or survey or both
Brecknockshire								
BRCKNVS 003	Three Cocks farmland	Built change map and Aerial- indicate new bypass to the south of Bronllys, expansion/intensification of caravan park to the west of Bronllys and slight change around south/west Talgarth, Hay and Three Cocks						Survey- bypass may affect quietness of the area and its character. GIS- alter boundary to the west of Bronllys to accommodate fixed caravans. Consider alteration taking bypass into consideration but this could be considered as a road through open countryside at present. Alter boundary with Talgarth and Three Cocks slightly to south west.
BRCKNVS 007	Twyn Eithiniog	Aerial- opencast extension evident	NVDI- less productive to east					GIS- amend boundary to accommodate change in opencast extent
BRCKNVS 008	Tywi Forest	Aerial- felling evident	NVDI-felling indicated			NRW- broadleaf planting plans indicate planting centrally		Survey- possible description character changes to mixed woodland in places and management recommendation changes
BRCKNVS 100	Usk Valley Hills	Forest roads evident and new planting evident on aerial	NVDI- more productive					Survey- description should indicate that Myarth Hill to the east is almost fully planted up now.
BRCKNVS 117	Llaneglwys Wood		NVDI-felling indicated					Survey- possible description to indicate some compartments felled to the south
BRCKNVS 141	Fan Fawr/Fan Lia (Fforest		Segment density-					Survey- check on site for changes in vegetation cover on uplands

	Fawr east)		indicates less complex					possibly due to grazing regimes and amend description and/or management recommendations as necessary	
Aspect area		Change- indicated by:						Stage 2c	
UID	Name	OS data, aerial photos and roads and buildings	Complexity maps (segment density) and NVDI	Phase 1 and seasonal change	LPA workshop/questionnaire	Other resources	Field-work	Recommended LANDMAP amendment- GIS or survey or both	
BRCKNVS 148	Glyn Tarell and Cynnig valley				Libanus expansion and gypsy site west of Brecon			Survey- mention Libanus expansion and Brecon gypsy site and mention integration needed in management guidelines. GIS- change boundary to Brecon if gypsy site is attached to the built boundary- the site is not apparent on any mapping or aerials.	
BRCKNVS 151	Talgarth	Built change map and Aerial- indicate new road alignment to the south west Talgarth and amendments in town						Survey- improvements may affect settlement and its character. GIS- alter boundary to the south west to accommodate road alignment north west of roundabout.	
BRCKNVS 230	Carreg Cadno				Penwllt quarry reused for pipeline works			Survey- mention use of quarry and possible mitigation measures desirable- check on site	
BRCKNVS 302	Crawnog Valley	Aerial- felling evident	NVDI- less productive in parts to western end of valley			NRW- broadleaf planting plans		Survey- possible description character changes to mixed woodland in places and management recommendation changes	
BRCKNVS 338	Felinfach farmlands	Built change map and Aerial- expansion of Brecon						GIS- amend boundary to south to accommodate town expansion	
BRCKNVS 361	Usk valley- Llangattock	Built change map and Aerial- expansion of Llangattock			Phytophthora ramoram and Chalara felling in area			Survey- possibly amend description of woodlands in area to describe fellings and	

								management guidelines; GIS- amend boundary to north to accommodate Llangattock expansion	
Aspect area		Change- indicated by:						Stage 2c	
UID	Name	OS data, aerial photos and roads and buildings	Complexity maps (segment density) and NVDI	Phase 1 and seasonal change	LPA workshop/questionnaire	Other resources	Field-work	Recommended LANDMAP amendment- GIS or survey or both	
BRCKNVS 363	Black Mountain		Segment density- indicates less complex					Survey- check on site for changes in vegetation cover on uplands possibly due to grazing regimes and amend description and/or management recommendations as necessary	
BRCKNVS 365	Bryn Henllys Opencast	Aerial- reclamation evident	NVDI- more productive					Survey- amend description and other fields to describe as reclaimed land, and amend management recommendations	
BRCKNVS 372	Mynydd Llangynidr and Mynydd Llangattock				Earth moving at Cwar y Hendre and reservoir drainage at Cairn Mound			Survey- mention some earth moving in quarry area and reservoirs/water bodies in description and possible management guidelines	
BRCKNVS 397	Usk valley northern slopes	Built change map and Aerial- expansion of Crickhowell						GIS- amend boundary to north of Usk to accommodate town expansion	
BRCKNVS 428	Mynydd Wysg	Aerial- felling evident				NRW- broadleaf planting plans- indicate edge to road which may soften perception of plantation		Survey- possibly amend description	
BRCKNVS 436	Tawe Valley and Cwm Twrch	Aerial- opencast extension evident	NVDI- less productive to south			NRW- national windfarm mapping		Survey- adjacent windfarm may affect setting. GIS- amend boundary to accommodate	

						indicates Maesgwyn windfarm to the south which is highly noticeable		change in opencast extent
Aspect area		Change- indicated by:					Stage 2c	
UID	Name	OS data, aerial photos and roads and buildings	Complexity maps (segment density) and NVDI	Phase 1 and seasonal change	LPA workshop/questionnaire	Other resources	Field-work	Recommended LANDMAP amendment- GIS or survey or both
BRCKNVS 527	Hay on Wye	Built change map and Aerial- expansion of Hay south						GIS- amend boundary to south of Hay to accommodate expansion
BRCKNVS 529	Wye Valley slopes	Built change map and Aerial- expansion of town						GIS- amend boundary to north to accommodate town expansion
BRCKNVS 590	Mynydd Du	Forest roads and felling evident on aerial	NVDI-felling indicated					Survey- possible description to indicate some compartments felled to the east with patches of broadleaf planting replacing blanket forestry plantation
BRCKNVS 597	Coed-y-Rhaiadr	Aerial- felling evident	NVDI- some more and some less productive in parts to eastern edge along the Nedd Fechan valley			NRW- broadleaf planting plans- especially to eastern edge- the Nedd Fechan valley		Survey- possible description character changes to mixed woodland in places and management recommendation changes
BRCKNVS 622	Crickhowell	Built change map and Aerial- expansion of town						GIS- amend boundary to south to accomodate town expansion
BRCKNVS 633	Brecon	Built change map and Aerial- expansion of town to north			Gypsy site west of Brecon			GIS- amend boundary to north to accomodate town expansion and possibly to west if gypsy site is

								attached to the built boundary- the site is not apparent on any mapping or aerals.
Aspect area		Change- indicated by:					Stage 2c	
UID	Name	OS data, aerial photos and roads and buildings	Complexity maps (segment density) and NVDI	Phase 1 and seasonal change	LPA workshop/questionnaire	Other resources	Field-work	Recommended LANDMAP amendment- GIS or survey or both
BRCKNVS 660	Black Mountains				Paths erosion and improvement; bracken management/eradication			Survey- ensure description notes access through mountains and management guidelines cover management issues; also mention bracken management/control action and need
BRCKNVS 684	Builth	Built change map and Aerial- expansion of town						GIS- amend boundary to south to accomodate town expansion
BRCKNVS 735	Usk valley east of Brecon	Built change map and Aerial- expansion of Llangattock			Cwrt y Gollen- phased development over time			Survey - consider mentioning Cwrt y Gollen in description and management guidelines to ensure integrated; GIS- amend boundary to south to accommodate Llangattock expansion
BRCKNVS 797	Carnafell and Talybont Forest	Aerial- felling evident			Phytophthora ramoram and Chalara felling in area	NRW- broadleaf planting plans		Survey- possible description character changes to mixed woodland in places due to felling for various reasons and management recommendation changes.
BRCKNVS 811	Upper Tawe valley				Craig y Nos corrective works			Survey- possibly amend management guidleines
BRCKNVS 833	Brecon Beacons				Paths erosion and improvement eg Pen y Fan, Corn Du, Beacons Way; bracken			Survey- ensure description notes access through mountains and management guidelines cover management issues eg Sugar

					management/eradication			Loaf, Beacons Way, Offa's Dyke; also mention bracken management/control action and need	
Aspect area		Change- indicated by:						Stage 2c	
UID	Name	OS data, aerial photos and roads and buildings	Complexity maps (segment density) and NVDI	Phase 1 and seasonal change	LPA workshop/questionnaire	Other resources	Field-work	Recommended LANDMAP amendment- GIS or survey or both	
BRCKNVS 838	Upper Taf Fechan Valley	Aerial- felling evident to eastern area	NVDI- less productive in parts of valley			NRW- broadleaf planting plans		Survey- possible description character changes to mixed woodland in places and management recommendation changes	
BRCKNVS 871	Irfon Forest	Aerial- felling evident	NVDI-felling indicated			NRW- broadleaf planting plans indicate planting to north and south		Survey- possible description character changes to mixed woodland in places and management recommendation changes	
BRCKNVS 876	Nedd Fechan and Mellte valleys				Improvements to paths and associated tourism infrastructure	NRW- national windfarm mapping indicates Maesgwyn windfarm to the south which is highly noticeable from the ridge between the valleys		Survey- adjacent windfarm may affect setting; consider mentioning paths and tourism infrastructure in description and management guidelines.	
BRCKNVS 891	Three Cocks	Built change map and Aerial- expansion of Three Cocks south west						GIS- amend boundary to south of Three Cocks to accommodate expansion	
BRCKNVS 911	Gwaun Hepste	Aerial- felling evident	NVDI- less productive in parts to			NRW- broadleaf planting plans- especially		Survey- possible description character changes to mixed woodland in places and	

			eastern end of valley			centrally		management recommendation changes
Aspect area		Change- indicated by:					Stage 2c	
UID	Name	OS data, aerial photos and roads and buildings	Complexity maps (segment density) and NVDI	Phase 1 and seasonal change	LPA workshop/questionnaire	Other resources	Field-work	Recommended LANDMAP amendment- GIS or survey or both
BRCKNVS 926	Nant Helen Opencast/reclamation	Aerial- opencast extension evident to west	NVDI- less productive to west					GIS- amend boundary to accommodate change in opencast extent
BRCKNVS 949	Bronllys	Built change map and Aerial- indicate new bypass to the south of Bronllys and expansion/intensification of caravan park to the west						Survey- bypass may affect quietness of the town and its character. GIS- alter boundary to the west to accommodate fixed caravans. Consider alteration taking bypass into consideration but this could be considered as a road through open countryside at present.
Montgomeryshire								
MNTGMVS 117	Banwy floodplain	Built change map and Aerial- expansion of caravan park						
MNTGMVS 179	Trannon Moors	Aerial photo shows wind turbine bases and roads at Carno 2	NVDI- wind turbine bases and roads of Carno 2 windfarm. Segment density- indicates significantly less complex.					Survey- add description of Carno 2 additional turbines. Check on site for changes in vegetation cover on uplands possibly due to grazing regimes and amend description and/or management recommendations as necessary.
MNTGMVS 200	Esgair Ychion	Aerial- Cefn Croes evident nearby to west	NVDI-felling indicated			renewable energy map and forest broadleaf		Survey- adjacent windfarm of Cefn Croes to the west may affect setting and broadleaf planting

						planting		may begin to change character
Aspect area		Change- indicated by:					Stage 2c	
UID	Name	OS data, aerial photos and roads and buildings	Complexity maps (segment density) and NVDI	Phase 1 and seasonal change	LPA workshop/questionnaire	Other resources	Field-work	Recommended LANDMAP amendment- GIS or survey or both
MNTGMVS 205	Llechwedd Llwyd Woodland	Aerial- felling evident	NVDI-felling indicated			NRW- broadleaf planting plans		Survey- possible description character changes to mixed woodland and management recommendation changes
MNTGMVS 227	Cefn Carnedd wooded hillside	Built change map and Aerial- expansion of Llanidloes						GIS- amend boundary to accommodate expansion of Llanidloes
MNTGMVS 278	Pont Llogel farmlands	Built change map and Aerial- expansion of caravan park						Survey- add caravan park as a feature and also add to management guidelines recommending mitigating effect of caravan park and integration into landscape
MNTGMVS 282	Rhialgwyn Upland Grazing	Aerial- felling evident	NVDI- felling of small forest blocks					Survey- description may change as removed conifers are only blocks in the area- depends if they are to be replanted
MNTGMVS 316	Kerry Ridgeway Woodland	Aerial- felling evident	NVDI-felling indicated			NRW- broadleaf planting plans		Survey- possible description character changes to mixed woodland and management recommendation changes
MNTGMVS 320	Banwy Forest					WG paper indicates Carnedd Wen and Llanbrynmair in planning but unlikely to be implemented for this review.		Survey- possibly no change at this stage

Aspect area		Change- indicated by:					Stage 2c	
UID	Name	OS data, aerial photos and roads and buildings	Complexity maps (segment density) and NVDI	Phase 1 and seasonal change	LPA workshop/questionnaire	Other resources	Field-work	Recommended LANDMAP amendment- GIS or survey or both
MNTGMVS 337	Cwm Tafalog		NVDI- wind turbine bases and roads of Cemmaes windfarm adjacent					Survey- adjacent Cemmaes wind farm may affect tranquillity and setting
MNTGMVS 368	Berwyn Uplands		Segment density- indicates less complex					Survey- check on site for changes in vegetation cover on uplands possibly due to grazing regimes and amend description and/or management recommendations as necessary
MNTGMVS 413	Mynydd Cemmaes	Aerial photo shows revised wind turbine bases and roads	NVDI- wind turbine bases and roads of Cemmaes windfarm. Segment density- indicates less complex.					Survey- possibly change description to incorporate larger wind farm with associated character effects. check on site for changes in vegetation cover on uplands possibly due to grazing regimes and amend description and/or management recommendations as necessary
MNTGMVS 422	Llanerfyl Mosaic farmlands					NRW- national windfarm mapping indicates Tir Gwynt is consented but not on the ground yet. WG paper indicates Carnedd Wen and Dyfnant		Survey- adjacent windfarms of Tir Gwynt and others may affect tranquillity and setting

						Forest in planning but unlikely to be implemented for this review.		
Aspect area		Change- indicated by:					Stage 2c	
UID	Name	OS data, aerial photos and roads and buildings	Complexity maps (segment density) and NVDI	Phase 1 and seasonal change	LPA workshop/questionnaire	Other resources	Field-work	Recommended LANDMAP amendment- GIS or survey or both
MNTGMVS 434	Montgomery Mosaic rolling farmland	Built change map and Aerial- expansion of settlement						GIS- amend boundary to accomodate expansion
MNTGMVS 443	Waun Dubarthog		Segment density- indicates less complex					Survey- check on site for changes in vegetation cover on uplands possibly due to grazing regimes and amend description and/or management recommendations as necessary
MNTGMVS 483	Dovey Forest		NVDI-felling indicated			NRW- broadleaf planting plans		Survey- possibly minor amendments to description to mention felling of compartments
MNTGMVS 500	Dyfnant Forest	Aerial- felling evident	NVDI-felling indicated			NRW- broadleaf planting plans		Survey- possible description character changes to mixed woodland and management recommendation changes
MNTGMVS 507	Montgomery	Built change map and Aerial- expansion of settlement						GIS- amend boundary to accomodate expansion
MNTGMVS 524	Guilsfield	Built change map and Aerial- expansion of settlement						GIS- amend boundary to accomodate expansion
MNTGMVS 541	Newtown	Built change map and Aerial- expansion of settlement						GIS- alter boundary to the north and east and south
MNTGMVS 548	Llanfair Caereinion	Built change map and Aerial- expansion of						GIS- alter boundary to the south

		settlement						
Aspect area		Change- indicated by:					Stage 2c	
UID	Name	OS data, aerial photos and roads and buildings	Complexity maps (segment density) and NVDI	Phase 1 and seasonal change	LPA workshop/questionnaire	Other resources	Field-work	Recommended LANDMAP amendment- GIS or survey or both
MNTGMVS 551	Llanidloes	Built change map and Aerial- expansion of settlement						GIS- amend boundary to accomodate expansion to east. Survey- possibly amend description to accommodate commercial expansion to the east
MNTGMVS 556	Carno	Built change map and Aerial- expansion of settlement						GIS- alter boundary of settlement to south east
MNTGMVS 571	Pen Coed upland					WG paper indicates Carnedd Wen, Llanbrynmair and Dyfnant Forest in adjacent areas in planning but unlikely to be implemented for this review.		Survey- possibly no change at this stage
MNTGMVS 627	Llanfyllin	Built change map and Aerial- expansion of settlement						GIS- amend boundary to accomodate expansion to north and west
MNTGMVS 635	Four Crosses	Aerial- small expansion of village						GIS- amend boundary to accomodate expansion to south
MNTGMVS 650	River Severn floodplain	Built change map and Aerial- expansion of Welshpool, Llanfyllin, Four Crosses, Guilsfield and large expansion of Abermule - possible						GIS- amend boundary to accommodate Welshpool commercial expansion and other settlements. Consider new Collector form possibly for Abermule.

		separate area						
Aspect area		Change- indicated by:					Stage 2c	
UID	Name	OS data, aerial photos and roads and buildings	Complexity maps (segment density) and NVDI	Phase 1 and seasonal change	LPA workshop/questionnaire	Other resources	Field-work	Recommended LANDMAP amendment- GIS or survey or both
MNTGMVS 662	Llantsantffraid-ym-Mechain	Built change map and Aerial- expansion of settlement						GIS- amend boundary to accomodate expansion north
MNTGMVS 672	Trannon Woodlands	Aerial- felling evident	NVDI-felling indicated			NRW- broadleaf planting plans		Survey- possibly minor amendments to description to mention felling of compartments
MNTGMVS 694	Carno Uplands					NRW- national windfarm mapping indicates Tir gwynt is consented but not on the ground yet- access and part of windfarm in area. BNRW- broadleaf planting plans		Survey- adjacent windfarms of Tir Gwynt and others may affect tranquillity and setting
MNTGMVS 696	Carno Grazing							Survey- description- Carno 2 is more evident on the skyline than Carno 1
MNTGMVS 733	Esgair Cwmowen Uplands	Change in roads and Aerial photo shows wind turbine bases and roads at Mynydd Clogau	NVDI- felling of forest block indicated			NRW- national windfarm mapping indicates Tir gwynt is consented but not on the ground yet		Survey- to include wind energy development as built at time of site visit in description and associated effects on character

Aspect area		Change- indicated by:					Stage 2c	
UID	Name	OS data, aerial photos and roads and buildings	Complexity maps (segment density) and NVDI	Phase 1 and seasonal change	LPA workshop/questionnaire	Other resources	Field-work	Recommended LANDMAP amendment- GIS or survey or both
MNTGMVS 762	Welshpool	Built change map and Aerial- expansion of settlement						GIS- amend boundary to accomodate expansion to north
MNTGMVS 776	Cefn Coch rolling pasture	Aerial photo for adjacent area shows wind turbine bases and roads at Mynydd Clogau				renewable energy map		Survey- adjacent windfarm may affect setting
MNTGMVS 815	Tregynon	Built change map and Aerial- shows wind turbine bases and roads at Mynydd Clogau nearby and expansion of settlement	NVDI- indication of development expansion			Renewable energy map		Survey- nearby Mynydd Clogau windfarm may affect setting. GIS- alter boundary of settlement to east
MNTGMVS 848	Vrynwy and Tanat Woodlands	Aerial- felling evident	NVDI-felling indicated			NRW- broadleaf planting plans		Survey- possible description character changes to mixed woodland and management recommendation changes
MNTGMVS 865	Caersws River Bowl	Aerial- expansion of Newtown						GIS- alter boundary adjacent to Newtown
MNTGMVS 875	Llanfyllin Mosaic north	Built change map and Aerial- expansion of Llansantffraid						GIS- alter boundary adjacent to Llansantffraid
MNTGMVS 899	Tregynon Rolling Hills	Built change map and Aerial- expansion of Newtown and Tregynon and significant expansion of semi-industrial agricultural unit north east of Bettws Cedewain						Survey- possible amendment to description and management recommendations; GIS- amend boundary to accommodate expansion of settlements

Aspect area		Change- indicated by:					Stage 2c	
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MNTGMVS 910	Plynlimon Moorlands	Aerial- Cefn Croes evident nearby to west	Segment density- indicates less complex			renewable energy map		Survey- adjacent windfarm of Cefn Croes to the west may affect setting. Check on site for changes in vegetation cover on uplands possibly due to grazing regimes and amend description and/or management recommendations as necessary.
MNTGMVS 916	Mynydd Pant coch hillsides	Aerial- felling evident				NRW- broadleaf planting plans		Survey- possibly minor amendments to description to mention felling of compartments and some broadleaf planting
MNTGMVS 917	Hafren Forest		NVDI-felling indicated			NRW- broadleaf planting plans		Survey- possible description character changes to mixed woodland and management recommendation changes
MNTGMVS 946	Llandyssil Hill and Scarp grazing	Aerial- expansion of Newtown						GIS- alter boundary adjacent to Newtown
MNTGMVS 962	Llanfyllin Mosaic South	Aerial- felling evident	NVDI-felling indicated			NRW- broadleaf planting plans		Survey- possible description character changes to mixed woodland and management recommendation changes
Radnorshire								
RDNRVS 101	Cambrian Mountains plateau tops		Segment density- indicates less complex					Survey- check on site for changes in vegetation cover on uplands possibly due to grazing regimes and amend description and/or management recommendations as necessary

Aspect area		Change- indicated by:					Stage 2c	
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RDNRVS 110	Upland Moor, Beacon Hill and Gors Lydan					Third party challenge to boundary and subsequent report by NRW.		GIS- Cefn Brith will be transferred to RDNRVS122. Collector- minor amendments to description as per Bronwen Thomas report, July 2013.
RDNRVS 117	Moorland east of Ithon	Aerial - increase in bracken on northern slopes	NVDI- less productive in parts					Survey- possible bracken encroachment
RDNRVS 122	Improved upland, south of Kerry Hills					Third party challenge to boundary and subsequent report by NRW.		GIS- Cefn Brith will be transferred to RDNRVS122 from 110.
RDNRVS 125	Bryn y Sarnau forest slopes and fields	Aerial- felling evident	NVDI-felling indicated			NRW- broadleaf planting plans		Survey- possible management changes and character changes to mixed woodland
RDNRVS 126	Forested Radnor Forest	Aerial- felling evident	NVDI-felling indicated			NRW- broadleaf planting plans		Survey- possible management changes and character changes to mixed woodland
RDNRVS 133	Rolling hills central south east	Aerial- reduce to exclude development in Llandrindod Wells	NVDI- reduce to exclude development					GIS- reduce to accommodate Llandrindod Wells expansion and Builth showground expansion.
RDNRVS 134	Rolling hills east	Built change map and Aerial- expansion of Knighton and Norton to the north						GIS- amend boundary to east to accommodate Knighton and expansion to the north of Norton
RDNRVS 135	Rolling hills between Ithon and Wye	Built change map and Aerial- expansion of Rhayader to east						GIS- amend boundary to accommodate expansion of Rhayader

Aspect area		Change- indicated by:					Stage 2c	
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RDNRVS 141	Wye floor south of Rhayader	Aerial- parking expansion to Builth showground site						GIS- consider reducing size of area to exclude showground site which should expanding to the north. Survey- new collector survey would be needed for Showground site and description of existing collector amended as necessary.
RDNRVS 142	Lugg and Teme floors	Built change map and Aerial- expansion of Knighton						GIS- consider changing the boundary to the west to include undeveloped valley floor east of Knighton.
RDNRVS 150	Lower Wye floor	Built change map and Aerial- expansion of Clyro south and east						GIS- amend boundary to south and east of Clyro to accommodate expansion
RDNRVS 151	East Lugg floor	Built change map and Aerial- expansion of town						GIS- amend boundary to north to accommodate Presteigne expansion
RDNRVS 152	Llandrindod Wells	Aerial- expand to include development to the north east	NVDI- expand to include development to the north east					GIS- alter boundary
RDNRVS 153	Rhayader	Built change map and Aerial- expansion of settlement to north east						GIS- amend boundary to accommodate expansion of Rhayader
RDNRVS 154	Knighton	Built change map and Aerial- expansion of settlement						GIS- amend boundary to east to accommodate town expansion and consider changing the boundary to the east to exclude undeveloped valley floor.

Aspect area		Change- indicated by:					Stage 2c	
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RDNRVS 155	Presteigne	Built change map and Aerial- expansion of settlement						GIS- amend boundary to south to accomodate expansion
RDNRVS 158	Norton	Built change map and Aerial- expansion of Norton to north						GIS- amend boundary to north of Norton to accommodate expansion
RDNRVS 159	Clyro	Built change map and Aerial- expansion of Clyro south and east						GIS- amend boundary to south and east of Clyro to accommodate expansion