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## 4 West Lothian Geodiversity Action Plan (WLGAP)

### 4.1 Introduction

The Geodiversity Audit described in Chapter 3 reviewed the component elements of West Lothian's geodiversity, and its relevance to other interests, at local, regional, national and international levels. It was undertaken as a means of informing the framing of recommendations and action points designed to guide the sustainable management, planning, conservation and interpretation of all aspects of the Earth heritage of West Lothian.

The audit included evaluations of 122 sites and features of geological and landscape importance in West Lothian, four of which are currently protected nationally as geological features in SSSIs and six protected locally as RIGS. The list of 51 WLGSs

(Table 2) selected expands these list of important sites to provide much better coverage at the local level.

A draft West Lothian Geodiversity Action Plan (WLGAP) has been prepared as a basis for discussion (Table 3). The WLGAP will require targeted consultation among partners to agree objectives, actions and timescales.

### 4.2 Aims

The main objectives of the WLGAP may be summarised as follows:

- To promote overall awareness, understanding, enjoyment and care of West Lothian's geodiversity and its relationship with biodiversity through partnership and community involvement
- To 'embed' geodiversity into future development planning and environmental management, monitoring and interpretation policies
- To provide guidance to West Lothian planners, landowners and other individuals and organisations on sustainable management of geodiversity in the area
- To identify threats to geological sites or features and recommend strategies to conserve and protect geological features
- To identify opportunities to enhance or restore the value of geodiversity features
- To engage industry, local communities and voluntary groups in caring for West Lothian's geodiversity

(Table 3) West Lothian Geodiversity Sites (WLGS) and explanation of abbreviations.

WL GS No.	Site name	Geology Class	Geology Class	Geol Theme	WLGS class	Other Designation	Site Potential / Issues / Management
		Group	Formation				
1	Baad Park Burn	Inverclyde Quaternary	Ballagan	LthSt Sed Struc GDep	2	PHRP AGLV	Potential interpretation leaflet for Pentlands walk. Good viewpoint

2	West Cairn Hill, East Burn	Inverclyde	Kinnesswood	LthSt Sed	2	PHRP AGLV	Potential interpretation leaflet for Pentlands walk. Good viewpoint
3	Linhouse Water - Above Carstairs Viaduct	Inverclyde	Ballagan	LthSt Sed	2	B-SSSI SWTR AGLV (LWS SW)	Potential for Linhouse Water geotrail Potential for on-site interpretation board and/or part of a Bathgate Hills geotrail.
4	East Kirkton Quarry	Strathclyde	West Lothian Oil-shale	Pal Sed	3	G-SSSI, GCR RIGS AGLV	Rubbish dumping, burning, and overgrowing Potential for on-site Interpretation, oil-shale mining heritage RIGS, potential for on-site interpretation
5	Five Sisters	Strathclyde	West Lothian Oil-shale	MnHe	2	SAM	- artificial Crag and Tail, interpretation leaflet
6	Seafield Law	Strathclyde	West Lothian Oil-shale	MnHe	3	P-RIGS	RIGS, interpretation leaflet, oil-shale mining heritage
7	Greendykes	Strathclyde	West Lothian Oil-shale	MnHe	3	SAM P-RIGS	

8	Almond Valley Heritage Centre	Strathclyde	West Lothian Oil-shale	MnHe	2	(LWS)	Current museum displays on the oil shale industry, geology, mining, oil refining and social history
9	Murieston Water 2	Strathclyde	Gullane	Struc	3	B-SSSI, CP LWS, AGLV AWI SNWI	Potential for on-site interpretation or leaflet on faulting
10	Almondell and Calder Wood	Strathclyde	West Lothian Oil-shale	LthSt MnHe	3	RIGS LWS, WS AWI SNWI AGLV, CP	Potential for on-site interpretation
11	Upper Uphall	Strathclyde	West Lothian Oil-shale	MnHe	3	P-RIGS	RIGS, potential for on-site interpretation board and / or leaflet on stoop and room mining
12	Union Canal, Winchburgh	Strathclyde	West Lothian Oil-shale	LthSt	3	SAM P-RIGS LWS	RIGS, potential for interpretation leaflet
13	Hopetoun Obelisk Quarry	Strathclyde	West Lothian Oil-shale	Sed LthSt BSt	3	HGDL (LWS) AGLV	Potential for on-site interpretation Soil dumping Potential for Society East Shore to Abercorn Point
4	Society East Shore	Strathclyde SSDPV	West Lothian Oil-shale SSDLO	Sed LthSt Ign GDep	2	AGLV (LWS) (HGDL) (AWI)	geotrail, interpretation leaflet and/or on-site interpretation board

15	Society Point	Strathclyde	West Lothian Oil-shale	Sed LthSt Struc	3	AGLV (HGDL) (AWI)	RIGS, potential for Society East Shore to Abercorn Point geotrail, interpretation leaflet and/or on-site interpretation board Potential for Society East Shore to Abercorn Point
16	Society Shore	Strathclyde	West Lothian Oil-shale	LthSt Pal	2	AGLV (HGDL) (AWI) (LWS)	geotrail, interpretation leaflet and/or on-site interpretation board Potential for Society East Shore to Abercorn Point
17	Hopetoun Shore	Strathclyde, MCPAS	West Lothian Oil-shale LAFAS	Sed LthSt Struc Ign, Pal	3	AGLV P-RIGS (HGDL) (AWI), (LWS)	geotrail, interpretation leaflet and/or on-site interpretation board. Potential for Society East Shore to Abercorn Point
18	Abercorn Point	Strathclyde Quaternary	West Lothian Oil-shale	Sed LthSt Struc PGDep	3	AGLV (M-SSSI) (HGDL) (LWS)	geotrail, interpretation leaflet and/or on-site interpretation board.

19	Midhope Burn	Strathclyde	West Lothian Oil-shale	LthSt	2	AWI SNWI HGDL	Potential to extend Society East Shore to Abercorn Point geotrail?
20	Cairnpapple Hill	Bathgate	Bathgate Hills Volcanic	BtHe Ign	3	SAM P-RIGS AGLV HPWG	RIGS, interpretation leaflet, good viewpoint
21	Wairdlaw Quarry	Bathgate LCTS	Bathgate Hills Volcanic MVSC	Pal BtHe	3	AGLV P-RIGS (CP), (AWI)	RIGS, interpretation leaflet, Wairdlaw Limestone Potential for museum exhibit,
22	Union Canal Museum	Bathgate	Bathgate Hills Volcanic	BtHe	2	SAM LWS	geology of Union Canal Potential for excellent sections in
23	Levenseat working quarry	Clackmannan	Passage	Sed LthSt	3	P-RIGS	Passage Formation once quarry ceases operation Potential for interpretation leaflet on limestone mines,
24	Levenseat quarries & mines	Clackmannan	Passage	LthSt MnHe	3		Levenseat to Fauldhouse walk, but marred by windblown rubbish from landfill site. Good viewpoint.

25	Skolie Burn	Clackmannan	Lower Limestone Limestone Coal	LthSt Sed Ign, Pal	3	M-SSSI GCR, LWS P-RIGS	RIGS, prone to rubbish dumping and vegetation overgrowth
26	Petershill Quarries	Clackmannan	Lower Limestone Limestone Coal	Pal Sed LthSt Ign	3	M-SSSI GCR, RIGS WS, SWTR AGLV	Interpretation board vandalised, vegetation overgrowth
27	Rifle Range Quarries	Clackmannan	Lower Limestone	Pal Sed LthSt MnHe	3	M-SSSI P-RIGS GCR HPWG AGLV	Vegetation overgrowth
28	Hilderston Silver Mine Quarry	Clackmannan	Lower Limestone	Sed	3	P-RIGS HPWG, WS AGLV	RIGS, potential interpretation leaflet, vegetation overgrowth
29	Hilderston Silver Mine	Clackmannan	Lower Limestone	MnHe Min	3	P-RIGS HPWG AGLV	RIGS, potential interpretation leaflet, vegetation overgrowth and flooding
	Hillhouse Quarry and Mine	Clackmannan MCPAS	Lower Limestone LAFAS	LthSt Ign MnHe	2	AGLV P-RIGS (CP)	RIGS, potential interpretation leaflet on stoop and room workings, but subsidence problems
31	Muiravonside, Carribber Glen	Clackmannan	Upper Limestone	LthSt MnHe	3	B-SSSI P-RIGS, LWS WI SNWI AGLV	RIGS, potential interpretation leaflet and/or geotrail
32	Wallace's Arch	Clackmannan	Passage	GeoM	2	P-RIGS LWS WI SNWI AGLV	Potential interpretation leaflet and/or geotrail

33	Barbauchlaw Quarries	Coal Measures (Scotland)	Lower Coal Measures (Scotland)	LthSt	2	LWS WS	Perhaps the only Coal Measures exposures in West Lothian? Visit required to determine potential
34	Barbauchlaw Burn Quarries	Coal Measures (Scotland)	Lower Coal Measures (Scotland)	LthSt	2	WS	Perhaps the only Coal Measures exposures in West Lothian? Visit required to determine potential
35	Carsie Hill	SSDPV Clackmannan Quaternary	SSDLO Lower Limestone	Ign GeoM	2	AGLV	Volcanic vent sculpted into Crag and Tail, potential interpretation leaflet, small exposures, vegetation overgrowth RIGS, potential interpretation leaflet and/or on-site interpretation board, good viewpoint for Pentland Hills Potential for
36	Auchinoon Quarry	MCPAS Strathclyde	LAFAS Gullane	Ign Meta LthSt	3	P-RIGS AGLV	for Linhouse Water geotrail
37	Linhouse Water - Glasgow Viaduct 2	MCPAS	LAFAS	Ign	2	AGLV WI SNWI LWS	

38	The Knock	LCTS Quaternary	MVSC	Ign GeoM	3	AGLV P-RIGS (WS) (HPWG)	Potential to include on Bathgate Hills geotrail, interpretation leaflet, good viewpoint Existing stone shelter with 43 rocks from the Midland Valley.
39	Witch Craig Viewpoint	LCTS Bathgate Quaternary	MVSC Bathgate Hills Volcanic	Ign GeoM	3	AGLV RIGS WS AWI SNWI (CP)	Potential to include on Bathgate Hills geotrail RIGS. Potential to include on Bathgate Hills geotrail, on-site interpretation/ interpretation leaflet. Good viewpoint across the whole of the Midland Valley RIGS, potential to include on Bathgate Hills geotrail, interpretation leaflet
40	Cockleroy	LCTS Bathgate Quaternary	MVSC Bathgate Hills Volcanic	Ign GeoM	3	AGLV P-RIGS LWS AWI SNWI SAM	Potential to include on Bathgate Hills geotrail, interpretation leaflet. Good viewpoint across the whole of the Midland Valley RIGS, potential to include on Bathgate Hills geotrail, interpretation leaflet
41	Beecraigs Quarry	LCTS	MVSC	Ign	3	AGLV CP P-RIGS (LWS)	Potential to include on Bathgate Hills geotrail, interpretation leaflet
42	Binny Craig	LCTS Quaternary	MVSC	Ign GeoM	3	RIGS AGLV AWI (WS)	Potential to include on Bathgate Hills geotrail. Good viewpoint



43	Kildimmery Fishery Quarry	LCTS	MVSC	Ign	2	AGLV	Potential to include on Bathgate Hills geotrail. Best example of quartz?
44	Craigton (Hill) Quarry	LCTS	MVSC	Ign Struc	3	(HGDL) (LWS) (AWI) (SAM) (SNWI)	dolerite sill, but access problems Potential for interpretation leaflet and/or on-site interpretation board
	Linhouse Water - Calderwood 1	LCTS	MVSC	Ign Struc LthSt	2	AGLV LWS B-SSSI AWI SNWI	Potential to include on Bathgate Hills geotrail Existing on-site board at the west end of the loch could be up-dated to include some info on the landforms and glaciofluvial deposits RIGS, potential for interpretation leaflet and/or on-site interpretation board
46	Tophichen Hill	LCTS Quaternary	MVSC	GeoM Ign	2	SAM AGLV	
47	Linlithgow Loch	Quaternary		GeoM BtHe	2	B-SSSI AGLV SAM	
48	Tailend Moss	Quaternary		Soil	3	B-SSSI P-RIGS WS RBI SWTR	

49	Longridge Moss	Quaternary	Soil	3	B-SSSI P-RIGS WS RBI SWTR	RIGS, potential for interpretation leaflet and/or on-site interpretation board Potential to combine with proposed RIGS at Seafield Law (see 6 above). Interpretation leaflet and/or on-site interpretation board
50	Easter Inch Moss	Quaternary	Soil	2	WS GCNS	Interpretation leaflet and/or on-site interpretation board
51	Calder Wood	Quaternary	PGDep ActPr	3	RIGS AGLV LWS B-SSSI AWI SNWI	Potential for on-site interpretation

#### Explanation of table

Abbrev.	Explanation	Abbrev.	Explanation
SSDPV	Southern Scotland Dinantian Plugs and Vents Suite	AGLV	Area of Great Landscape Value
SSDLO	Southern Scotland Dinantian Plugs and Vents Suite, Lothian Subsuite Midland Valley	AWI	Ancient Woodland Inventory
MCPAS	Carboniferous to Early Permian Basic Alkaline Sill Suite	B-SSSI	Site of Special Scientific Interest (Biological)
LAFAS	Dinantian to Westphalian Sills of Lothians and Fife	CP	Country Park
MVSC	Midland Valley sill complex	GCNS	Great Crested Newt Site (Scotland)
LCTS	North Britain Late Carboniferous Tholeiitic Suite	GCR	Geological Conservation Review Site
LthSt	Lithostratigraphy	G-SSSI	Site of Special Scientific Interest (Geological)
Sed	Sedimentology	LWS	Listed Wildlife Site
Struc	Structural geology	HGDL	Historic Garden & Designed Landscape

Ign	Igneous geology	HPWG	High Priority Wildflower Grasslands
Pal	Palaeontology	M-SSSI	Site of Special Scientific Interest (Mixed geological and biological)
Meta	Metamorphic geology	PHRP	Pentland Hills Regional Park
Min	Minerals	P-RIGS	Proposed Regionally Important Geological and Geomorphological Site
GDep	Glacial deposits	RBI	Raised Bog Inventory
PGDep	Post-glacial deposits	RIGS	Regionally Important Geological and Geomorphological Site
GeoM	Geomorphology	SAM	Scheduled Ancient Monument
ActPr	Active processes	SNWII	Semi-Natural Woodland Inventory
MnHe	Mining Heritage	SWTR	Scottish Wildlife Trust Reserve
BtHe	Built Heritage	WS	Wildlife Site (1993)
(CP)	Designations in brackets indicate that geodiversity site is adjacent or close to designated site		

LOCAL GEODIVERSITY ACTION PLAN (LGAP) ASSESSMENT OF GEOLOGICAL SITES - RANKING CRITERIA			
RARITY	The abundance or significance of the feature of the site in the global context. <i>Is the rarity such that the feature is one of only a few in the world, in the UK or in the regional area or is it one of many examples and only of reference or educational significance (because it is on the doorstep)?</i>	10 8 6 4 2 0	WORLD UK REGIONAL LOCAL (LGAP) EDUCATIONAL / REFERENCE NOT PRESENT / RELEVANT
QUALITY	The extent to which a feature is typical or demonstrates 'text-book' features. <i>World class specimen or cruddy example?</i>	10 8 6 4 2 0	WORLD CLASS UK REGIONAL LOCAL (LGAP) EDUCATIONAL / REFERENCE NOT PRESENT / RELEVANT
LITERATURE & DATA	The detail of written literature or material collections relating to the feature.	10 8 6 4 2 0	DETAILED STUDIES INTERPRETATIONS DESCRIPTIONS COLLECTED MATERIAL REFERENCED NO DATA
EDUCATIONAL VALUE	The value of the site feature for educational fieldwork (including school, degree and adult education courses). Including 'relief sites' that may relieve pressure on other popular sites. <i>Is it visited by UK-wide groups or local schools only?</i>	10 8 6 4 2 0	UK EDUCATIONAL REGIONAL LGAP AREA SCHOOLS / HE LOCAL (WALKING DIST.) GROUPS LITTLE VALUE NO VALUE
COMMUNITY VALUE	The value of the site to local people as a local amenity including historical or cultural associations outside the geological significance. 'Local is defined as within walking or 10 min drive distance. <i>Is the feature of the site used daily as common ground or rarely visited by the local community?</i>	10 8 6 4 2 0	DAILY LOCAL USE WEEKLY USE MONTHLY USE YEARLY USE INFREQUENT USE NO LOCAL USE

(Table 2) Ranking criteria for BGS geodiversity audits.

*(Table 3) West Lothian Geodiversity Sites (WLGS) and explanation of abbreviations.*