



West Lothian place-based Green Networks (including Local Biodiversity and Geodiversity sites)

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1 Introduction

1.1 To support the *West Lothian Local Development Plan* this Supplementary Guidance (SG) sets out what the green network concept is and the process undertaken to identify it across West Lothian. A West Lothian wide strategic Green Network was tabled in the *LDP Main Issues Report* (MIR-2014) and more locally focused, Green Network opportunities are identified in this SG related to the *LDP Proposed Plan*.

2 What is a Green Network? - definition and principles

2.1 There is no single agreed definition of the term 'green network', but the definition used by Glasgow City Council provides a useful reference point for development planning:

"The linking together of natural, semi-natural and man-made open space (which may include leisure and recreational facilities) to create an interconnected network that provides opportunities for physical activity, increases accessibility within settlements and to the surrounding countryside, while enhancing biodiversity and the quality of the external environment."

2.2 Therefore, in broad terms, a green network is concerned with the linking up of areas of open space. Central to the concept are the principles of *connectivity* and *multi-functionality*.

- ▶ *Connectivity* – highlighting the ambition to link people and places, and provide habitat networks for species movement; and
- ▶ *Multi-functionality* – being the idea of integrating different activities and land uses within the same site in order to deliver maximum benefits and optimum efficiency of land use.

2.3 Both principles are directly relevant to a number of key objectives in Scottish Planning Policy 2; particularly the delivery of high quality sustainable places and drivers towards more efficient use of land as well as support for the Central Scotland Green Network concept.



3 National Planning Framework for Scotland 3 (NPF3)

3.1 The Central Scotland Green Network (CSGN) is included in *National Planning Framework 3* (NPF3) which was published in June 2014 as one of only 14 National Developments across Scotland. CSGN's continued inclusion in NPF3 recognises the important role that green networks can play in delivering a high quality landscape structure to support development plan ambitions for settlement growth, infrastructure and economic development.

3.2 The aim of the CSGN outlined in NPF3 is to deliver:

"... a step change in environmental quality, woodland cover and recreational opportunities... [and] make Central Scotland a more attractive place to live in, do business and visit; help to absorb CO₂; enhance biodiversity; and promote active travel and healthier life styles."

3.3 The Scottish Government charged the Forestry Commission Scotland and Scottish Natural Heritage to deliver the green network concept across Central Scotland. It embraces 19 local authorities from Ayrshire through Lanarkshire to Fife and the Lothians. A Partnership Board was established with a Support Unit supplied by the Central Scotland Forest Trust (CSFT). CSFT have become the Central Scotland Green Network Trust in March 2014.

4 Scottish Government's Green Infrastructure: Design and Place-making (2011)

4.1 The Scottish Government's document, *Green Infrastructure: Design and Place-making* (2011) includes definitions for green infrastructure and green network.

4.2 Green Infrastructure is:

"...the use of ecosystems, green spaces and water in strategic land use planning to deliver environmental and quality of life benefits. It includes parks, open spaces, playing fields, woodlands, wetlands, road verges, allotments and private gardens. Green infrastructure can contribute to climate change mitigation and adaptation, natural disaster risk mitigation, protection against flooding and erosion as well as biodiversity connectivity."

European Commission definition

4.3 Green Network is:

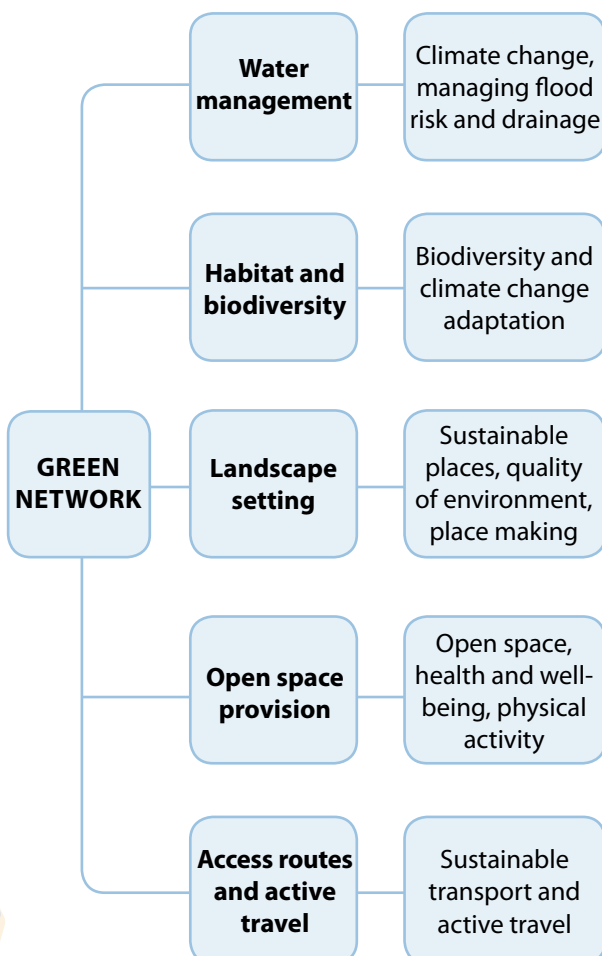
"Individual elements of green infrastructure that can serve a useful green infrastructure purpose, without being connected. However, when green infrastructure components are linked together to form green networks further combined benefits are achieved at a strategic level"

4.4 Green networks are therefore an excellent delivery mechanism to meet a wide range of Scottish Government's objectives; e.g.

- aspirations for sustainable communities;
- meeting the demands of climate change;
- making successful and attractive places to live and work;
- protecting and enhancing the natural environment; and
- helping provide opportunities for healthier and more active lives.



4.5 These are all fundamentally supported through the delivery of a multi-functional network of green and blue (i.e. water) infrastructure. This is demonstrated in the diagram.



5 The aim of Green Networks at the *Local Development Plan* (LDP) level in West Lothian

5.1 Early dialogue between the council and Scottish Natural Heritage provided an opportunity to discuss the priorities for green networks in relation to the LDP. These early discussions suggested that the aim should be to two-fold:

- ▶ to safeguard and protect existing areas of interconnected green networks; and
- ▶ to identify the key needs and opportunities to enhance them.

5.2 It was agreed that in meeting these two aims and in line with the emphasis of the new planning system, the LDP should seek to include spatial proposals, as well as a policy, that avoids fragmentation of existing green networks and identify key opportunities to enhance them.

6 Approach in West Lothian

6.1 Building on the learning from other local authorities experience suggests it is helpful to consider green networks as a hierarchy of three levels:

- ▶ local authority-wide;
- ▶ settlement-wide and
- ▶ local or neighbourhood-level;

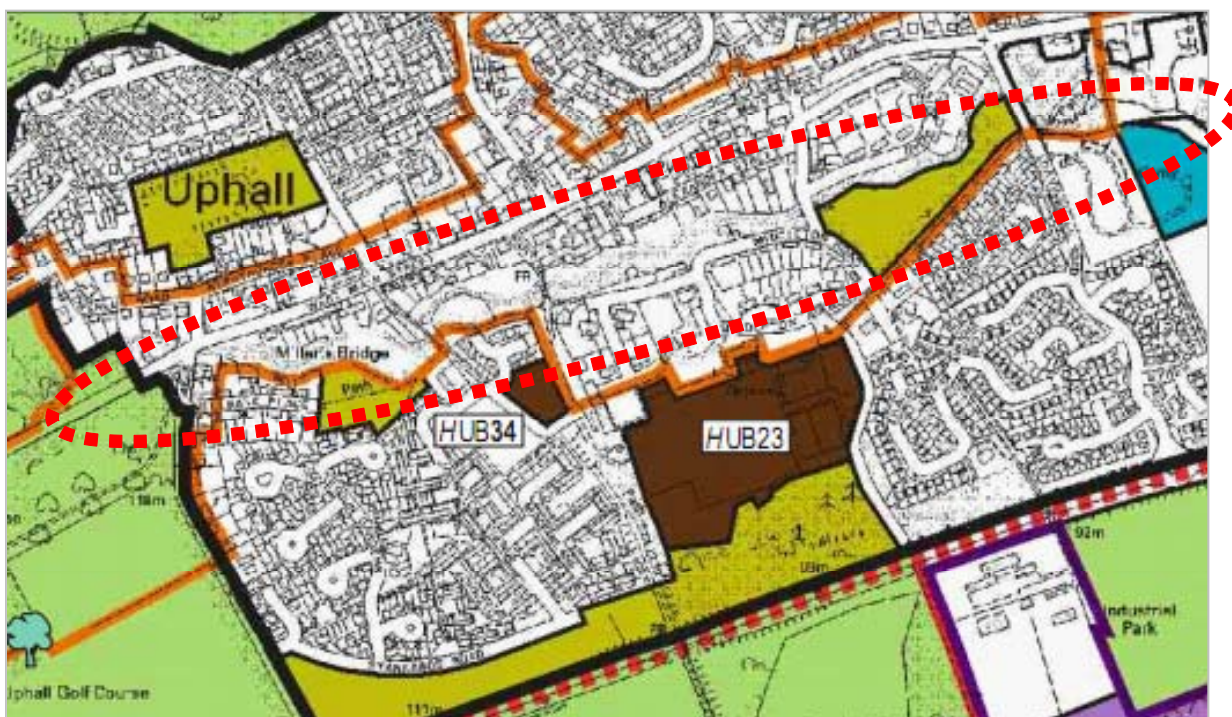
and when establishing how best to deal with them in the LDP, focussing on:

- ▶ what can usefully be shown at the whole plan level;
- ▶ what is better shown at the settlement level; and
- ▶ what is more appropriately dealt with through supplementary guidance.

6.2 In Fife Council, early work on green network planning for the LDP, taken forward in partnership with SNH, has focussed on developing a simple, practical and place-focussed approach, largely being on existing related strategies and spatial information, and seeking to utilise in-house council expertise. This work focuses on key settlements to understand the existing resource which should be safeguarded and identify the main green network moves or opportunities in relation to these existing assets.

6.3 Building on learning from Fife, experience suggests that there would be most benefit in West Lothian by concentrating on the settlement-wide levels in terms of spatial proposals and identifying indicatively the broad assets and opportunities at the West Lothian-wide scale. This is set out in the table.

Green Network Scale	Focus of mapping	Spatial approach in the LDP
West Lothian-wide	Strategically important or West Lothian wide green networks <i>e.g.</i> : <ul style="list-style-type: none"> ■ coastal fringe, ■ national cycle routes 75 & 76, ■ river corridors, ■ the Union Canal. 	Existing assets to be safeguarded and key opportunities for enhancement identified in the LDP as spatial proposals
Settlement-wide	Settlement-wide / strategically important green networks, particularly within Livingston and also the settlements within close proximity to the core development areas (CDAs) <i>e.g.</i> : <ul style="list-style-type: none"> ■ Armadale ■ Broxburn ■ Winchburgh and ■ West Livingston and strategic development areas such as: <ul style="list-style-type: none"> ■ Wester Inch, Bathgate and ■ "Heartlands", Whitburn 	Existing assets to be safeguarded and key opportunities for enhancement identified in the LDP as spatial proposals. Key green network requirements for CDA and strategic development sites shown (<i>e.g.</i> where they have an approved or evolving master-plan that covers green infrastructure).
Local-level	More local or minor scale networks that form an important part of the wider green network, but are perhaps more appropriately dealt with at a site or neighbourhood scale.	Not to be shown in LDP, though main opportunities to safeguard or enhance green networks within proposed development sites may be identified in the plan or supplementary guidance as appropriate.



7 Green networks – an example at the settlement scale

7.1 The map above shows an extract from the existing adopted *West Lothian Local Plan* (2009) that covers Uphall. The “olive green” light coloured areas identify protected open space, which has policy protection in the plan (Policy COM 2). From the proposals map, none of these open spaces appear to be connected to form a part of wider green network.

7.2 Yet several of these protected green-spaces actually sit adjacent to the Brox Burn (the area outlined within the red-dashed line).

7.3 Specifically, the Brox Burn that flows from west – east through the area is a riparian corridor, with a main path route between Millers Bridge and Loaninghill Road, Uphall as part of the wider Brox Burn Walkway, with smaller paths linking from this spine path into many of the different neighbourhoods that sit along its length. There is a major spur path that links southwards across the A89 towards Uphall Station rail station and Pumpherston beyond that is well used by rail and cycle commuters. This also allows access to wider countryside area e.g. the rehabilitated Uphall East Bing and further on Almondell Country Park.

7.4 At the settlement scale therefore, the Brox Burn and its related walkway is a connected, multi-functional green network that combines green space provision and an active travel route which links to a public transport hub and the wider countryside, with water management, landscape and habitat functions, all within a relatively small area.

7.5 Given its importance at the settlement scale, there would be clear value in protecting this green network asset within the LDP, and in considering what broad opportunity there might be to enhance it. e.g.:

- upgrading the paths connecting the various housing developments to the main Brox Burn Walkway;
- improvements to the green space along the A89; and
- improved woodland management along the riparian corridor



Mapping workshop

7.6 Building on this example, an initial small, in-house mapping workshop was held focussing on key settlements in order to develop a green network spatial strategy for inclusion in the LDP. A further short session was held which focused on the West Lothian-wide green network.

The mapping workshops were used to identify:

- existing green network assets that should be protected; and
- key opportunities to enhance and expand the green network.

7.7 To ensure a robust process, the workshops were based on existing spatial data and information contained in adopted council or other relevant strategies, combined with expert officer's local knowledge. In line with their contribution to modernised planning, SNH offered staff time to assist in developing the approach and facilitated the initial pilot workshop.

Pilot workshop - Autumn 2012

7.8 The pilot workshop concentrated on developing a mapping approach for application at the settlement scale, focussing on Broxburn, Uphall and Winchburgh as a case study.

7.9 The pilot workshop involved a facilitated, round table discussion framed around answering the following key questions:

- what are the existing green network assets at the settlement-scale that should be safeguarded in the LDP; and
- where there are opportunities to expand and enhance the network, particularly in relation to proposed development sites.

7.10 The potential green networks and opportunities highlighted as part of this discussion were identified and annotated on a base plan and notes recorded.

7.11 The second part to the pilot workshop focused on identifying an indicative green network at the West-Lothian wide-scale for inclusion in the MIR for the LDP.

7.12 The MIR provided an opportunity to consult on the workshop outputs and proposed approach, and to adapt the approach as appropriate in relation to the feedback received.



Workshop outputs:

- existing green networks at the settlement-wide level that can be safeguarded in the LDP were mapped;
- broad green network opportunities at the settlement scale were identified and shown diagrammatically, particularly in and around proposed core development sites, and highlighted for further consideration at the Development Management stage;
- a short description was developed for each green network, with a brief bullet point summary of its key functions and the opportunities for enhancement;
- This information will be aimed at Development Management staff and other officers engaged with spatial planning and wider service delivery to aid discussion with developers and their agents and delivery on the ground. It will also be of use to Central Scotland Green Network Trust staff or communities wishing to pursue their own local improvements.

Workshop mapping

7.13 Base plans were prepared in advance of the workshops by West Lothian GIS specialists, using in-house data as follows:

Winchburgh, Uphall, Broxburn

- open spaces (though this did not include private gardens, or small amenity open space, transport corridors e.g.: verges). All other Planning Advice Note 65 typologies are included, even where these might have restricted or currently no public access e.g. golf courses, woodland, school sites;
 - adopted core paths, aspirational / indicative paths (that were not included in the Core Path Plan), and other access and cycle routes (e.g.: NCN)
 - watercourses (including the Union Canal) and large water bodies;
 - 1:200 flood risk data, or more local level flood risk/drainage data for West Lothian flood risk information;
 - designated sites (SPAs, SSSIs, LNRs, LBSs, etc);
 - adopted local plan (2009) development sites;
 - emerging 'Preferred Sites' site boundaries from the overall Expressions of Interest (EOI) sites list for the LDP;
 - proposed community woodlands / rural parks as identified in the adopted local plan; and
 - integrated habitat network data layers for woodland, wetland and grassland.
- 7.14 At a West Lothian wide level, regard was had to the following for informing the green network:
- open space audit of major sites(sites with a size threshold of 0.2ha +) e.g.: country parks;
 - water courses (including the Union Canal);
 - adopted core paths, aspirational / indicative paths that did not appear in the Finalised Core Path Plan, and other strategic-level access and cycle routes (NCN 75 and 76);
 - large designated nature conservation sites (SPAs, SSSIs etc.);
 - Areas of Great Landscape Value as identified in the adopted local plan;
 - Countryside Belt identified in the adopted local plan;
 - Proposed rural parks / community woodlands (from adopted local plan);
 - settlement boundaries;
 - adopted local plan CDA and strategic development sites;
 - location of Scheduled Ancient Monuments.



8 Draft West Lothian Green Networks

8.1 These sources of geographic information were analysed to draft several detailed maps at 1: 12,500 scale of the green networks across West Lothian. The Layout Plan before the Opportunities Schedule (page 15) shows the outlines of the various inset maps at the West Lothian wide level.

8.2 Each Green Network map will eventually show (as still in preparation) the following:

- existing green network;
- opportunities for green network improvement;
- opportunity map reference (for schedule);
- CDA and Strategic Development Sites – masterplan green infrastructure proposals;
- adopted local plan allocated and MIR ‘Preferred’ development sites;
- existing strategic access routes;
- potential strategic access routes; and
- urban settlement boundaries.

8.3 To accompany the maps are related schedules of Green Network opportunity gaps. These schedules relate the:

- map reference (shown on Maps: 1) North, 2) East and 3 West);
- general location;
- indicative green network function;
- opportunity gaps; and
- comments on the specific detail of the opportunity for improvement.

8.4 In many cases these green network opportunities will take a long time to deliver due to budget funding constraints from public sector grants or other sources. Where possible they will utilise opportunities provided via development sites and it is expected that if these green network opportunities are identified in the table below then developers will be expected to consider them in their proposals and help implement the schemes. This schedule of opportunities can be monitored over the five year *Proposed Plan* period and updated for the next plan, along with refinements to the mapped Green Network.

**WEST LOTHIAN GREEN NETWORK
SETTLEMENT SCALE & OPPORTUNITY GAPS
LAYOUT MAP**

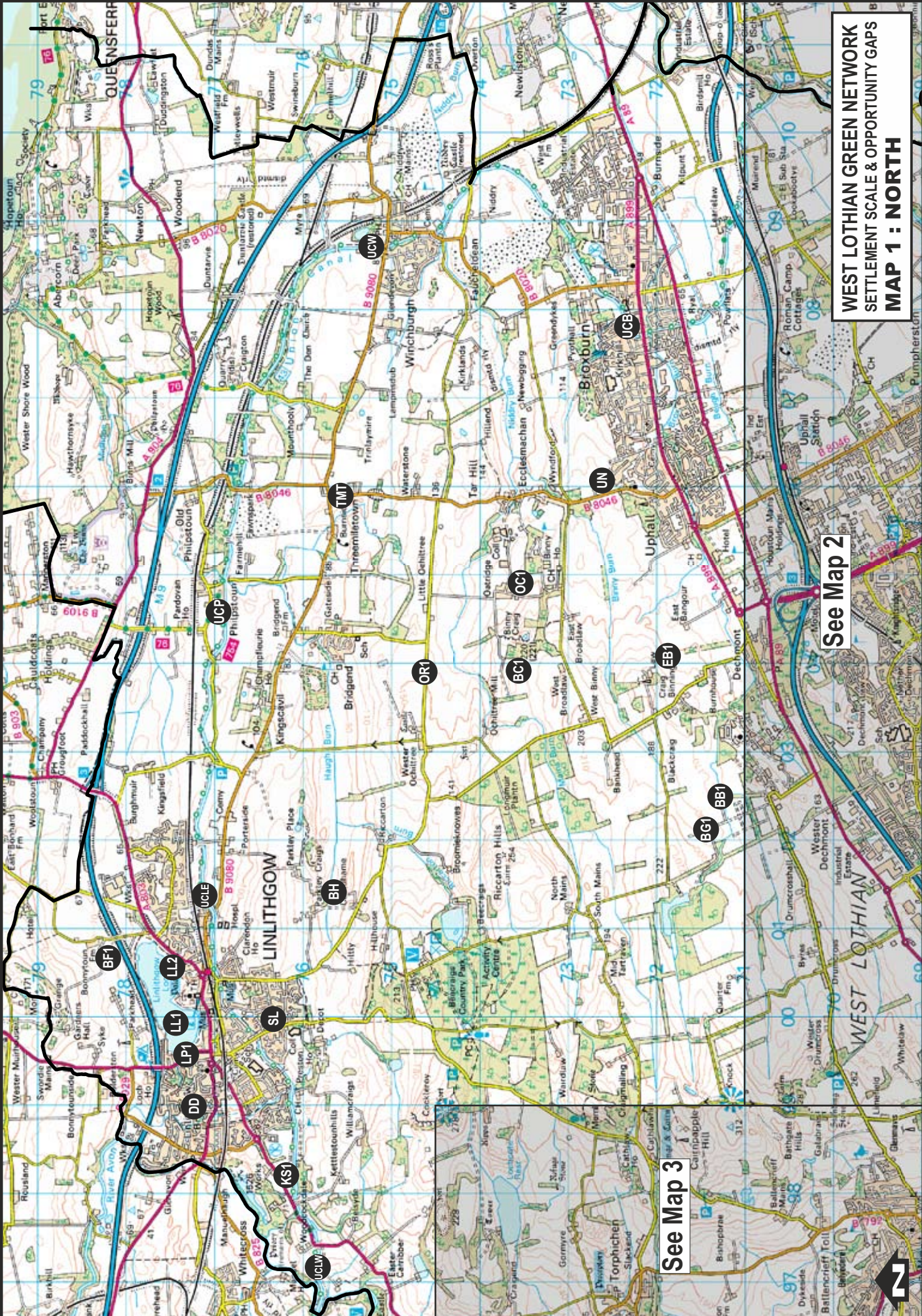
MAP 1

MAP 2

MAP 3

2

2

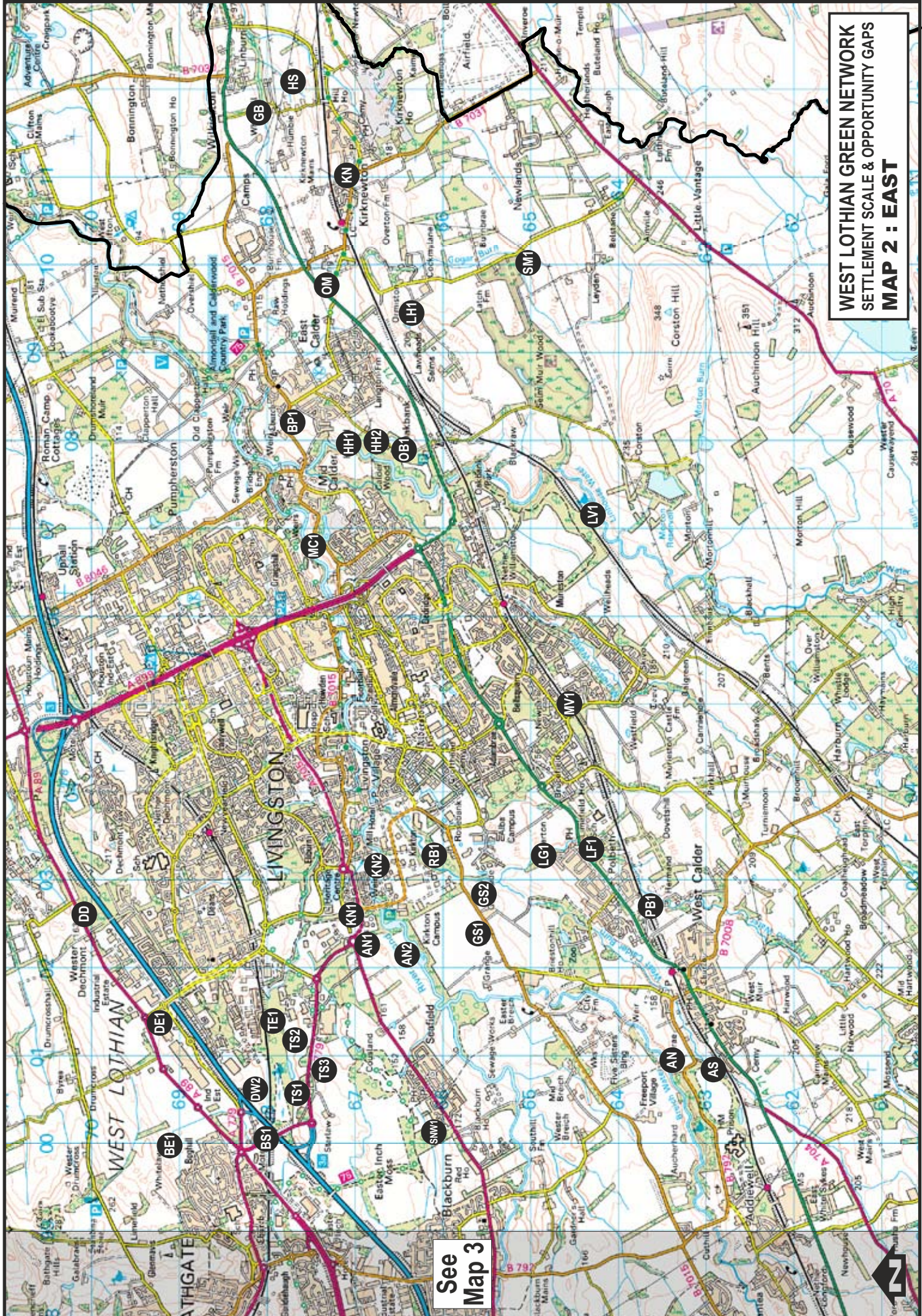


See Map 2

See Map 3

WEST LOTHIAN GREEN NETWORK
SETTLEMENT SCALE & OPPORTUNITY GAPS
MAP 1 : NORTH

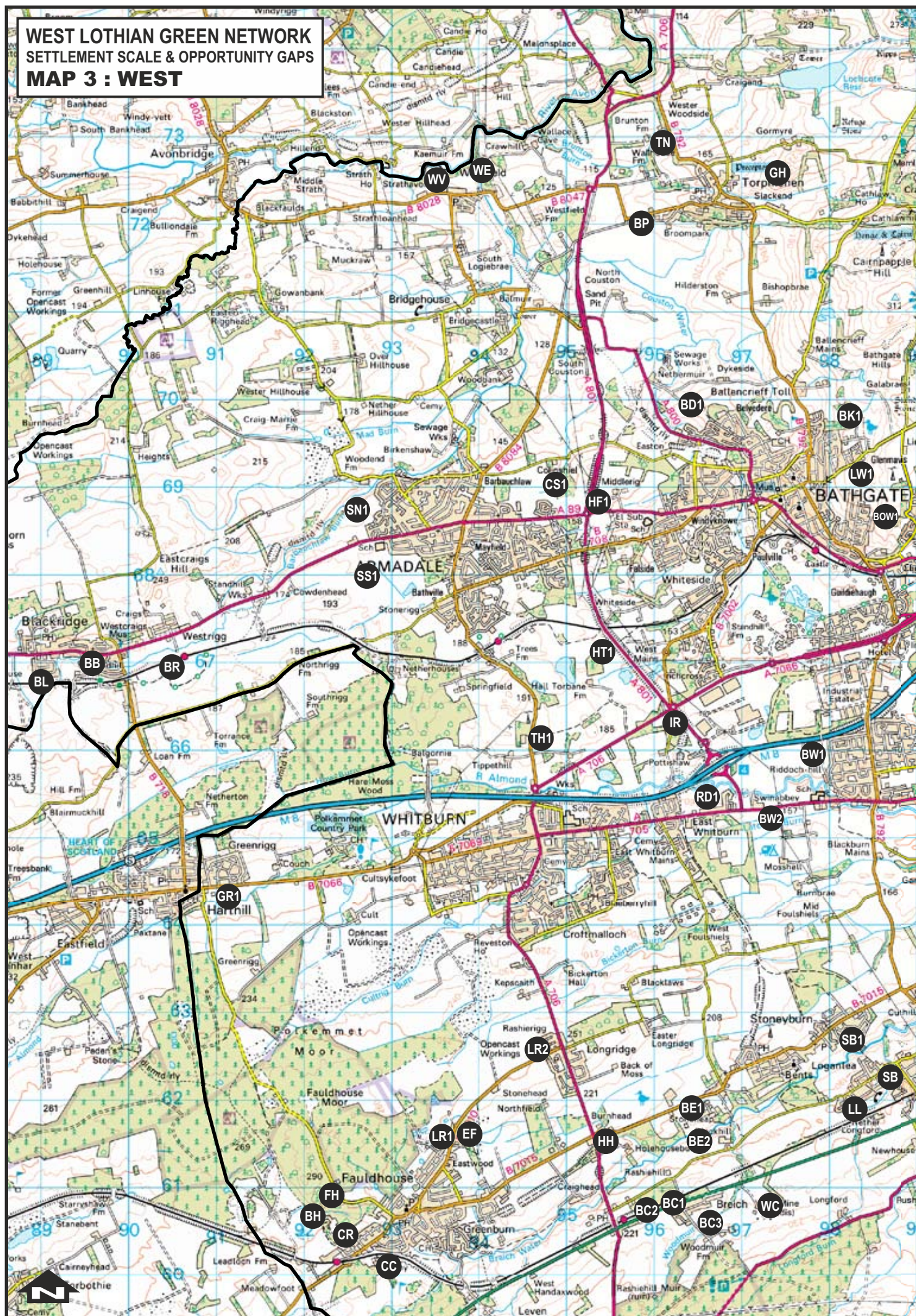




WEST LOTHIAN GREEN NETWORK
SETTLEMENT SCALE & OPPORTUNITY GAPS
MAP 2 : EAST

See
Map 3

**WEST LOTHIAN GREEN NETWORK
SETTLEMENT SCALE & OPPORTUNITY GAPS
MAP 3 : WEST**



Schedule of opportunities (see layout map and associated three maps: 1) North, 2) East and 3) West for the general location of potential green network improvement schemes)

Map Ref	Location	Function	Opportunity Gap	Comment
See Map 2				
BE 1	Boghall East	Recreation	Footpath connection.	Link between Boghall Playing fields & Caputhall Community Woodland (WLC) leads into Livingston A89 Cycle path.
DE 1	Deans East	Biodiversity improvement	Structural planting on east edge of development site.	Recent approval of biomass plant link to Mossbank (potential LBS).
DW 2	Deans West	Greenspace	Open space along high-pressure gas pipeline buffer / corridor.	Insert GN requirement into Planning Brief for Private – Tesco owned) development site.
DD	Dechmont - Deans	Active Travel	Cycle route 3m wide lit to connect A89 existing Cycle path.	West of former Bangour Village Hospital to connect to existing Deans / Tesco / Boghall connection.
BS 1	Boghall South	Active Travel	Scope for NCN75 cycle connection	Opportunity to create short cut loop in NCN network between Livingston & Bathgate / Blackburn.
TS 1	Tailend South 1	Biodiversity improvement	Field edge woodland planting.	WLC own field Scope for shelter belt connection between (CSGNT) woodland blocks & Tailend Moss SSSI.
TS 2	Tailend South 2	Biodiversity improvement	Field edge woodland planting.	
TS 3	Tailend South 3	Biodiversity improvement	Structural planting on west edge of development site	Expansion of distillery. Scope for additional woodland planting.
TE 1	Tailend East 1	Active Travel	Connection between Tailend Moss & Starlaw Business Park alongside Lochshot Burn.	Re-define footpath & scope for additional woodland planting
S-NW 1	Seafeld NorthWest 1	Biodiversity improvement	Expansion of deciduous woodland on brownfield site.	CSGN Development Fund 1 study (2011) identifies woodland expansion opportunities.
AN 1	Almond North 1	Active Travel	NCN 75 link to Almond Greenway.	Cycle way scheme to navigate slope and design to be compatible with new road connection.
AN 2	Almond North 2	Blue Network	Protection / expansion of Almond Pools.	Reinforcement of Almond Greenway on lower slopes adjacent to River Almond.
GS 1	Gavieside 1	Active Travel	Greenway connection to Polbeth.	Part of Gavieside masterplan
GS 2	Gavieside 2	Biodiversity improvement	Establish community woodland.	Land unsuitable for development.
LG 1	Limefield Glen 1	Active Travel	Walkway connection.	Design in consultation with adjacent Brotherton Farm.
LF 1	Limefield House Walled Garden	Greenspace	Reinstatement of public open space and riverside path.	Consultation with Alice Bank residents and Polbeth. Community Council.
PB 1	Polbeth Community Woodland 1	Active Travel	Footway connection link path / ramps.	Between community woodland areas.
KN 1	Kirkton North 1	Active Travel	Footway connection between Greenway.	Edge of KN11 development site Proposal within Planning Brief.
KN 2	Kirkton North 2	Active Travel	Footway connection and bridge.	Connection Almond Valley Heritage Centre to Greenway.
RB 1	Rosebank 1	Active Travel	Footway connection and bridge.	Connecting Alba Campus to Killandean Greenway.

Map Ref	Location	Function	Opportunity Gap	Comment
MV1	Murieston Valley 1	Active Travel	Footway connection to spine path.	Create as part of Murieston Trail.
HH 1	Hoghill 1	Biodiversity improvement	Woodland Management and new access paths.	
HH 2	Hoghill 2	Biodiversity improvement	Replacement woodland and new connection to Oakbank Park	Previous woodland removal and Fly-tipping issues.
BP 1	Broompark 1	Biodiversity improvement	Community woodland an access	Former horticultural nursery unsuitable for development.
MC 1	Mid Calder 1	Biodiversity improvement	Community woodland an access.	And new bridge to connect Mid Calder to Almond Park.
LV 1	Linhouse Valley 1	Biodiversity improvement	Management of SSSI.	Through new fencing and grazing.
OB 1	Oakbank 1	Biodiversity improvement	Derelict former poultry sheds.	With existing shelter beds > additional planting.
LH 1	Lawheads 1	Biodiversity improvement	Derelict former piggery sheds.	
SM 1	Selm Muir 1	Recreation	Forestry Commission Plantation.	Car park, interpretation and path works via FCS in conjunction with Kirknewton Community Development Trust.
AN	Addiewell North	Recreation	Connection eastwards between Nature Reserve & right of way.	Subject to landowner agreement, via Scottish Wildlife Trust Management Plan for Addiewell North site.
AS	Addiewell South	Recreation	Connection to Local Biodiversity Site at Addiewell Pond as part of restored bing.	Subject to landowner agreement and utilising existing tunnel under rail line.
Bathgate / Armadale / Whitburn area - Map 2				
BW 1	Blackburn West 1	Biodiversity improvement	Community woodland and circular path network.	Subject to landowner agreement, vacant ground adjacent to settlement and quality lowland raised bog to west and river Almond to south.
BW 2	Blackburn West 2	Greenspace	Community woodland and circular path network along with corridor improvement with hedge planting and fence replacement	Vacant and derelict ground on west approach to settlement
RD 1	Redmill 1	Biodiversity improvement	Community woodland and circular path network.	Vacant ground adjacent to settlement and adjacent to River Almond to north and connection to Whitrigg Community Woodland.
IR	Inchcross Roundabout	Biodiversity improvement	Structural planting at strategic junction.	Habitat improvements of quality remnant ancient and birch woodland.
TH 1	Tippethill House 1	Active Travel	Strategic path connection.	Strategic off road cycle path connection between Armadale CDA and Whitburn, utilize / widen footpath on south section / east side of road.
HT 1	Hall Torbane Farm1	Biodiversity improvement	Structural planting on east side / entrance to CDA / connection A801	Associated with Bob Burn improvements to south.
HF 1	Heathfield 1	Biodiversity improvement	Structural shelter belt / hedge planting at strategic junction.	Number of field edge / roadside hedge opportunities (as woodland expansion constrained due to overhead pylons).
CS 1	Colinshiel 1	Active Travel	Connections to Colinshiel Local Biodiversity Site on west edge of CDA.	Completion of Armadale round-town-walk missing link on west side Colinshiel Wood LBS and improvement to field boundaries

Map Ref	Location	Function	Opportunity Gap	Comment
SN 1	Standhill North 1	Biodiversity improvement	Structural planting as part of CDA masterplan.	Improvement to Armadale round-town-walk and retention of open space alongside Barbauchlaw Burn.
SS 1	Standhill South 1	Recreation	Reinstatement of Armadale round-town-walk.	Improvements to missing link in Armadale round-town-walk.
GR 1	Greenrigg 1	Biodiversity improvement	Strategic road corridor verge and field edges.	Improvement to field edges and alongside B7066 verges associated with adjacent River Almond riparian corridor into Polkemmet Country Park.
BoW 1	Boghall West 1	Active Travel	Improvement to right of way.	Connection between Boghall and Bathgate.
LW 1	Limefield West 1	Recreation	Missing link in Bathgate round-town-walk.	Strategic footpath link connection improvements in discussion with landowner and CSGNT.
BK 1	Bughtknowes 1	Recreation	Missing link in Bathgate round-town-walk.	Strategic footpath link connection improvements in discussion with landowner and CSGNT.
BD 1	Belvedere 1	Recreation	Improvements to right of way.	Surface improvements connecting north west Bathgate to Dykeside right of way.
EB 1	East Bangour/ Burnhouse/ Law Wood Farms	Biodiversity improvement	Field edge / riparian corridor hedge and tree planting.	SAC / CSGNT to explore whole farm green network grant possibilities with land managers on visible sloping ridge.
OC 1	SRUC- Oatridge campus	Biodiversity improvement	Field edge / riparian corridor hedge and tree planting.	SAC / CSGNT to explore whole farm green network grant possibilities with land managers on visible sloping ridge. Consider possibilities on campus potentially using students / volunteer groups.
BC 1	Binny Craig	Biodiversity improvement	Pond restoration.	Consider scope for GN connections to west of Binny Craig along hanging side right of way.
OR1	Ochiltree Ridge	Biodiversity improvement	Prominent skyline ridge.	Scope for further infill tree and hedge planting on east – west quiet road.
TMT	Threemiletown	Biodiversity improvement	Field edge / riparian corridor hedge and tree planting.	SAC / CSGNT to explore with Hopetoun Estate woodland management plan scope for green network connections.
UC-b	Union Canal - Broxburn	Active Travel	Towpath upgrade.	Scottish Canals application in 13/14 to Sustrans Community links programme to upgrade towpath between Greendykes Road and A89.
UC-w	Union Canal - Winchburgh	Active Travel	Towpath upgrade.	Consider upgrade towpath in Winchburgh Cutting.
Linlithgow area - Map 1				
DD	Doomsdale	Greenspace	New sports playing pitch.	Explore scope surrounding green infrastructure improvements.
KS 1	Kettlestoun West	Greenspace	Playing field possible community facilities allotments and green infrastructure.	Support Linlithgow Community Development Trust to develop proposals. Scope for CSGNT to establish green infrastructure.
LL 1	Linlithgow Loch 1	Biodiversity improvement	Various habitat improvements in and around Loch.	Implementation of Linlithgow Loch Catchment Management Plan via SAC farm surveys and SEPA Restoration Fund.
LL 2	Linlithgow Loch 2	Recreation	Missing round-loch link footpath between Fiddlers Croft.	Advocated by Civic Trust. Consultation with landowners, Historic Scotland (on archaeology) and SNH.

Map Ref	Location	Function	Opportunity Gap	Comment
LP 1	Lady Park	Greenspace	Open space at west end of Loch in ownership of Trust.	Support Linlithgow Community Development Trust via CSGNT, to develop proposals for Orchard / new path.
BF 1	Bonnytoun Farm	Biodiversity improvement	Farm run-off tackled by off line ponds.	Implementation of Linlithgow Loch Catchment Management Plan recommendation via SAC.
UC- LW	Union Canal - Linlithgow	Biodiversity improvement	Wildlife survey and identification of access connections to town.	Scottish Waterways Trust (Development Officer) wildlife surveys and volunteer work on minor habitats, planting and access improvements.
BH	Bathgate Hills	Biodiversity improvement	Northern Bathgate Hills / Lowland farmlands.	Feasibility study for scope of landscape scale green network improvements via possible Heritage Lottery Fund bid.
SL	Shoemaker Lane	Active Travel	Upgrade existing right of way.	Following establishment of ownership resurface key urban right of way.
Broxburn area - Map 1				
UN	Uphall North	Recreation	Path connections between Uphall and Broxburn Community woodlands.	Way marking of informal route to north of Dargai Place / Carledubs Crescent to link 2 sites.
UCB	Union Canal Broxburn	Active Travel	Further tow path improvements	Work with Scottish Canals at Port Buchan as part of Broxburn Conservation Area improvements
BB"	Brox Burn Uphall	Riparian corridor	Scope for restoration work on riverbank woodland	Subject to identification of land owners and funds.
BG1	Bangour General	Active Travel	Missing link connection between Blackcraig ridge road and Drumcrosshall Rd (right of way).	Subject to agreement with Scottish Enterprise & 2 landowners and suitable cost effective route on hill alongside +/- through woodland on west boundary.
BB1	Brox Burn	Riparian corridor	Scope for riparian corridor improvements and de-channelizing section of burn.	Subject to agreement with Scottish Enterprise & 1 landowner.
East Calder Kirknewton and Wilkieston area - Map 2				
KN - SM1	Selm Muir (connection)	Active Travel	Construct off-road path / cycle track / fencing and drainage.	Following Kirknewton Community Development Trust discussion with local landowners via CSGNT.
OM	Ormiston Mains	Active Travel	Cycle path connection under A71 and along field edge reservation in agreement with landowner.	A71 road scheme set up cycle path route and fencing but never implemented surface / connections north of underpass
HS	Humbie Smallholdings	Riparian corridor	Scope for riparian corridor improvements.	SAC and CSGNT to survey and gauge landowner interest. Scope for SEPA Restoration grants
GB	Gogar Burn	Riparian corridor	Scope for riparian corridor improvements.	SAC and CSGNT to survey and gauge landowner interest. Scope for SEPA Restoration grants.

Map Ref	Location	Function	Opportunity Gap	Comment
Blackridge area - Map 3				
BB	Barbauchlaw Burn , Blackridge	Riparian corridor	Burnside walkway surface consolidation, drainage and open up corridor.	WLC / CSGNT seek funding for riverside path improvements.
BL	Bedlormie	Active Travel & Greenspace	Upgrading of paths / formalisation of existing desire-line path around and through community woodland.	With agreement of landowner and contribution to Sustrans Airdrie-Bathgate NCN75 route green network environmental improvements.
BR	Blackridge Station / Westrigg Bing	Active Travel	Connection and realignment NCN 75 cycle path to new Blackridge Station.	Re-route circular loop south of bing in conjunction with Sustrans and landowner for more direct connection to new station platform - south side.
Westfield and Torphichen area - Map 3				
TN	Torphichen North	Active Travel & Biodiversity improvement	Connection between village and River Avon Heritage Trail. Woodland Management of Brunton Strips.	CSGNT consultation with landowners and consider design / costs and funding.
GH	Gormyre Hills	Biodiversity improvement	Improvements to Proposed Local Biodiversity Site.	Subject to landowner consultation and SNH Survey and Site Management Brief.
BP	Broompark	Active Travel	Off Road path connection between Sunnyside right of way / former stopped up road on fast road (south side) to village.	Subject to landowner consultation and agreement
WV	Westfield Viaduct	Recreation	Connection between village and River Avon Heritage Trail.	Subject to landowner consultation, feasibility study for major restoration scheme for B Listed viaduct.
WE	Westfield East	Recreation	Connection between village and River Avon Heritage Trail.	Alternative connection between village downstream with new pedestrian bridge across River Avon.
Fauldhouse area - Map 3				
CR	Caledonian Road	Recreation	Scope for improvements to access routes.	Council owned informal park area.
BH	Braehead Quarry	Greenspace	Former quarry.	Scope for additional woodland planting.
FH	Falahill Quarry	Greenspace	Former quarry.	Scope for additional woodland planting.
CC	Cemetery connection	Active Travel	Council owned former rail line/ derelict area between cemeteries.	Subject to consultation with Golf course, short path connection to Ex-Knowes colliery site to avoid course.
EF	Eastfield	Active Travel & Greenspace	Former rehabilitated bing and associated vacant / derelict land.	Subject to landowner consultation, scope for woodland management, additional woodland planting and access improvements.
LR 1	Lanrigg Road	Active Travel	Missing link footpath connection.	Subject to landowner consultation at north end, to connect into new strategic road along south side of Polkemmet rehabilitation scheme boundary.
LR 2	Longridge Road	Active Travel	Missing link footpath connection.	Achieved through planning condition on housing allocation (HLr6).
HH	Hole House Farm	Active Travel	Missing link footpath connection.	Subject to agreement with landowner link between Fauldhouse strategic route and B7015 / Stoneheap Wood / Breich Water Trail.
BE 1	Bents West 1	Active Travel	Improvements to existing connection	Subject to agreement with landowner

Map Ref	Location	Function	Opportunity Gap	Comment
BE 2	Bents West 2	Active Travel	Improvements to existing connection	Subject to agreement with landowner
BC 1	Breich Central 1	Greenspace	Vacant council ground on entrance to village.	CSGNT consultation with village and consider design / costs and funding.
BC 2	Breich Central 2	Greenspace	Existing woodland of approach to village.	Requires woodland management and new fence.
BC 3	Breich Central 3	Active Travel & Greenspace	Continuation of path network between Woodmuir right of way and local park with burn side improvements.	Path connection to east into new local park south of Primary School achieved through planning condition on allocated housing site (HBc6).
WC	Woodmuir Colliery	Greenspace	Large extent of vacant and derelict land outwith settlement.	Subject to landowner consultation, scope for extensive woodland planting and access improvements.
LL	Loganlea	Greenspace	Open space, drainage & planting improvements.	Council owned land
SB	Skolie Burn corridor	Biodiversity improvement	Tackle issues raised in SNH Site Condition Monitoring report.	Part Council owned and requires consultation with adjacent landowner. Maintenance works on fencing and removal of fly-tipping.
SB 1	Stoneyburn 1	Active Travel	Path improvement along major "desire-line" between villages / Haggarty's Bridge.	Partly achieved through planning condition on adjacent housing allocation (HSb6).



9 Local Biodiversity Sites

9.1 A related aspect of green networks is Local Biodiversity Sites (LBS).

9.2 The Wildlife Information Centre (TWIC) co-ordinate and manage the Local Biodiversity Sites system in West Lothian on behalf of the council. Specifically, TWIC undertake:

1. Co-ordination of the LBS Steering Group of ecological experts to develop work programmes, site selection and review and to provide the secretariat for one meeting in the year.
2. Management of LBS data – maintaining list of LBS sites, updating records as new information becomes available.
3. Maintenance and provision of GIS layer of LBS sites.
4. Assessing sites as required and notifying owners when required.
5. Once sites are confirmed as LBS, producing sites statements and notifying landowners.

9.3 The existing West Lothian Local Plan was adopted in 2009 with the commitment to review the 29 “Local Wildlife Sites” (now termed potential “Local Biodiversity Sites” (pLBS)) listed in the local plan. The pLBS Steering Group is chaired by the council and administered by TWIC and consists of the council’s Planning Services & Countryside Services, Scottish Natural Heritage, Scottish Wildlife Trust and several local volunteer biodiversity experts.

9.4 It is estimated there are approximately 130 potential Local Biodiversity Sites across West Lothian, but not all have had an ecological survey that would allow assessment under the LBS criteria.

Process

The criteria are as follows:

- Species status
- Plant diversity
- Habitat importance
- Connectivity
- Biodiversity Features
- Social factors

9.5 TWIC gather all known data on the site related to the above criteria, including existing species and habitat data along with detailed maps and aerial photos. A draft LBS Assessment proforma is produced by TWIC for consideration of the LBS Steering Group. Each criteria receives a score and this leads to an “Overall Site Assessment Score”. To merit LBS status, a site must pass a score of 12.

9.6 The following table lists all known potential LBS, their location, grid reference and area. It should be noted that a large number are riparian corridors straddling river banks that, due to their undeveloped nature, retain some of the best biodiversity in West Lothian.

Potential Local Biodiversity Sites (October 2015)

Site name	Locality	Grid reference (site centroid)	Total area(ha)
Addiewell Ponds	South of Addiewell South Bing	NT003626	7
Almond Pools	West of Livingston	NT023663	19
Almondell Country Park	North of East Calder	NT089689	50
Avontoun Marsh & Pace Hill	West of Linlithgow	NS980765	30
Balvormie Meadow	Beecraigs Country Park	NS997738	-
Bangour Reservoir	Bathgate Hills	NT012719	
Barbauchlaw Burn	Armadale	NS938727	2.3
Barbauchlaw Glen	North Armadale	NS921685	43
Beecraigs Reservoir	SE of Linlithgow	NT010744	10
Bellsquarry Wood	SW Livingston	NT050652	12
Binny Craig	Bathgate Hills	NT043735	
Bog Burn - Cobbinshaw to West Torphin	SW West Calder	NT026591 - NT034609	n/a
Bog Burn - West Torphin to East Broomhill	SE West Calder	NT034610 - NT044623	n/a
Bogburn Flood Lagoons	Bathgate	NS977677	34
Boghead Roundabout Road Verge	Bathgate	NS965667	n/a
Bowden Hill	Bathgate Hills	NS976744	34
Breich Water - Breich	Breich Valley	NS961614	n/a
Breich Water - East Badallan to Fauldhouse	Breich Valley	NS932596	n/a
Breich Water - Easter Breich to River Almond	Breich Valley	NS016656	n/a
Breich Water - Fauldhouse to Breich Crossroad	Breich Valley	NS947604	n/a
Breich Water - North Addiewell Bing to Easter Breich	Breich Valley	NT016644	n/a
Breich Water - Stoneyburn	Breich Valley	NS979623	n/a
Briestonhill Moss	North Polbeth	NT022645	4
Burn Craigs Wood (and Bailes Muir)	South Newton	NT093767	14
Camilty Water	South Livingston	NT062613	n/a
Canal Wood	North of Winchburgh	NT079761	23
Caputhall Community Woodland	NE of Boghall	NT005691	21
Caputhall Moss and Woodland	NW of Deans, Livingston	NT011694	9
Cobbinshaw Main Reservoir	South of West Calder	NT015571	10.1
Cockleroy Hill	Bathgate Hills	NS987747	19
Cockleroy Reservoir	Bathgate Hills	NS995749	28.3
Cockleroy Wood	Bathgate Hills	NS984748	2.3
Colinshiel Wood	NE Armadale	NS950690	5
Craigmailing Quarry Pond	Bathgate Hills	NS993721	3
Craigton Quarry	East of Philpstoun	NT075769	13
Crosswood Burn	SE West Calder / Pentlands	NT058592	n/a

Site name	Locality	Grid reference (site centroid)	Total area(ha)
Crosswood Reservoir	SE West Calder / Pentlands	NT060575	5.1
Drumbeg Moss	NW of Blackridge	NS870683	62
Drumshoreland	West of Pumpherston	NT070702	55
Drumtassie Old Workings	North of Blackridge	NS892694	49
East Blawhorn	North of Blackridge	NS892687	
East Cairn Hill	Pentland Hills	NT121596	1.9
East Kirkton Quarry	Boghall / East Bathgate	NS990691	2.4
East Rhodens Bog	North of Blackridge	NS912699	20
East Shore Wood & Shore	Hopetoun / Forth	NT106787	10.6
Easter Inch Moss & Seafeld Law	West of Livingston	NT003664	146
Easter Redburn Moss	North West of Blackridge	NS888675	
Faucheldean Bing	South of Winchburgh	NT084741	16
Faucheldean Road Verge	South of Winchburgh	NT083743	n/a
Fauldhouse Ponds	Benhar / NW Fauldhouse	NS921607	14.1
Forthview Cottage Road Verge	B8084 / SE Westfield	NS951708	n/a
Foulshiels Bing	North Stoneyburn	NS977635	38
Galabraes Quarry Pond	NE Bathgate	NS986701	12.6
Glendevon Pond	West Winchburgh	NT077750	1.1
Greendykes Bing	NE Broxburn	NT087736	48
Half Loaf Pond	SW Bathgate	NS960668	3
Harperrig Moss	Pentlands	NT114610	156.3
Harperrig Reservoir	Pentlands	NT092610	112
Harwood Water - Baad's Mill to Hartwood	SW West Calder	NT009068	n/a
Harwood Water - Hartwood to Hermand Quarry	South of West Calder	NT024624	n/a
Harwood Water - Woodmuir Plantation to Baad's Mill	SW West Calder	NS994591	n/a
Hillhouse		NS915076	67
Hopetoun House Grounds	Hopetoun	NT088789	66
Killandean Burn	SW Livingston	NT034663	
Kirknewton Estate	Kirknewton	NT118664	65
Leyden Road Verge	SW Kirknewton	NT099656	n/a
Limefield Glen & Harwood Water to Gavieside Bridge	North Polbeth	NT032649	n/a
Linhouse Water - Oakbank to Calder Wood	Mid Calder	NT076655	n/a
Linhouse Water - Overwilliamston to Linn Caldron	South Livingston	NT061627	n/a
Little Boghead	Bathgate	NS965680	
Lochcote Reservoir and Craigend Hill	Bathgate Hills	NS978737	40
Longridge Moss	SE Longridge	NS956620	35

Site name	Locality	Grid reference (site centroid)	Total area(ha)
Lower Craigmillen Road Verge	Bathgate Hills	NS992722	n/a
Mains Burn	Linlithgow	NT033739	1.1
Mid Hartwood Road Verge	West Calder	NT018603	n/a
Middlemuir	Pentland Hills	NT065555	3.3
Middleton Pond	south Uphall	NT062713	3
Mill Road	Blackburn	NS980655	
Mosshouse Farm Moss	West Blackridge	NS882669	2.8
Mounthooly Road Verge	NW Winchburgh	NT069760	n/a
Murieston Water - Annetscross to Murieston Castle	SW Livingston	NT049631	n/a
Murieston Water - Livingston South to Manse Covert	Livingston	NT066656	n/a
Murieston Water - Murieston	Livingston	NT058645	n/a
Nether Longford Moss	SW Addiewell	NS975611	130
North Addiewell Bing & associated Breich Water	NW West Calder	NT001630	49
North Wood, Bellsquarry	SW Livingston	NT045644	5
Ochiltree Fort Hills	Bathgate Hills	NT030741	5
Old Philpstoun Bing	East of Philpstoun	NT054770	9
Parkhead East and Hermand Quarry	East of West Calder	NT028635	24
Polkemmet and River Almond to Greenrigg	West of Whitburn	NS922646	69
Pumpherstoun Pond	SE Pumpherstoun	NT071692	1
Raiziehill Moss	West of Blackridge	NS874667	35
Riccarton Hills	Bathgate Hills	NT014736	16.2
River Almond - Almondvale	Livingston	NT054669	10
River Almond - Blackburn	West Livingston	NS981654	n/a
River Almond - Blackburn to Seafeld	West Livingston	NT008652	n/a
River Almond - East Calder Sewage Treatment Works	West Livingston	NT078682	n/a
River Almond - Livingston Village	Livingston	NT035668	n/a
River Almond - Mid Calder	East Livingston	NT068675	n/a
River Almond - Polkemmet to Whitburn	North Whitburn	NS938655	n/a
River Almond - Whitburn	North Whitburn	NS960655	n/a
River Avon - Avon Viaduct to Wallace's Cave	SW Linlithgow	NS917725 - 977765	n/a
River Avon - Ballenbreich	SW Linlithgow	NS930725	n/a
River Avon - Carriber Glen to Linlithgow Bridge	SW Linlithgow	NS974764	n/a
River Avon - Linlithgow Bridge	SW Linlithgow	NS982776	n/a
River Avon - Torphichen Bridge to Carriber Glen	North Torphichen	NS955745	22
River Avon - Wester Strath to Strath Mill	NW Westfield	NS917725 - 977765	n/a
Silvermines Quarry	Bathgate Hills	NS990714	8
Skivo Quarry	South Livingston	NT051640	3
Swinabbey Moss	NW Blackburn	NS970658	39.7

Site name	Locality	Grid reference (site centroid)	Total area(ha)
The Desert & Wallace's Cave	NE Westfield	NS950731	40
The Knuckles, Gormyre Hill	by Torphichen in Bathgate Hills	NS975727	11
Union Canal - Avon Aqueduct to Linlithgow	West of Linlithgow	NT978760	18
Union Canal - Broxburn to Linn's Mill	SE Broxburn	NT086712	n/a
Union Canal - Linlithgow	Linlithgow	NT000767	n/a
Union Canal - Linlithgow to Park Farm	East of Linlithgow	NT021772	n/a
Union Canal - Park Farm to Philpstoun	East of Linlithgow	NT040770	6
Union Canal - Philpstoun east to Craigton	West of Winchburgh	NT062766	19
Union Canal - Winchburgh to Broxburn	NE Broxburn	NT095738	19
West Blawhorn	NW Blackridge		
	NS878679		
West Torphin Wood	South of West Calder	NT025606	14
Westcraigs Moss	North Blackridge	NS898683	
Wester Shore Wood	Hopetoun	NT067793	56
Westfield Pond, Murieston	SW Livingston	NT047638	3
Whitrigg Bing	East Whitburn	NS969644	0.1
Winchburgh Clay Quarry Pond (West)	Winchburgh	NT089753	
Witch Craig	Bathgate Hills	NS989727	18






9.7 While it was the intention to show these pLBS in the local development plan, their scale, lack of environmental information and consequently unconfirmed nature means that they are now outlined in the Supplementary Guidance. They will also require discussion with landowners. Site Management Briefs will ideally be prepared for each site, potentially with the assistance of Scottish Natural Heritage, which will identify key management actions and potential sources of grant funding.

9.8 The map on page 26 is an extract from the West Lothian Council Supplementary Guidance on '*Planning for Nature - Development Management & Wildlife (2015)*'. See Figure 2 / page 6: "Local Natural Heritage Designations in West Lothian" that indicatively shows proposed LBS.






Contact Planning Services for the full list of pLBS and more details.

Key:

Designated Sites

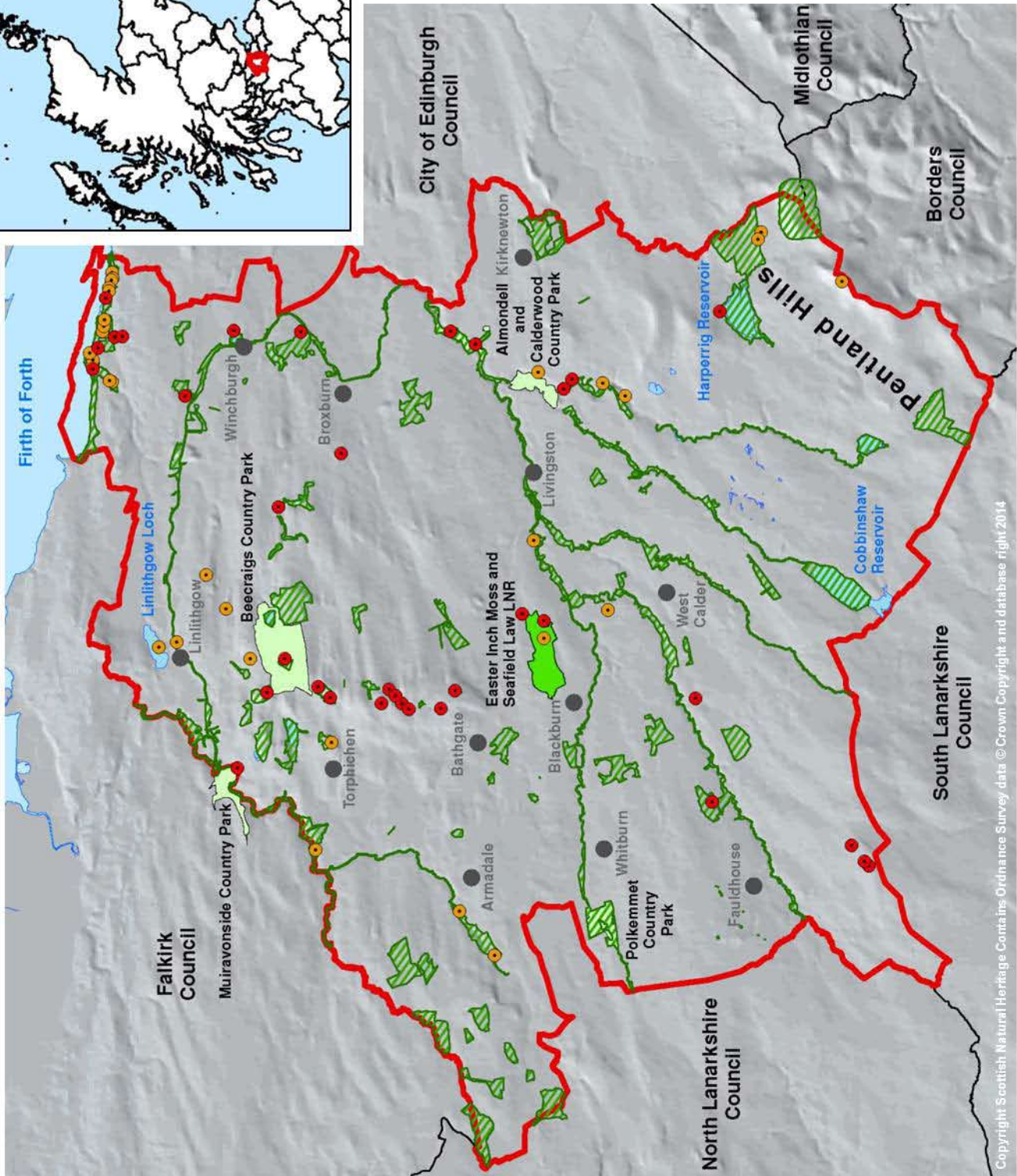
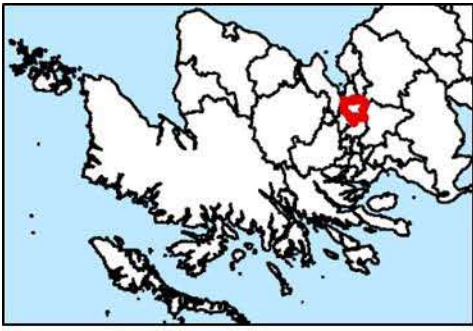
-  Proposed Local Geodiversity Site of Great Value
-  Proposed Local Geodiversity Site of Some Value
-  Proposed Local Biodiversity Site
-  Local Nature Reserve (LNR)
-  Country Park

Other Geographical Features

-  Open Water
-  West Lothian Council Boundary
-  Other Council Boundary
-  High Water Mark
-  Settlement

Further information on Local Geodiversity Sites can be found at: <http://nora.nerc.ac.uk/7429/1/CR06008N.pdf>

For exact site boundaries please contact: West Lothian Council (Planning Services)





10 Local Geodiversity Sites

10.1 A final component in the green network of West Lothian is Local Geodiversity Sites (WLGS).

10.2 There were six Regionally Important Geological & Geomorphological sites (RIGS) identified in the West Lothian Local Plan (2009):

- ▶ Almondell, East Calder
- ▶ Calder Wood, Mid Calder
- ▶ Petershill, Bathgate
- ▶ Binny Craig, Ecclesmachan
- ▶ East Kirkton Quarry, Boghall
- ▶ Witchcraigs, Bathgate Hills

10.3 All, but the last site, are within council ownership.

10.4 These RIGS are now termed “Geodiversity Sites” and have been reviewed with the help of British Geological Survey, Lothian & Borders Geo-conservation Group and Almond Valley Heritage Trust.

10.5 A comprehensive audit of [West Lothian’s geodiversity potential](#) was undertaken by the British Geological Survey in 2006/7.

10.6 From the initial long list of several hundred potential geodiversity sites, these have been assessed and around 50 are considered to represent West Lothian’s best geological resource. More detailed site boundaries and accompanying citations covering their specific geological merit, socio-economic value and recommendations for retention and interpretation are under preparation with the aid of the British Geological Survey.

Geodiversity site review

10.7 British Geological Survey undertook a site review of 122 geodiversity sites. These were separated into four classes for GIS display based on the values assigned to the various criteria in the Geological Scientific Merit fields in the GeoDiversity database. The table below lists the ranking criteria applied to these fields in the BGS GeoDiversity database.

Ranking criteria for BGS geodiversity audits

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. 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)?	10	WORLD
		8	UK
		6	REGIONAL
		4	LOCAL (LGAP)
		2	EDUCATIONAL / REFERENCE
		0	NOT PRESENT / RELEVANT
QUALITY	The extent to which a feature is typical or demonstrates 'text-book' features. World class specimen or cruddy example?	10	WORLD
		8	UK
		6	REGIONAL
		4	LOCAL (LGAP)
		2	EDUCATIONAL / REFERENCE
		0	NOT PRESENT / RELEVANT
LITERATURE & DATA	The detail of written literature or material collections relating to the feature.	10	DETAILED STUDIES
		8	INTERPRETATIONS
		6	DESCRIPTIONS
		4	COLLECTED MATERIAL
		2	REFERENCED
		0	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. Is it visited by UK-wide groups or local schools only?	10	UK EDUCATIONAL
		8	REGIONAL
		6	LGAP AREA SCHOOLS / HE
		4	LOCAL (WALKING DIST.) GROUPS
		2	LITTLE VALUE
		0	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. Is the feature of the site used daily as common ground or rarely visited by the local community?	10	DAILY LOCAL USE
		8	WEEKLY USE
		6	MONTHLY USE
		4	YEARLY USE
		2	INFREQUENT USE
		0	NO LOCAL USE

10.8 The four classes applied are:

- 3: Geological features of great value, worthy of interpretation & conservation – 34 sites
- 2: Geological features of some value, may be worthy of interpretation & conservation – 33 sites
- 1: Geological features of limited value – 34 sites
- 0: Geological features destroyed, no longer visible, or of no value – 21 sites

10.9 Although the Geological Scientific Merit (GSM) scores were taken into account when applying these four classes to the sites, other factors such as the number of other natural heritage designations were also considered. Also the WLGS list includes a few sites that were not visited and thus not scored for GSM.

10.10 The 67 sites that are class 3 and class 2 are considered to be representative of particular geodiversity features in the context of West Lothian and classed here as West Lothian Geodiversity Sites (WLGS). For numbering and description purposes, a number of these localities have been considered together to give a total of 51 potential WLGSs (see table below)

10.11 Of these 51 WLGS sites, four have statutory protection as geological or mixed geological and biological SSSIs (4–East Kirkton, 25–Skolie Burn, 26–Petershill Quarries and 27–Rifle Ranges Quarries). The remaining 47 WLGSs form a large group of non-statutory, but significant geodiversity sites. Five of these 47 sites are existing RIGS and L&B GEO CON have a further 16 localities on a ‘proposed’ WLGS list for possible future designation.

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

WLGS No.	Site name	Group	Formation	Geol Theme	WLGS class	Other Designation	Site Potential / Issues / Management
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 SWTR
4	East Kirkton Quarry	Strathclyde	West Lothian Oil-shale	Pal Sed	3	G-SSSI GCR RIGS AGLV	Potential for on-site interpretation board and/or part of a Bathgate Hills geotrail. Rubbish dumping, burning, and overgrowing
5	Five Sisters	Strathclyde	West Lothian Oil-shale	MnHe	2	SAM	Potential for on-site interpretation, oil-shale mining heritage

WL GS No.	Site name	Group	Formation	Geol Theme	WLGS class	Other Designation	Site Potential / Issues / Management
6	Seafield Law	Strathclyde	West Lothian Oil-shale	MnHe	3	P-RIGS	RIGS, potential for on-site interpretation – artificial Crag and Tail, interpretation leaflet
7	Greendykes	Strathclyde	West Lothian Oil-shale	MnHe	3	SAM P-RIGS	RIGS, interpretation leaflet, oil-shale mining heritage
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 AGLV	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)	Potential for on-site interpretation Soil dumping
14	Society East Shore	Strathclyde SSDPV	West Lothian Oil-shale SSDLO	Sed LthSt Ign GDep	2	AGLV (LWS) (HGDL) (AWI)	Potential for Society East Shore to Abercorn Point 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

WL GS No.	Site name	Group	Formation	Geol Theme	WLGS class	Other Designation	Site Potential / Issues / Management
16	Society Shore	Strathclyde	West Lothian Oil-shale	LthSt Pal	2	AGLV (HGDL) (AWI) (LWS)	Potential for Society East Shore to Abercorn Point geotrail, interpretation leaflet and/or on- site interpretation board
17	Hopetoun Shore	Strathclyde MCPAS	West Lothian Oil-shale LAFAS	Sed LthSt Struc Ign, Pal	3	AGLV P-RIGS (HGDL) (AWI) (LWS)	Potential for Society East Shore to Abercorn Point geotrail, interpretation leaflet and/or on- site interpretation board.
18	Abercorn Point	Strathclyde Quaternary	West Lothian Oil-shale	Sed LthSt Struc PGDep	3	AGLV (M-SSSI) (HGDL) (LWS)	Potential for Society East Shore to Abercorn Point 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
22	Union Canal Museum	Bathgate	Bathgate Hills Volcanic	BtHe	2	SAM, LWS	Potential for museum exhibit, geology of Union Canal
23	Levenseat working quarry	Clackmannan	Passage	Sed LthSt	3	P-RIGS	Potential for excellent sections in Passage Formation once quarry ceases operation

WL GS No.	Site name	Group	Formation	Geol Theme	WLGS class	Other Designation	Site Potential / Issues / Management
24	Levenseat quarries & mines	Clackmannan	Passage	LthSt MnHe	3		Potential for interpretation leaflet on limestone mines, 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	3	P-RIGS HPWG AGLV	RIGS, potential interpretation leaflet, vegetation overgrowth and flooding
30	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, AWI, SNWI, AGLV	RIGS, potential interpretation leaflet and/or geotrail
32	Wallace's Arch	Clackmannan	Passage	GeoM	2	P-RIGS, LWS, AWI, 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

WL GS No.	Site name	Group	Formation	Geol Theme	WLGS class	Other Designation	Site Potential / Issues / Management
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
36	Auchinoon Quarry	MCPAS Strathclyde	LAFAS Gullane	Ign Meta LthSt	3	P-RIGS AGLV	RIGS, potential interpretation leaflet and/or on- site interpretation board, good viewpoint for Pentland Hills
37	Linhouse Water - Glasgow Viaduct 2	MCPAS	LAFAS	Ign	2	AGLV, AWI, SNWI, LWS	Potential for Linhouse Water geotrail
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
39	Witch Craig Viewpoint	LCTS Bathgate Quaternary	MVSC Bathgate Hills Volcanic	Ign GeoM	3	AGLV RIGS WS AWI SNWI (CP)	Existing stone shelter with 43 rocks from the Midland Valley. Potential to include on Bathgate Hills geotrail
40	Cockleroy	LCTS Bathgate Quaternary	MVSC Bathgate Hills Volcanic	Ign GeoM	3	AGLV P-RIGS LWS AWI SNWI SAM	RIGS. Potential to include on Bathgate Hills geotrail, on- site interpretation/ interpretation leaflet. Good viewpoint across the whole of the Midland Valley
41	Beecraigs Quarry	LCTS	MVSC	Ign	3	AGLV CP P-RIGS (LWS)	RIGS, potential to include on Bathgate Hills geotrail, interpretation leaflet

WL GS No.	Site name	Group	Formation	Geol Theme	WLGS class	Other Designation	Site Potential / Issues / Management
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.
44	Craigton (Hill) Quarry	LCTS	MVSC	Ign Struc	3	(HGDL) (LWS) (AWI) (SAM) (SNWI)	Best example of quartzdolerite sill, but access problems
45	Linhouse Water- Calderwood 1	LCTS	MVSC	Ign Struc LthSt	2	AGLV LWS B-SSSI AWI SNWI	Potential for interpretation leaflet and/or on- site interpretation board
46	Tophichen Hill	LCTS Quaternary	MVSC	GeoM Ign	2	SAM AGLV	Potential to include on Bathgate Hills geotrail
47	Linlithgow Loch	Quaternary		GeoM BtHe	2	B-SSSI AGLV SAM	Existing on-site board at the west end of the loch could be up- dated to include some info in the landforms and glaciofluvial deposits
48	Tailend Moss	Quaternary		Soil	3	B-SSSI P-RIGS WS RBI SWTR	RIGS, potential for interpretation leaflet and/or onsite interpretation board
49	Longridge Moss	Quaternary		Soil	3	B-SSSI P-RIGS WS RBI SWTR	RIGS, potential for interpretation leaflet and/or onsite interpretation board
50	Easter Inch Moss	Quaternary		Soil	2	WS GCNS	Potential to combine with proposed RIGS at Seafield Law (see 6 above). Interpretation leaflet and/or onsite interpretation board
51	Calder Wood	Quaternary		PGDep ActPr	3	RIGS, AGLV, LWS, B-SSSI, AWI, SNWI	Potential for on-site interpretation

Explanation of abbreviations.

Abbrev.	Explanation
SSDPV	Southern Scotland Dinantian Plugs and Vents Suite
SSDLO	Southern Scotland Dinantian Plugs and Vents Suite, Lothian Subsuite
MCPAS	Midland Valley Carboniferous to Early Permian Basic Alkaline Sill Suite
LAFAS	Dinantian to Westphalian Sills of Lothians and Fife
MVSC	Midland Valley sill complex
LCTS	North Britain Late Carboniferous Tholeiitic Suite
LthSt	Lithostratigraphy
Sed	Sedimentology
Struc	Structural geology
Ign	Igneous geology
Pal	Palaeontology
Meta	Metamorphic geology
Min	Minerals
GDep	Glacial deposits
PGDep	Post-glacial deposits
GeoM	Geomorphology
ActPr	Active processes
MnHe	Mining Heritage
BtHe	Built Heritage
(CP)	Designations in brackets indicate that geodiversity site is CP
AGLV	Area of Great Landscape Value
AWI	Ancient Woodland Inventory
B-SSSI	Site of Special Scientific Interest (Biological)
CP	Country Park
GCNS	Great Crested Newt Site (Scotland)
GCR	Geological Conservation Review Site
G-SSSI	Site of Special Scientific Interest (Geological)
LWS	Listed Wildlife Site
HGDL	Historic Garden & Designed Landscape
HPWG	High Priority Wildflower Grasslands
M-SSSI	Site of Special Scientific Interest (Mixed geological and biological)

Abbrev.	Explanation
PHRP	Pentland Hills Regional Park
P-RIGS	Proposed Regionally Important Geological and Geomorphological Site
RBI	Raised Bog Inventory
RIGS	Regionally Important Geological and Geomorphological Site
SAM	Scheduled Ancient Monument
SNWII	Semi-Natural Woodland Inventory
SWTR	Scottish Wildlife Trust Reserve
WS	Wildlife Site (1993)

10.12 The map on page 26 is an extract from the West Lothian Council Supplementary Guidance on *'Planning for Nature - Development Management & Wildlife (2015)'*. See Figure 2 / page 6: "Local Natural Heritage Designations in West Lothian" that indicatively shows proposed Local Geodiversity Sites of "Great Value" (in red) and a secondary batch of pWLGS of "Some Value" (in orange).

10.13 Contact Planning Services for the full list of both pWLGS and more details of the boundaries (where known at this stage) and citations (where produced).