



(Draft) interim supplementary guidance

WIND ENERGY DEVELOPMENT

SPATIAL FRAMEWORK AND ASSESSMENT CRITERIA FOR ON-SHORE WIND ENERGY DEVELOPMENT IN WEST LOTHIAN

April 2015



**INVESTORS
IN PEOPLE**

westlothian.gov.uk



**West Lothian
Council**

(Draft) INTERIM SUPPLEMENTARY GUIDANCE: WIND ENERGY DEVELOPMENT

SPATIAL FRAMEWORK & ASSESSMENT CRITERIA FOR ON-SHORE WIND ENERGY DEVELOPMENT IN WEST LoTHIAN

1.0	Introduction & regulatory context	4
2.0	Planning policy context	7
3.0	Spatial framework	9
4.0	Landscape character - Guidance & constraints	17
5.0	Policy considerations - Assessment checklist	61
	<i>POLICY CONSIDERATIONS</i>	
	▪ <i>Habitat, protected species, nature conservation, forests, woodlands</i>	
	▪ <i>Peat, soils & water</i>	
	▪ <i>Historic environment</i>	
	▪ <i>Communities, tourism, recreation, traffic</i>	
	▪ <i>Aviation, defence & telecommunications safeguarding</i>	
	<i>SUPPORTING INFORMATION & SITE PLANNING</i>	
	<i>ASSESSMENT CHECKLIST</i>	
6.0	Small-scale turbines – Siting and design checklist	77
	<i>Glossary</i>	
	<i>References</i>	
	<i>Contacts</i>	
	<i>APPENDICES</i>	
A	<i>Interim planning guidance note: Assessment of wind turbine noise</i>	84
B	<i>Community energy benefits</i>	84

LIST OF FIGURES

FIGURE 1: SUMMARY FLOWCHART OF PLANNING PROCESS FOR WIND ENERGY APPLICATIONS	6
FIGURE 2: SCALE AND EIA THRESHOLDS FOR ASSESSING WIND ENERGY DEVELOPMENT	7
FIGURE 3: MAIN PERMISSIONS AND LICENCES REQUIRED FOR WIND ENERGY DEVELOPMENT	7
FIGURE 4: SPATIAL FRAMEWORK GROUP 1: Areas where wind farms will not be acceptable	11
FIGURE 5: SPATIAL FRAMEWORK GROUP 2a: Areas of significant protection - National and international designations	13
FIGURE 6: SPATIAL FRAMEWORK GROUP 2b: Areas of significant protection - Other nationally important mapped environmental interests	14
FIGURE 7: SPATIAL FRAMEWORK GROUP 2c: Areas of significant protection - Community separation for consideration of visual impact	16
FIGURE 8: LANDSCAPE CHARACTER AREAS AND TYPES	18
FIGURE 9: LANDSCAPE SENSITIVITY TO WIND ENERGY DEVELOPMENT	19
FIGURE 10: AREAS OF GREAT LANDSCAPE VALUE	20
FIGURE 11: CANDIDATE SPECIAL LANDSCAPE AREAS	21
FIGURE 12: SENSITIVITY OF LANDMARK LANDSCAPE FEATURES & IMPORTANT VIEWPOINTS	22
FIGURE 13: PRINCIPAL SENSITIVE ROUTES	23
FIGURE 14: LANDSCAPE UNITS WITH POTENTIAL FOR WIND ENERGY DEVELOPMENT	24
FIGURE 15: POTENTIAL AREAS OF SEARCH BASED ON LANDSCAPE CAPACITY STUDY	25
MAPS: LANDSCAPE CHARACTER UNITS 1 – 23	26
FIGURE 16: LIST OF SPECIES TO BE CONSIDERED IN RELATION TO WIND ENERGY DEVELOPMENT	63
FIGURE 17: EDINBURGH AIRPORT – AIRSPACE DIAGRAM	68
FIGURE 18: GENERAL GUIDANCE ON TURBINE SIZES & LANDSCAPE SCALE	77



(Draft) Interim Supplementary Guidance: **WIND ENERGY DEVELOPMENT**

SPATIAL FRAMEWORK AND ASSESSMENT CRITERIA FOR ON-SHORE WIND ENERGY DEVELOPMENT IN WEST LoTHIAN

1.0 Introduction and regulatory context

Need for and scope of the guidance

This *Interim Supplementary Guidance (SG)* has been prepared under the provisions of Section 22 of the Town and Country Planning (Scotland) Act 1997, as amended by the *Planning Etc. (Scotland) Act (2006)*, and Regulation 27 of the *Town and Country Planning (Development Planning) (Scotland) Regulations (2008)* on supplementary guidance.

This interim Supplementary Guidance (SG) provides the planning policy context for wind energy development; a spatial framework and spatial guidance; landscape character guidance; specific guidance on single and small wind turbine development; policy framework considerations; technical feasibility and site development information; guidance on how the cumulative impacts of wind energy will be assessed; and information on community energy and its benefits.

It is intended in the longer term that the guidance will form part of the development plan for West Lothian which consists of the Strategic Development Plan for Edinburgh and Southeast Scotland (SDP) and the West Lothian Local Plan (WLLP). The WLLP is in the process of being replaced by the West Lothian Local Development Plan.

How to use this document

Figure 1: *Summary flowchart of planning process for wind energy applications* sets out how this guidance will be used to assess wind energy developments relative to the scale of the proposal. However, assessment may vary in specific cases depending on the nature, scale and location of the development. For the purposes of this supplementary guidance **Single and small wind turbine developments** is defined as a maximum of two turbines having an upper limit of 35m to blade tip.

Wind farm developments are defined as more than two turbines above 35m to blade tip.

The West Lothian context

West Lothian is an area of interest to on-shore wind developers. Its location in Central Scotland reduces grid transmission costs and the few international and national heritage designations and absence of statutory green belt provides for a less constrained area of interest. There continues to be interest for wind energy development in the higher ground in West Lothian - and more recently small wind energy proposals where higher wind speeds are found.

Decisions from Scottish Government Ministers on two major wind farm applications in the vicinity of the Pentland Hills – Fauch Hill Wind Farm and Harburnhead Wind Farm – have been released by Scottish Government with the former being refused and the latter granted consent. Both these decisions influence the assessment of landscape and visual impacts of wind energy within West Lothian.

To inform policy, the council has recently undertaken a review of its local landscape designations and one of the conclusions arising from this work was the high level of visibility of landscape in West Lothian due to the major road and rail transport arteries which traverse the area. This high level of visibility is most evident in the Almond Valley which is set between the Bathgate Hills to the north and the Pentland Hills to the south-east, whilst also being one of the main flight paths for Edinburgh Airport.

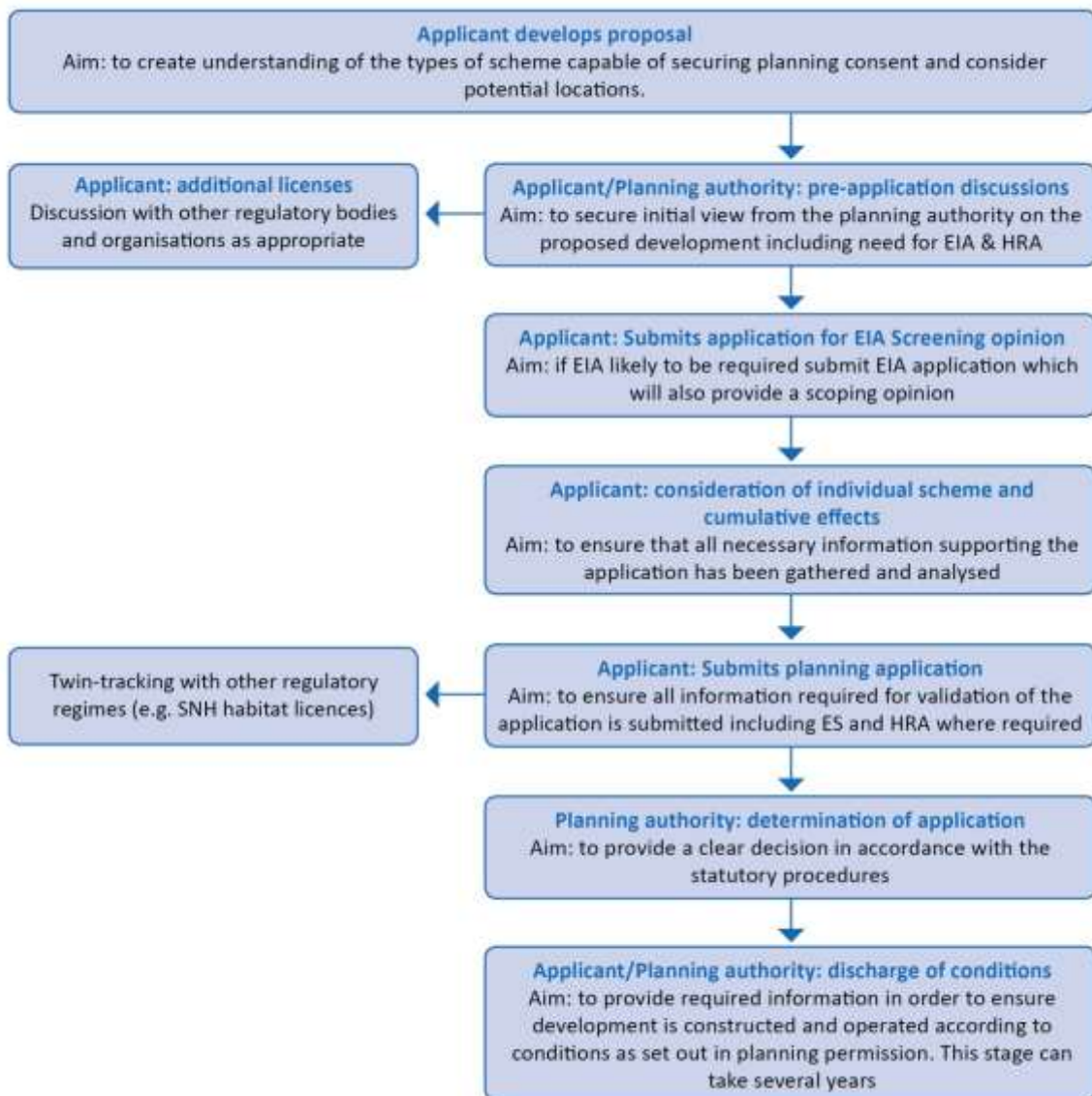
Planning application process

Wind farm developments with a capacity below 50 megawatts (MW) are determined under planning legislation. Larger wind farms of 50MW or greater are determined under Section 36 of the Electricity Act 1989, in which case the council as planning authority is a statutory consultee. The guidance in this Interim SG applies to both categories of development: above and below 50MW.

Further information on the operation of the Section 36 process can be found at:

<http://www.scotland.gov.uk/Topics/Business-Industry/Energy/Infrastructure/Energy-Consents/>

FIGURE 1: SUMMARY FLOWCHART OF PLANNING PROCESS FOR WIND ENERGY APPLICATIONS

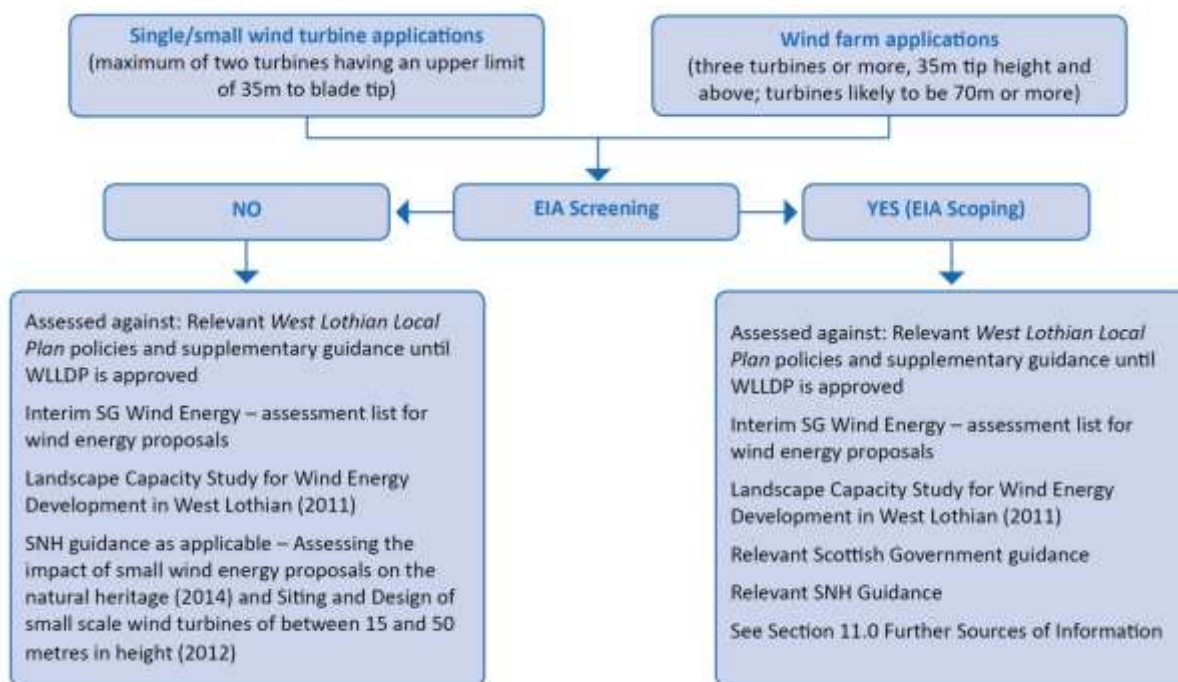


Environmental Impact Assessment & Habitats Regulation Appraisal

The council has a statutory obligation to consider whether Environmental Impact Assessment is required for any wind energy proposal with regard to the significance of potential environmental impacts. Consideration must also be given to whether the proposal could have an impact on 'sensitive areas' as described in PAN 1/2013: *Environmental Impact Assessment* and Circular 3: 2011 *The Environmental Impact Assessment (Scotland) Regulations 2011*.

Figure 2 sets out the main policy sources for addressing wind energy developments based on scale and EIA thresholds. This is a simplified diagram giving the signposts through complex assessment criteria for wind energy development and therefore should not be viewed as a definitive list.

FIGURE 2: SCALE AND EIA THRESHOLDS FOR ASSESSING WIND ENERGY DEVELOPMENT



Other consents required

A summary of the main regulatory regimes is outlined in Figure 3.

FIGURE 3: MAIN PERMISSIONS AND LICENCES REQUIRED FOR WIND ENERGY DEVELOPMENT

Planning Authority	Scottish Government (s.36 Electricity Act 1989)	SEPA (CAR & PPC)	SNH	Forestry Commission
Determination <50MW generating capacity	Determination >50MW generating capacity	Water abstraction and river engineering works (CAR) Waste management	Licences for protected species	Felling licences and associated environmental impact assessments

2.0 Planning policy context

National Planning Framework 3 & Scottish Planning Policy 2014

National Planning Framework 3 was published in June 2014 and includes a number of national initiatives, developments and targets which have some bearing on this Supplementary Guidance. This guidance has regard to these documents.

SPP 2014 requires that all planning authorities prepare spatial frameworks for wind energy following a standardised methodology to give consistency across Scotland. Development plans are required to set out criteria for the decision-making process for deciding applications on wind energy.

In assessing planning applications for wind energy developments, SPP sets out likely considerations for the assessment of ‘energy infrastructure developments’ above and beyond spatial frameworks.

These considerations cover economic impacts, energy targets, greenhouse gas emissions, cumulative, landscape and visual impacts. Other impacts and effects indicated are for communities and individual dwellings, natural heritage, carbon rich soils, public access, historic environment, tourism and recreation, aviation and defence, telecommunications, traffic and hydrology. (SPP, para. 169)

In accordance with SPP2014 this SG sets out and explains the factors which will be taken into account in decision making on wind energy proposals. Assessment criteria relevant to the consideration of applications will depend on the scale of a development and its relationship to the surrounding area.

The Strategic Development Plan

Policy 10 of the *SESPlan SDP* (June 2013) sets out the broad policy on renewable energy and provides support for renewable energy developments. The policy requires local development plans to set a framework for the encouragement of renewable energy proposals that contribute towards achieving national targets for electricity and heat, taking into account relevant economic, social, environmental and transport considerations, to facilitate more decentralised patterns of energy generation and supply and to take account of the potential for developing heat networks. The SDP can be viewed at <http://www.sesplan.gov.uk/>

The West Lothian Local Plan

Adopted in January 2009, the *West Lothian Local Plan* (WLLP) recognises that proposals for on-shore wind energy will be looked at favourably provided that a proposal does not give rise to unacceptable environmental effects including cumulative, landscape and visual impacts. As wind energy developments are complex there are a wide range of policies with potential to apply to a proposal. Of specific relevance is policy NWR20. The WLLP can be viewed at <http://www.westlothian.gov.uk/WLLP>

The West Lothian Local Development Plan (LDP)

The *West Lothian Local Plan* is to be replaced by the *West Lothian Local Development Plan*. The first stage in this process is the preparation of a Main Issues Report (MIR). The MIR went to public consultation in autumn 2014. Background documents, which accompany the MIR and have informed this SG, include the revised *West Lothian Landscape Character Classification* and the *West Lothian Local Landscape Designation Review*. The MIR and associated documents can be viewed at <http://www.westlothian.gov.uk/MIR>

This SG will be a material consideration in the determination of planning applications until such time as the West Lothian Local Development Plan is adopted.

Wind energy in West Lothian

The council produces a quarterly compendium of wind energy applications in both chart form and as a GIS map. The latest version of this information can be found at the following web-link: http://www.westlothian.gov.uk/media/4020/Wind-Turbine-Database/pdf/Wind_Energy_Data_20150218.pdf

The existing and emerging wind energy pattern of medium to large scale wind energy development reflects the prevalence of upland locations, i.e. Blacklaw Wind Farm and Extension, and, Pates Hill Wind Farm and Extension. There is a pattern emerging in the western end of the Pentlands of wind farms in the upland areas divided by separation areas, usually of commercial forestry or moorland, to prevent coalescence of wind energy development.

Decisions from Scottish Government Ministers on two major wind farm applications in the vicinity of the Pentland Hills – Fauch Hill Wind Farm and Harburnhead Wind Farm – were released in summer 2014 with the former being refused and the latter granted consent.

Both these decisions, and the subsequent development of a wind farm at Harburnhead, will influence the assessment of landscape and visual impacts of wind energy within West Lothian.

Smaller and single wind energy development in West Lothian tends to be more scattered and usually associated with farms or businesses. Currently, this is the prevalent type of application received by the council.

This Supplementary Guidance defines ‘small-scale or small wind energy development’ as a maximum of two turbines having an upper limit of 35m to blade tip. Thus the minimum threshold for a wind farm for the spatial framework is defined as three or more turbines greater in height than 35 metres to blade tip. In practice, proportional weighting will be given to the spatial framework for proposals which are likely to have significant landscape and visual impacts such that a single turbine, of for instance 85m to blade tip, would be treated as a wind farm development.

This SG will be revised and kept under review to ensure that it remains relevant and up to date. As the LDP progresses, in accordance with the requirements of the associated Strategic Environmental Assessment, a monitoring report will be prepared which will aim to cover:

- Data on wind energy proposals and developments in West Lothian; and
- Developments affecting the terms of and constraints identified in this Interim SPG.

3.0 Spatial framework

Scottish Planning Policy 2014 - Spatial framework methodology

SPP2014 seeks to deliver consistency nationally for spatial frameworks for wind energy across Scotland. SPP speaks of ‘energy infrastructure developments’ taking account of spatial frameworks for wind energy.

The focus of the strategic assessment for wind energy proposals requires to be incorporated into the policy framework for onshore wind energy in the council’s LDP. The development management criteria is set out below and integrated into the section: Policy considerations - Assessment Checklist.

- Net economic impact
- Contributions to energy targets
- Effects on greenhouse gas emissions
- Cumulative impacts

- Impacts on communities and individual dwellings
- Landscape and visual impacts
- Effects on the natural heritage
- Impacts on carbon rich soils
- Public access: long distance routes (LDRs), cycle and scenic routes
- Impacts on the historic environment
- Impacts on tourism and recreation
- Impacts on aviation, defence interests and seismological recording
- Impacts on telecommunications and broadcasting installations
- Impacts on road traffic
- Impacts on adjacent trunk roads
- Effects on hydrology, the water environment and flood risk
- Need for conditions relating to decommissioning developments
- Opportunities for energy storage
- Need for obligations to ensure site restoration

The spatial framework set out in SPP1014 identifies three groups for wind farms. This supplementary guidance sets these in a West Lothian context.

Group 1: Areas where wind farms will not be acceptable

Only National Parks and National Scenic Areas can be identified as areas where wind farms are not acceptable. There are no national parks or national scenic areas in West Lothian. There are, however, a number of nationally important sites within the administrative boundary which the council believes should be considered as constraints of national importance. These are set out in the figure and table below.

<i>Nationally important sites within West Lothian</i>	<i>Justification</i>
Hopetoun House and Estate (1)	Historic house, garden and designed landscape, near South Queensferry
Linlithgow Palace and Peel (2)	Former royal palace and grounds
Cairnpapple neolithic henge and stone circle (3)	Rare Neolithic landscape in southern Scotland & Historic Scotland visitor site in the Bathgate Hills
Torphichen Perceptory (4)	Pre-reformation church and landscape, Torphichen in the Bathgate Hills
Union Canal and Towpath (6)	Major industrial monument and working contour canal which traverses West Lothian through settlements of Linlithgow, Philpstoun, Winchburgh and Broxburn
Five Sisters Shale Bing (5)	Unique industrial heritage relic, north of West Calder

FIGURE 4: SPATIAL FRAMEWORK GROUP 1: Areas where wind farms will not be acceptable



Group 2: Areas of significant protection

Group 2 areas include:

- National and international designations (Group 2a);
- Other nationally important mapped environmental interests (Group 2b); and
- Community separation for consideration of visual impact (Group 2c).

These areas are not totally excluded from wind farm development as SPP2014 advises that development in these areas may be appropriate in some circumstances. Developers would be required to demonstrate that any significant effects on the qualities of these areas can be substantially overcome by siting, design or other mitigation.

The sites and designations within West Lothian in the three categories identified for Group 2 in SPP2014, are set out below and represented in the associated maps.

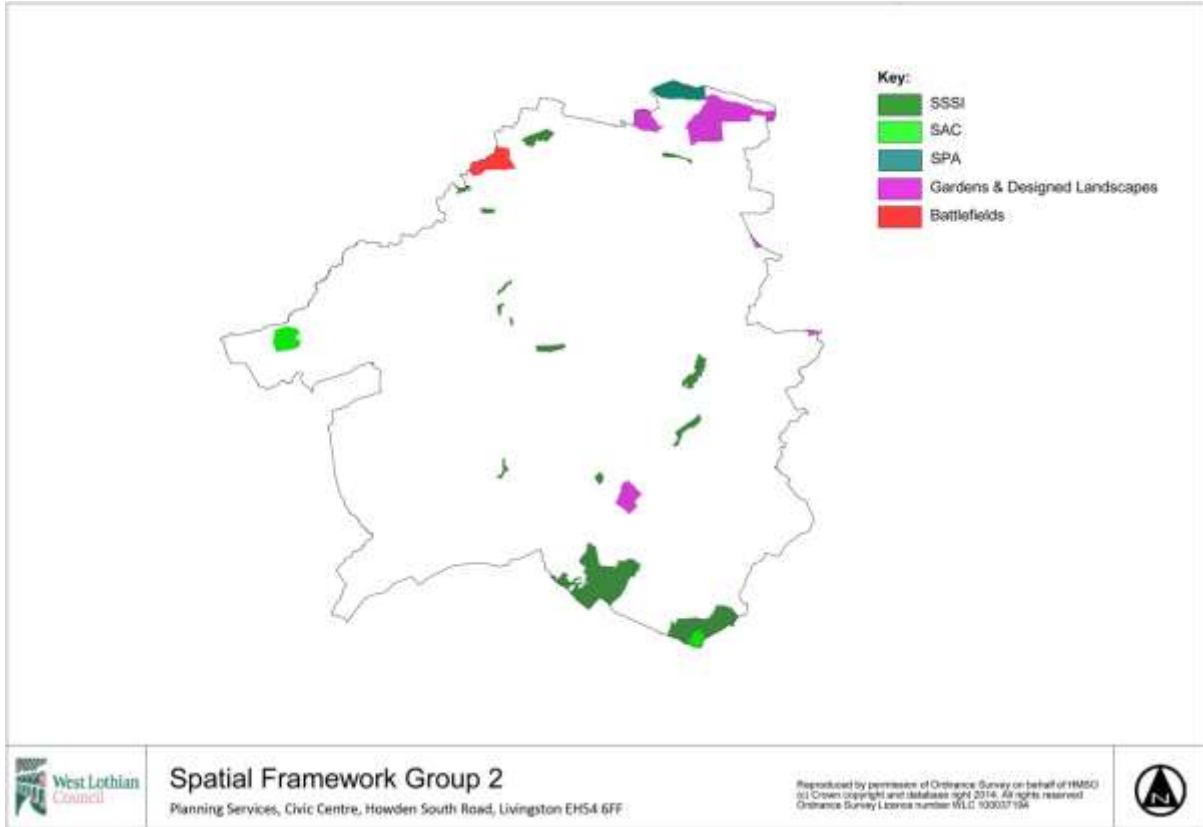
Group 2a - International and national designations

World Heritage Sites	Forth Rail Bridge (within Edinburgh)
Natura 2000 and Ramsar sites:	
<i>Special Areas of Conservation</i>	Blawhorn Moss, near Blackridge Craigengarr, Pentland Hills

<i>Special Protection Areas</i>	Firth of Forth (part in West Lothian)
<i>Sites of Special Scientific Interest</i>	Blawhorn Moss, near Blackridge Calder Wood, near Mid Calder Carriber Glen, near Linlithgow Cobbinshaw Moss, near Harburn Cobbinshaw Reservoir, near Harburn Craigengar, Pentland Hills East Kirkton Quarry, Bathgate Firth of Forth Hermand Birchwood, West Calder Linhouse Valley, Murieston, Livingston Linlithgow Loch Lochcote Marsh, Torphichen Petershill, Bathgate Philpstoun Muir, near Linlithgow Skolie Burn, Loganlea, Addiewell Tailend Moss, Bathgate
<i>National Nature Reserves</i>	Blawhorn Moss, by Blackridge
<i>Sites identified in Historic Scotland's Inventory of Gardens and Designed Landscapes</i>	Harburn House, south-east of West Calder Hatton House, east of Wilkieston (southern part only, main part within City of Edinburgh) Hopetoun House, near the Firth of Forth House of the Binns, north-east of Linlithgow (In addition, Newliston House, immediately east of Broxburn, is predominantly within Edinburgh City)
<i>Sites identified in Historic Scotland's Inventory of Historic Battlefields</i>	Battle of Linlithgow Bridge site (part is in Falkirk Council area)

There are additional international and national designations beyond West Lothian's boundaries in adjacent local authority areas which may require inclusion at planning application stage and in the preparation of a supporting Environmental Statement (i.e. international and national environmental designations related to birds) but for the purposes of this supplementary guidance information is confined to West Lothian.

FIGURE 5: SPATIAL FRAMEWORK GROUP 2a: Areas of significant protection - International and national designations



Group 2b - Other nationally important mapped environmental interests

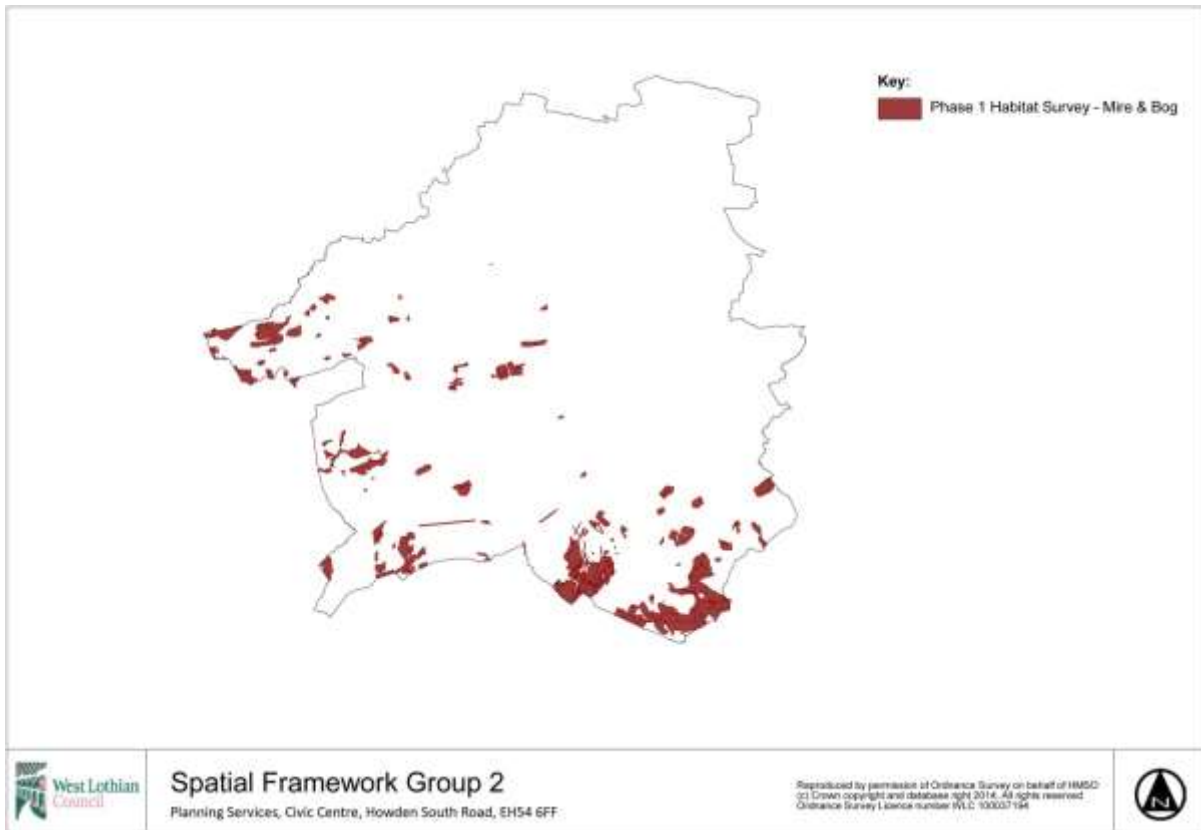
Peatlands cover 20% of Scotland’s landmass and are important stores of carbon.

The council is aware of the consultation document released by Scottish Natural Heritage for *Scotland’s National Peatland Plan* as well as the preparation of additional guidance by SNH to support the assessment of peat and carbon rich soils for this stage in the Spatial Framework. Therefore, any bearing which future SNH guidance document might have on this supplementary guidance and the spatial framework for wind energy will be addressed in further iterations of this guidance.

In the interim, the information from the council’s Phase 1 Habitat Survey is the source data. Mire and Bog Habitat was surveyed and mapped in 1993.

Areas of wild land as shown on the 2014 SNH map of wild land areas	There are no areas of ‘wild land’ as identified by SNH in West Lothian
Carbon rich soils, deep peat and priority peatland habitat	There are significant areas of peatland in the west and south of West Lothian tallying with moorland and upland habitat, as well as several associated SSSIs Blawhorn Moss National Nature Reserve (also a SSSI and SAC) is of particular interest as a large remnant of lowland raised bog in central Scotland

FIGURE 6: SPATIAL FRAMEWORK GROUP 2b: Areas of significant protection - Other nationally important mapped environmental interests



Groups 2c - Community separation for consideration of visual impact

SPP identifies these areas as:

An area not exceeding 2km around cities, towns and villages identified on the local development plan with an identified settlement envelope or edge. The extent of the area will be determined by the planning authority based on landform and other features which restrict views out from the settlement.

The phrase 'not exceeding 2km' is significant. The council has had regard to this when identifying Group 2c *Areas of significant protection* and as such wind farm developments within 2km of the settlement envelope defined by the '*visual impact (on) views out from settlements*', i.e. towns and villages identified in the West Lothian Local Plan will not be supported. However, the determination of the extent of these areas based on '*landform and other features which restrict views out from the settlement*' will need further discussion with SNH, access to view-shed analysis software, and/or detailed LVIA at application stage.

'Settlement Setting' was used as one of the evaluation criteria for the *West Lothian Local Landscape Designation Review* (pp. 34 & 40, LLDR, June 2013) where the majority of the council area was evaluated as of 'medium' or 'high' value, reflecting the importance of local landscape to settlement setting, and, the extent of settlement across West Lothian. The council therefore takes forward the 2km *Areas of significant protection* around local communities with some degree of confidence.

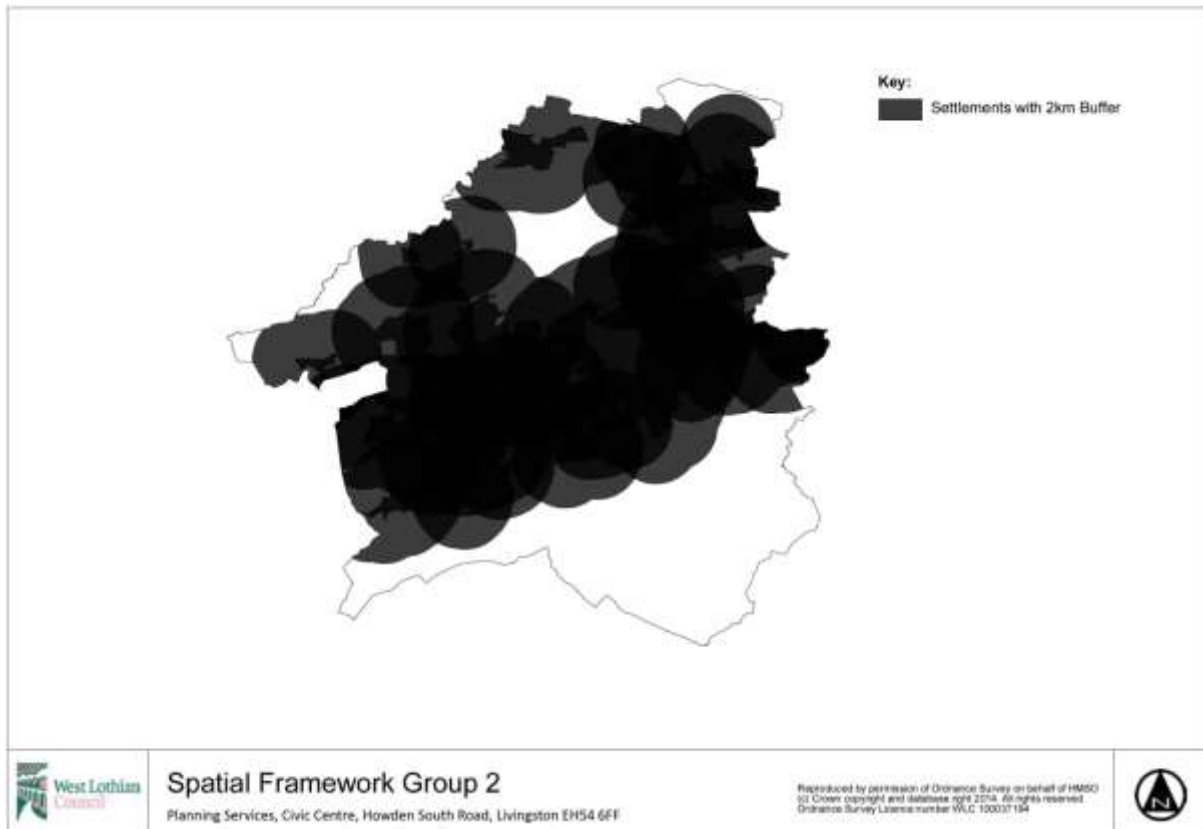
The settlement pattern in West Lothian reflects the traditional east-west routes which traverse the area, primarily to the south of the Bathgate Hills, but also to the north along the Forth Valley. The thirty (30) settlements identified by settlement boundaries in the West Lothian Local Plan 2009 and additional communities falling within this threshold in adjacent local authority areas are:

<p><i>Group 2C Communities within West Lothian</i></p>	<p>Addiewell & Loganlea Armadale Bathgate Blackburn Blackridge Breich Bridgend Broxburn Dechmont Ecclesmachan East Calder East Whitburn Fauldhouse Greenrigg Kirkliston Linlithgow Livingston including Mid Calder, Pumpherston & Uphall Station Longridge Newton & Woodend Philpstoun Polbeth Seafield Stoneyburn & Bents Torphichen Uphall West Calder Westfield Whitburn Winchburgh Wilkieston</p>
<p><i>Group 2C Communities in adjacent local authorities within 2km requiring consideration and assessment</i></p>	<p><i>City of Edinburgh Council: South Queensferry, Kirkliston, Newbridge</i> <i>North Lanarkshire Council: Harthill</i> <i>South Lanarkshire: Woolfords, Tarbrax</i> <i>Falkirk Council: Avonbridge, Whitecross, Bo'ness</i></p>

'Views' is another evaluation criterion used in the *West Lothian Local Landscape Designation Review* where it was found that "a number of areas ranked high against this criterion, with almost all others ranked medium. This reflects the high visibility of West Lothian from several key transport corridors. (LLDR, p. 34). It is concluded that the West Lothian landscape is highly visible and that there are significant receptor routes (motorways, A-roads, rail corridors) and adjacent areas along key transport corridors.

Figure 7 shows the identified settlements and includes the 2km 'Areas of significant protection' exclusion zone around each settlement.

FIGURE 7: SPATIAL FRAMEWORK GROUP 2c: Areas of significant protection - Community separation for consideration of visual impact



All settlement boundaries in West Lothian are to be reviewed for the Local Development Plan.

Group 3: Areas with potential for wind farm development

SPP 2014 advises for this grouping that “Beyond groups 1 and 2, wind farms are likely to be acceptable, subject to detailed consideration against identified policy criteria.” [SPP, p. 39]

Areas with potential for wind farm development therefore comprise of the summation of the spatial configuration of the previous two groupings as set out below. Through the policy review for the Local Development Plan it may be that the criteria is adjusted and this would be reflected in a further iteration of this supplementary guidance.

GROUP	Summary of results	Comment	Requires further consultation with SNH for the LDP version of SG
Group 1: <i>Areas where wind farms will not be acceptable</i>	No National Parks or National Scenic Areas identified	Other national interests highlighted for consideration	No
Group 2a: <i>Areas of significant protection – International and national designations</i>	Constraints identified in all categories; all outwith settlement boundaries with the exception of a Historic Battlefield site at Linlithgow Bridge	Environmental designations and constraints outwith the West Lothian administrative boundary are likely to be required for Environmental Statements and at planning application stage	No, but advice on extent of bird assessment desirable

Group 2b: <i>Areas of significant protection</i> – Other nationally important mapped environmental interests – peatlands, carbon soils etc.	Considerable areas of ‘Mire and bog habitat’ identified in the west, south-west and south of West Lothian	Siting, design and mitigation may overcome some of these Group 2 constraints, though resulting in smaller search areas for wind energy development	No, but Scotland’s National Peatland Plan & other SNH guidance/tools are in preparation; however sufficient information available at present
Group 2c: <i>Areas of significant protection</i> – Community separation for consideration of visual impact	There is significant urban settlement in West Lothian which reflects strategic transport routes. The Local Landscape Designation Review confirms the importance of ‘settlement setting’ and the high visibility of the local landscape from strategic routes and adjacent areas.	Views out from communities can be restricted by landform, topography, landscape, and other features – but these require further definition and analysis.	No, but to determine the final extent of areas of significant protection for communities guidance/discussion with SNH and Scottish Government is advisable as the council does not have the required view-shed analysis software; or detailed LVIA at application stage

Whilst the basic SPP methodology indicates that there are additional areas with potential for wind farm development, there are significant reasons for not supporting significant further commercial wind farm development. These are the council’s most sensitive landscapes which are valuable in their own right and are important areas of countryside which off-set the urbanisation of much of the lowland areas in West Lothian. Access to green space is vital to maintain the quality of life for local residents, and, increasingly for existing and future residents in nearby communities in West Edinburgh.

4.0 Landscape character – Guidance and constraints

The Valuing the Natural Environment section of SPP seeks that the planning system should ‘facilitate positive change while maintaining and enhancing distinctive landscape character’ as one of the chapters main policy principles. (SPP, para. 194) Emphasis on landscape character is further amplified in the paragraphs on Development Plans which give three purposes for areas of local landscape value:

- safeguard and enhance the character and quality of a landscape which is important or particularly valued locally or regionally; or
- promote understanding and awareness of the distinctive character and special qualities of local landscapes; or
- safeguard and promote important local settings for outdoor recreation and tourism.

Landscape character is an important assessment tool for indicating the capacity for wind energy for different landscape types. Landscape character assessment is usually combined with visual impact analysis to determine the landscape capacity of a landscape character area or unit to a particular type of development, wind energy in this case.

In general, large scale landscapes with little complexity or pattern have more capacity for wind energy development than small scape landscapes with considerable landscape pattern, such as

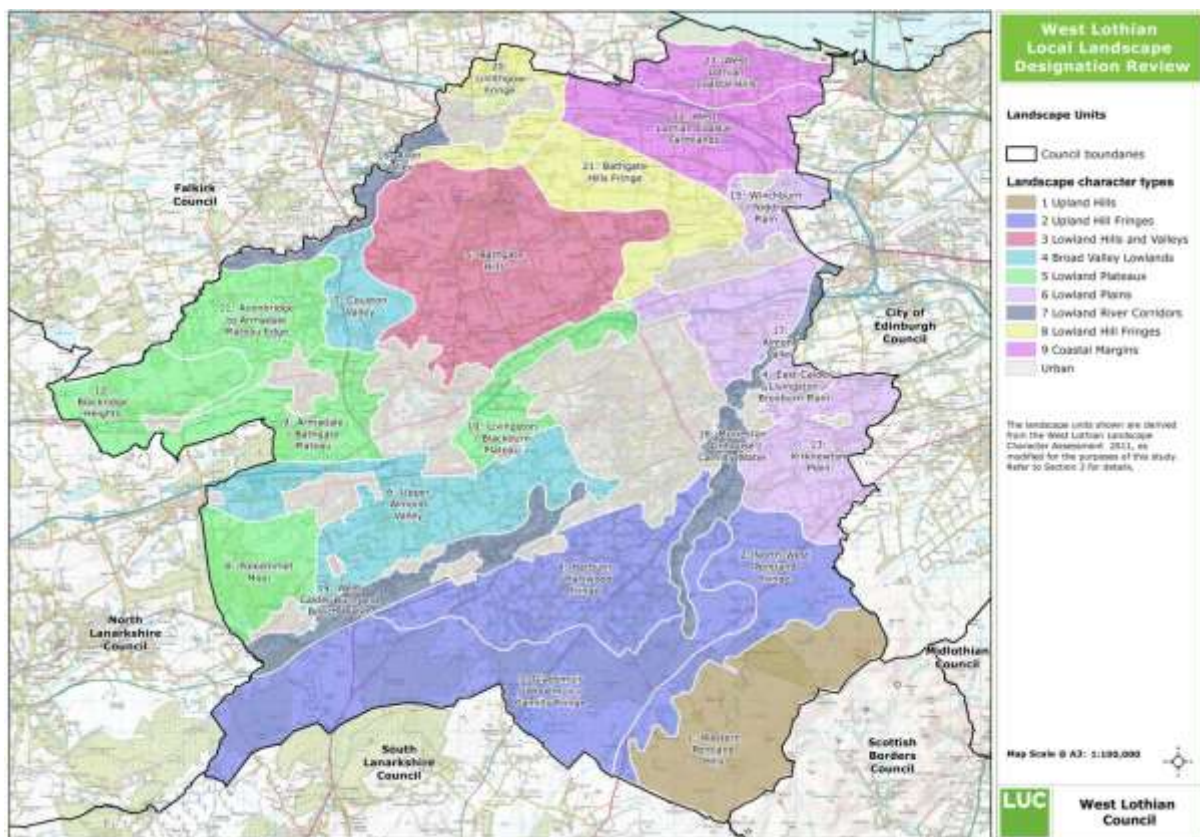
traditional field patterns, which have much greater sensitivity to wind energy development. There are a range of methods of analysing the potential visual impacts of a proposed wind turbine which generally depends on the receptors/potential viewers, the scale of the turbine and the distance over which a proposal can be seen.

The council has produced a number of documents based on landscape character which have informed this supplementary guidance.

- *Landscape Capacity Study for Wind Energy Development* (David Tyldesley and Associates, 2011)
- *Local Landscape Designation Review* (Land Use Consultants, 2013)
- *West Lothian Landscape Character Classification* (West Lothian Council, 2014 - prepared in-house based on the above studies)

Through these studies the landscape character of West Lothian has been identified as comprising nine landscape character types which are set out in Figure 8. The most common landscape character type in West Lothian is Lowland Plateaux of which there are five different examples across West Lothian (bright green below in Figure 8).

FIGURE 8: LANDSCAPE CHARACTER AREAS AND TYPES



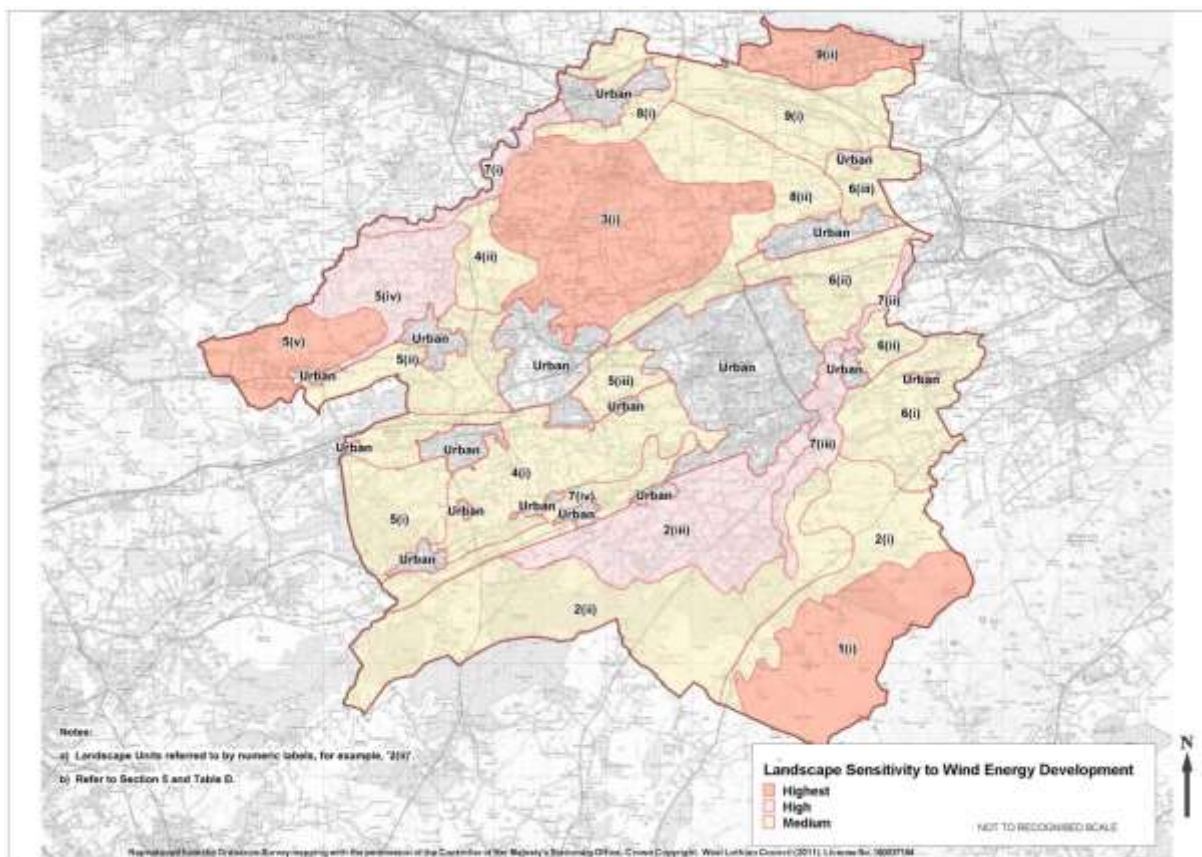
These landscape types are further subdivided into 23 landscape character areas which are set out later in this supplementary guidance.

Landscape sensitivity is an important consideration in the assessment of wind energy proposals and in developing the spatial framework. ‘Landscape sensitivity’ indicates the potential level of impact for different types and units of landscape based on set criteria. In this instance ‘landscape capacity’

is being assessed for wind energy so that an assessment of higher sensitivity for a landscape translates into a lower capacity for wind energy development.

The council commissioned the *Landscape Capacity Study for Wind Energy* (LCS) to determine the extent of wind energy potential based on landscape and visual assessment in West Lothian. This study is confined to a methodology which uses landscape character assessment and visibility analysis and does not include a range of other standard assessment criteria such as cumulative impacts and aviation constraints. Figure 9 shows the basic assessment of landscape units across West Lothian to wind energy development.

FIGURE 9: LANDSCAPE SENSITIVITY TO WIND ENERGY DEVELOPMENT



The areas of 'Highest sensitivity to wind energy development' overlap with designated Areas of Great Landscape Value and Candidate Special Landscape Areas (cSLA) and thus support the protection of the most significant areas of landscape sensitivity in West Lothian - Areas of Great Landscape Value and their successors Candidate Special Landscape Areas.

Local Landscape Designations

The council has also undertaken a review of its local landscape designations in accordance with SPP 2014 and SNH guidance. The review was the subject of consultation at the Main Issues Report stage of the LDP. As there are no international or national landscape designations in West Lothian, cSLAs are the most highly regarded landscapes albeit local in status. The cSLAs may require some minor alteration through the process of balancing the different interests which inform the LDP. The cSLAs

reflect the current Areas of Great Landscape Value designations as set out in the WLLP and which further tie in with the 'Areas of Highest Sensitivity to Wind Energy Development' identified in the council's landscape capacity study of 2011. Areas of great landscape and candidate Special Landscape Areas are set out in Figures 10 and 11.

FIGURE 10: AREA OF GREAT LANDSCAPE VALUE

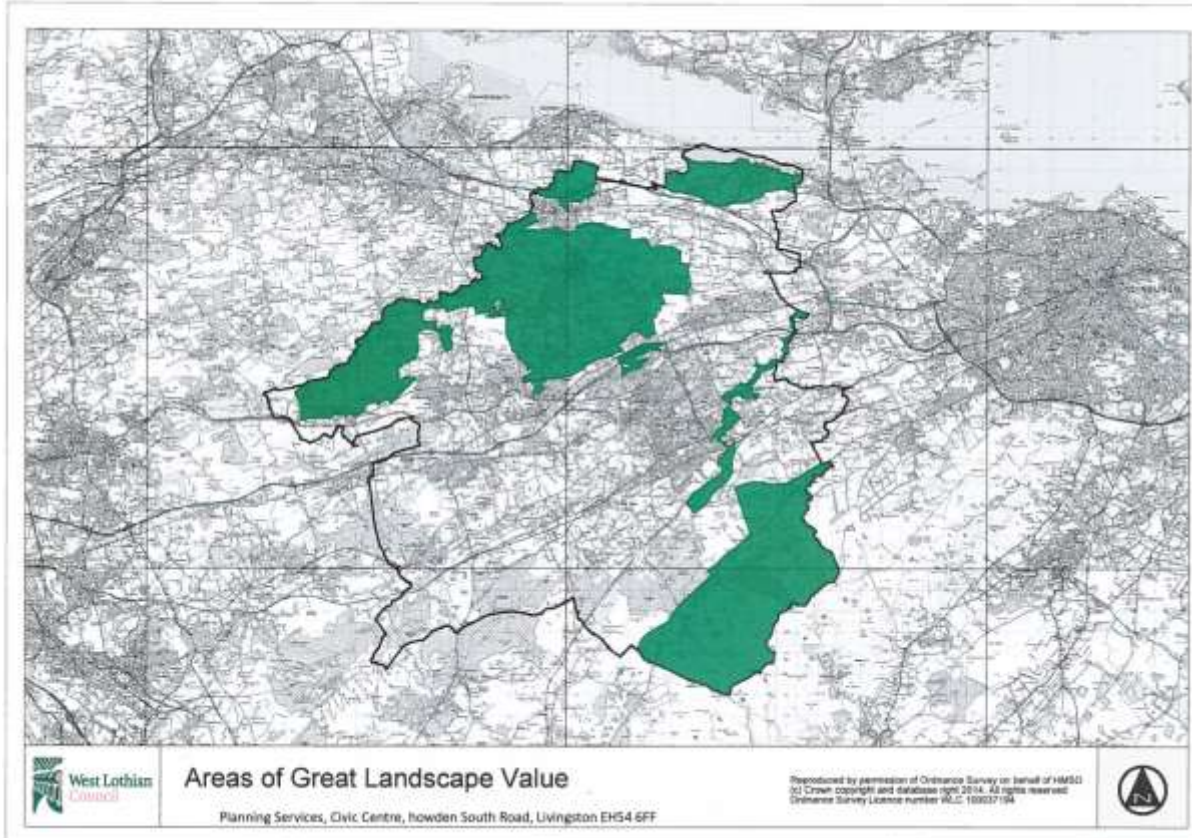
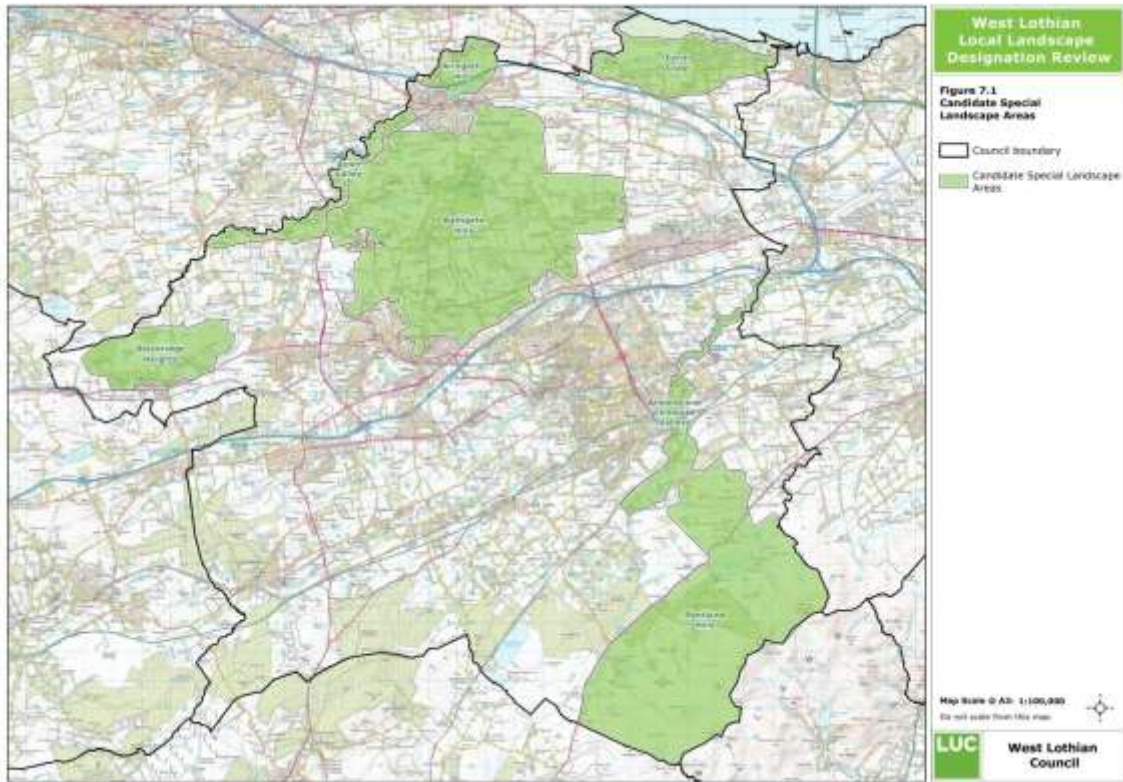


FIGURE 11: CANDIDATE SPECIAL LANDSCAPE AREAS

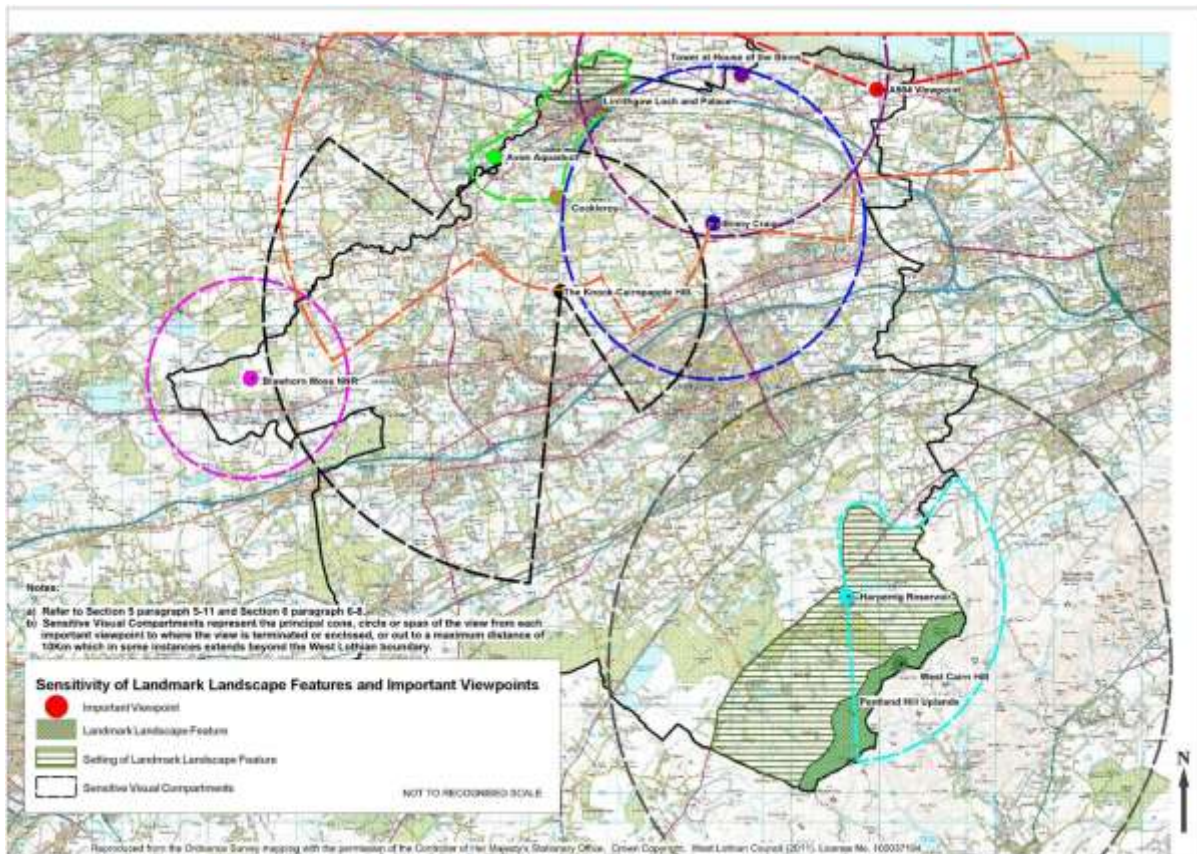


Landmark landscapes, important viewpoints and principal sensitive routes

To determine the capacity of landscape character areas to wind energy, sensitivity of the landscape character against pre-determined criteria is assessed. Two landmark landscape features and nine important viewpoints have been identified. For the landmark landscape features, the Pentland Hills Uplands and Linlithgow Loch and Palace, and areas important to the sensitivity of their setting have been identified and are indicated in Figure 12 (dark green & green hatching).

Sensitive Visual Compartments are attached to each of the important viewpoints denoting areas from which these usually highpoints in the landscape can be seen from and viewed from i.e. views in and out. (coloured points with radial views)

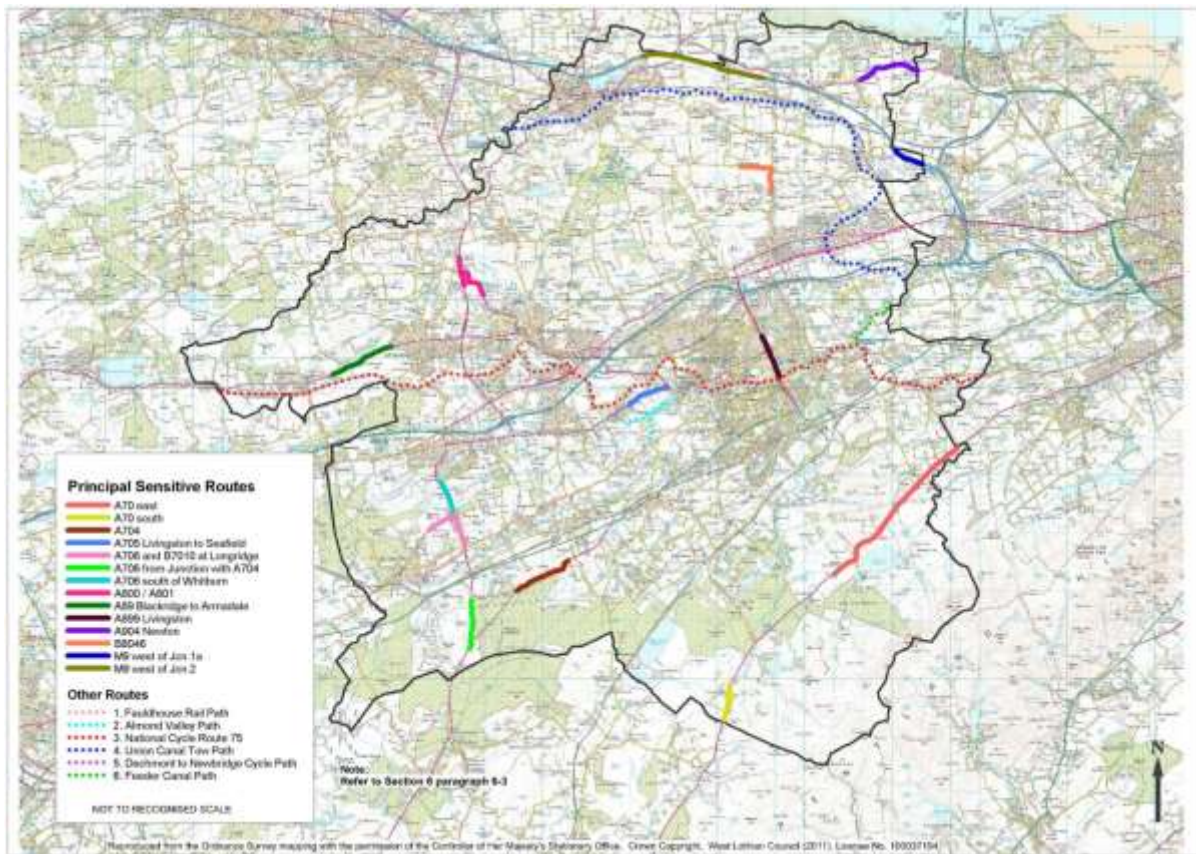
FIGURE 12: SENSITIVITY OF LANDMARK LANDSCAPE FEATURES & IMPORTANT VIEWPOINTS



How one views landscape is an important factor in landscape sensitivity. The most common modern experience is from roadways. For West Lothian 14 Principal Sensitive Routes and six other routes, primarily footpaths and cycleways, have been identified and are shown in Figure 13. It is assumed that there is considerable sensitivity for receptors/users of outdoor recreational routes due to the direct views and longer time spent in the landscape.

All these considerations have informed the council's approach to wind energy proposals in accordance with those parts of SPP 2014 that underscore the need for landscape protection.

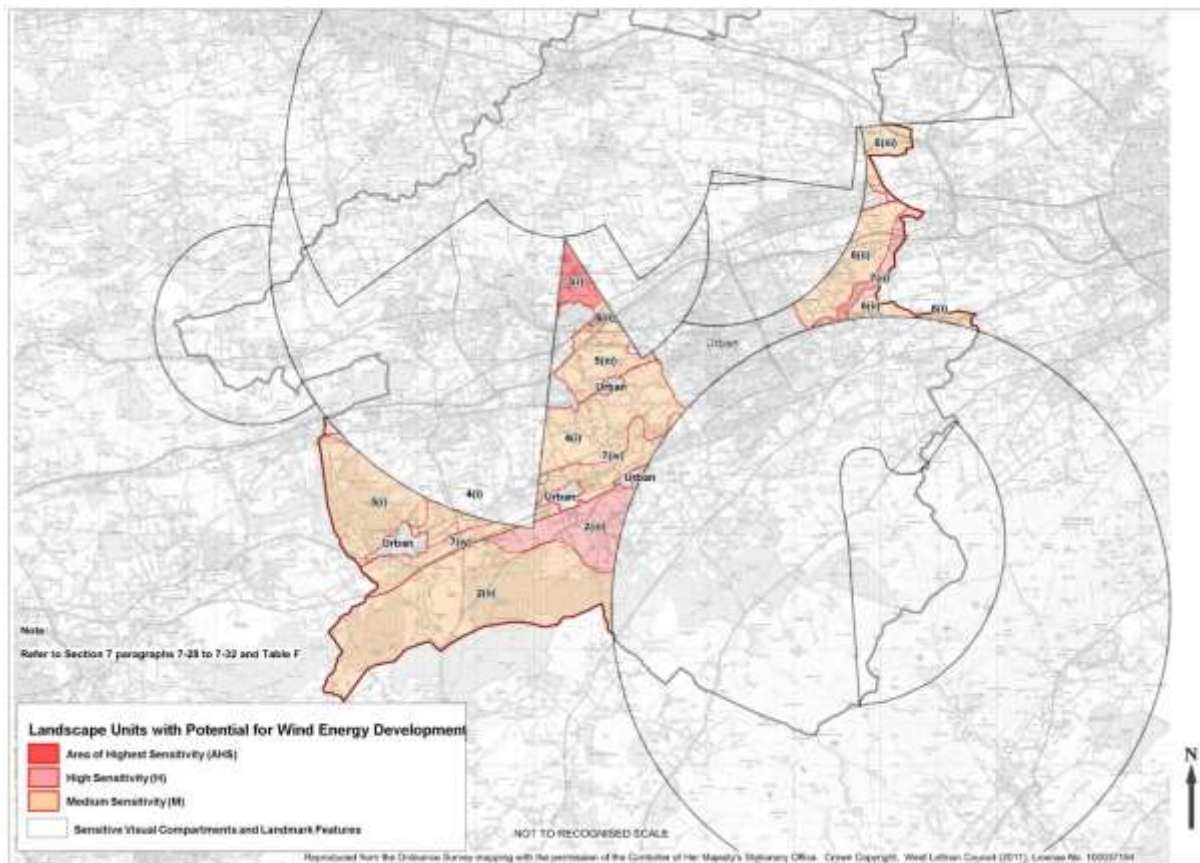
FIGURE 13: PRINCIPAL SENSITIVE ROUTES



Landscape capacity for wind energy based on Landscape Capacity Study

Based on the landscape sensitivity assessment and the visual analysis it can be seen from Figure 14 below that parts of some of the landscape units remain which may have potential for wind energy. However, this assessment of landscape capacity for wind energy is purely based on landscape and visual sensitivity criteria and a range of further assessments would be required as set out in the Assessment Checklist further on in this supplementary guidance.

FIGURE 14: LANDSCAPE UNITS WITH POTENTIAL FOR WIND ENERGY DEVELOPMENT



There are eight potential sites for wind energy identified in the *Landscape Capacity Study for Wind Energy Development in West Lothian* (2011). Based solely on landscape and visual assessment, these potential sites are:

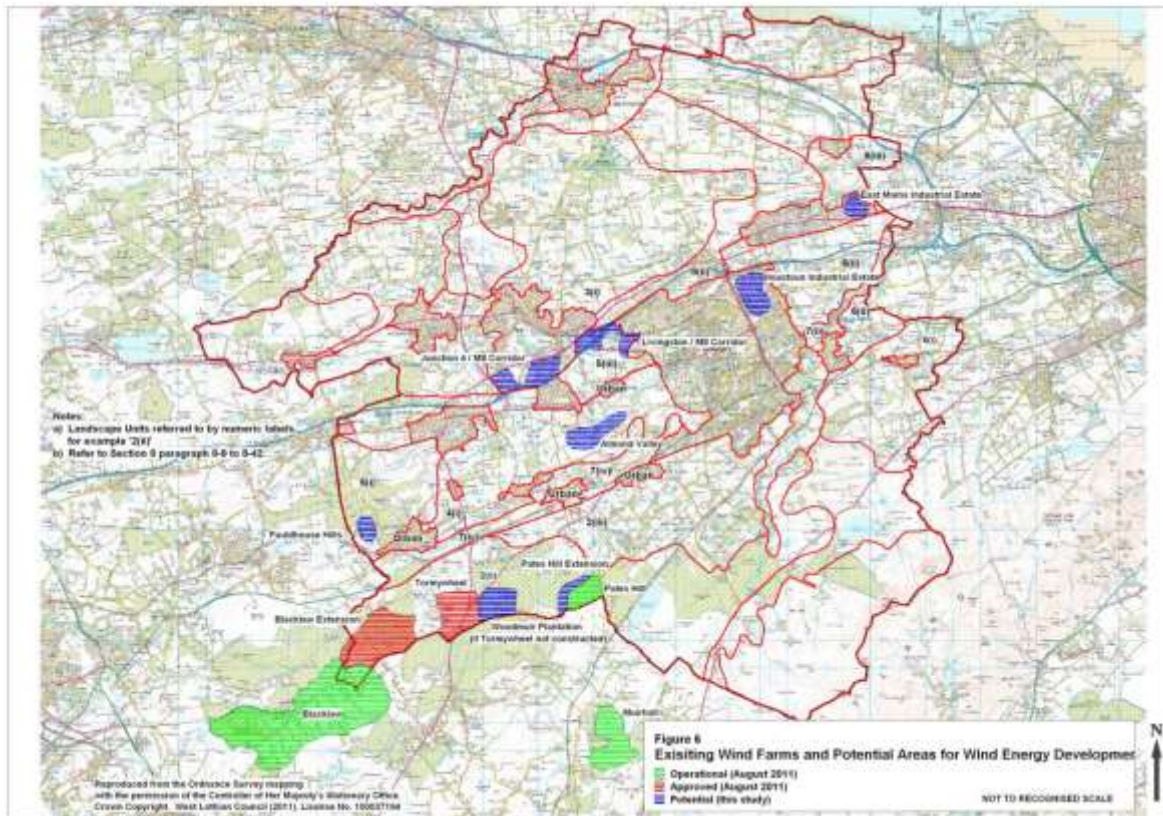
- East Mains Industrial Estate, Broxburn
- Houstoun Industrial Estate, Livingston
- Livingston/ M8 Corridor
- Junction 4/M8 Corridor
- Almond Valley, West Calder
- Pates Hill Extension, Breich
- Tormywheel (or Woodmuir Plantation if Tormywheel not constructed) Breich
- Fauldhouse Hills, Fauldhouse

These sites are shown in Figure 15 however, not all these sites are likely to be practicable in terms of the scale of wind energy proposals and successful assessment through the planning process.

Since Figure 15 was prepared three further wind farms have been consented which do not appear on the map:

- Burnhead/ Stoneridge Wind Farm, north of Blackridge Height in Falkirk
- Pearie Law Wind Farm, north-west of Cobbinshaw Reservoir
- Harburnhead Wind Farm, east of Cobbinshaw Reservoir

FIGURE 15: POTENTIAL AREAS OF SEARCH BASED ON LANDSCAPE CAPACITY STUDY



Landscape character area summaries

Assessment of potential landscape and visual impacts (LVIA) of wind energy proposals is a key part in the decision making process. An Ordnance Survey based plan of each landscape unit, standard landscape character information and, taking into account key findings of the council's *Landscape Capacity Study for Wind Energy Development in West Lothian* (2011), together with key constraints are set out in the tables below. The tables take cognisance of the key areas of constraint as set out in SPP2014 and more local constraints for the council's administrative area.

It is the case that a proposal in one unit could have significant impacts on an adjacent or nearby landscape unit, therefore, assessment by the criteria set out for each landscape unit should not be viewed in isolation from the broader landscape, visual and planning context.

The tables provide guidance for the assessment and acceptability of wind energy development subject to detailed consideration identified against policy criteria. The nature of West Lothian is such that there are virtually no areas which can be identified spatially as being relatively free from all constraints. Each proposal for wind energy should seek to address and will be assessed against each of the identified constraints.

Landscape Character Type: UPLAND HILLS

Landscape Character Unit 1: WESTERN PENTLAND HILLS

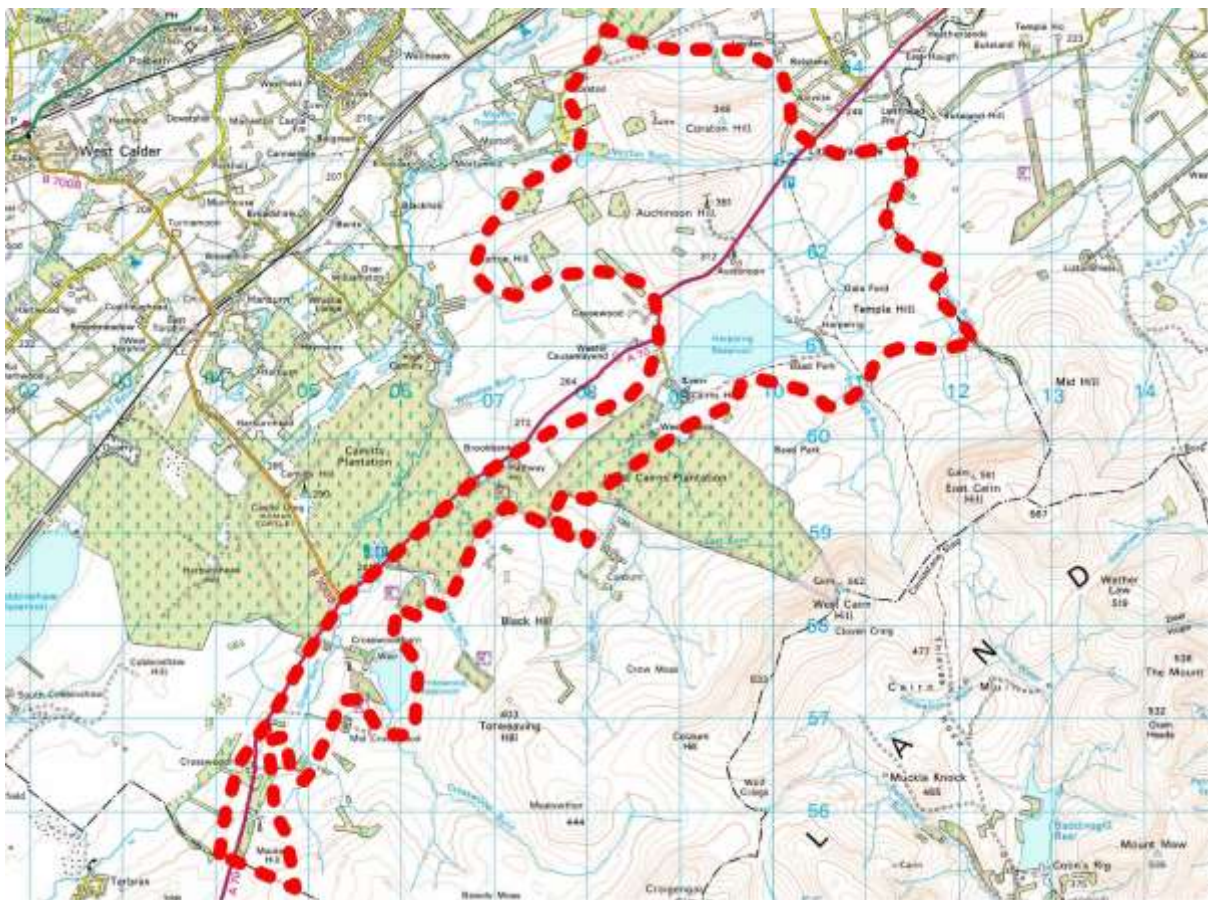


LANDSCAPE AND VISUAL IMPACT ASSESSMENT	
<i>Landscape sensitivity assessment</i>	Area of Highest Sensitivity
<i>Landscape objective</i>	Protection - Wind Energy Development (WED) and any other large scale, uncharacteristic development would be inappropriate
<i>Landscape capacity assessment</i>	NO CAPACITY
<i>Landmark landscape features & Settings of Landmark Landscape Features</i>	Impact on views from/to: Pentland Hills Uplands & Setting of this Landmark Landscape Feature
<i>Principal sensitive routes (tourist and amenity)</i>	Impact on views from/to: A70 east and south (Lang Whang) National Cycle Route 75
<i>Important viewpoints & Sensitive visual compartments</i>	Impact on views from/to: West Cairn Hill & its Sensitive visual compartment Harperigg Reservoir - its sensitive visual compartment
<i>Other landscape considerations (AGLV, cSLA)</i>	Pentland Hills AGLV Pentland Hills Candidate SLA
CONSTRAINTS & NON-LVIA CONSIDERATIONS	
<i>Group 1 - Areas where wind farms will not be acceptable: National constraints</i>	No national parks or national scenic areas. There are a number of nationally important areas which the council believe should be considered as constraints of national importance but none in this landscape character area.
<i>Group 2a – Areas of significant protection: National and</i>	Natura 2000: <i>Special Area of Conservation: Craigengar</i>

<p><i>international designations</i> (World Heritage Sites, Natura 2000 & Ramsar sites, SSSIs, National Nature Reserves, Inventory Gardens and Designed Landscapes, Historic Battlefields)</p>	<p><i>Site of Special Scientific Interest:</i> Craigengar <i>Site of Special Scientific Interest:</i> Cobbinshaw Moss, near Harburn <i>Site of Special Scientific Interest:</i> Cobbinshaw Reservoir, near Harburn</p>
<p>Group 2b – <i>Areas of significant protection: Other nationally important mapped environmental interests</i> (areas of wild land, carbon rich soils, deep peat and priority peatland)</p>	<p>There are no areas of wild land identified by SNH in West Lothian</p> <p>Significant carbon rich soils and peatland areas; significant areas of Mire & Bog habitat mapped in Phase 1 Habitat Survey</p>
<p>Group 2c – <i>Areas of significant protection: Community separation for consideration of visual impact</i> (an area not exceeding 2km around cities, towns and villages identified on the local development plan with an identified settlement envelope or edge etc.)</p>	<p><i>Community separation for consideration of visual impacts applies for:</i></p> <p>Tarbrax, South Lanarkshire</p>
<p>Other factors</p>	<p>Pentland Hills Regional Park Rights of Way/ Paths: Cauldstane Slap; Crosswood Burn Assessment of cumulative impacts</p>

Landscape Character Type: UPLAND HILLS FRINGES

Landscape Character Unit 2: NORTH-WEST PENTLAND FRINGE



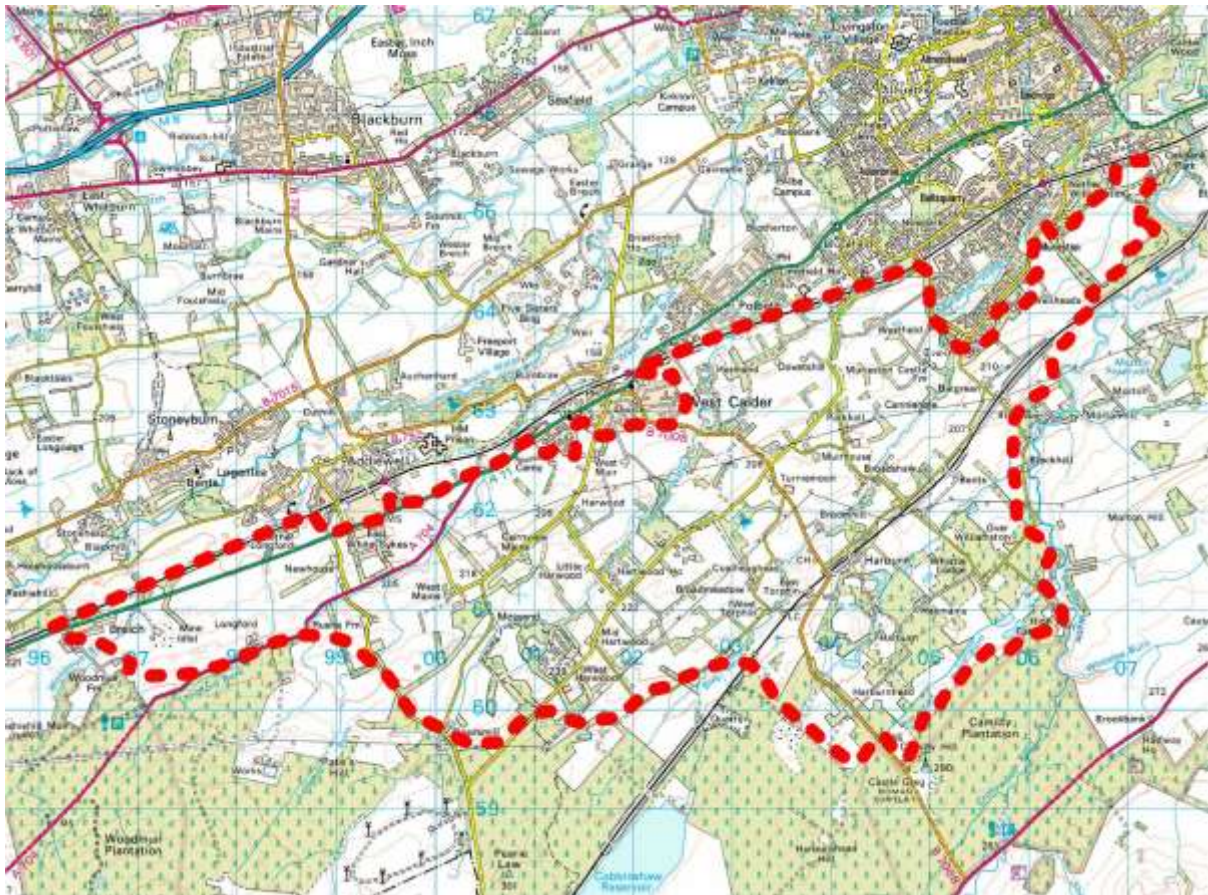
LANDSCAPE AND VISUAL IMPACT ASSESSMENT	
<i>Landscape sensitivity assessment</i>	High sensitivity
<i>Landscape objective</i>	Protection - to support landscape sensitivity and visibility analysis
<i>Landscape capacity assessment</i>	NO CAPACITY
<i>Landmark landscape features & Settings of Landmark Landscape Features</i>	Impact on views from/to: Setting of the Pentland Hills Uplands Landmark Landscape Feature
<i>Principal sensitive routes (tourist and amenity)</i>	Impact on views from: A70 South 'Lang Whang' A70 East 'Lang Whang'
<i>Important viewpoints & Sensitive visual compartments</i>	Impact on views from/to: West Cairn Hill - its sensitive visual compartment Harperigg Reservoir and its sensitive visual compartment
<i>Other landscape considerations (AGLV, cSLA)</i>	Pentland Hills AGLV Pentland Hills Candidate SLA
CONSTRAINTS & NON-LVIA CONSIDERATIONS	
<i>Group 1 - Areas where wind farms will not be acceptable: National constraints</i>	No national parks or national scenic areas. There are a number of nationally important which the council believe should be considered as constraints of national importance but none in this landscape character area.
<i>Group 2a – Areas of significant protection: National and international designations (World Heritage Sites, Natura 2000 & Ramsar sites, SSSIs, National Nature Reserves, Inventory Gardens and Designed Landscapes, Historic Battlefields)</i>	None
<i>Group 2b – Areas of significant protection: Other nationally important mapped environmental interests (areas of wild land, carbon rich soils, deep peat and priority peatland)</i>	There are no areas of wild land identified by SNH in West Lothian Carbon rich soils and peatland habitat known through Phase 1 Habitat Survey: Mire & Bog habitat
<i>Group 2c – Areas of significant protection: Community separation for consideration of visual impact (an area not exceeding 2km around cities, towns and villages identified on the local development plan with an identified settlement envelope or edge etc.)</i>	<i>Community separation for consideration of visual impacts applies for:</i> Livingston (including Mid Calder, Pumpherston & Uphall Station) Tarbrax, South Lanarkshire
<i>Other factors</i>	Pentland Hills Regional Park Rights of Way/ Paths: Cauldstane Slap; Crosswood Burn Assessment of cumulative impacts

Landscape Character Unit 3: GLADSMUIR/ WOODMUIR/ CAMILTY FRINGE

LANDSCAPE AND VISUAL IMPACT ASSESSMENT	
<i>Landscape sensitivity assessment</i>	Medium sensitivity
<i>Landscape objective</i>	Accommodation
<i>Landscape capacity assessment</i>	NO CAPACITY (taking into account cumulative impacts)
<i>Landmark landscape features & Settings of Landmark Landscape Features</i>	Impact on views from: Settings of Landmark Landscape Features – Pentland Hills Uplands
<i>Principal sensitive routes (tourist and amenity)</i>	Impact on views from: A704 A706 junction with A704 A70 east
<i>Important viewpoints & Sensitive visual compartments</i>	Impact on views from/to: West Cairn Hill & its Sensitive visual compartments
<i>Other landscape considerations (Cumulative effects, AGLV, cSLA)</i>	Cumulative effects with built and consented WED Pentland Hills AGLV (small part) Pentland Hills Candidate SLA
CONSTRAINTS & NON-LVIA CONSIDERATIONS	
<i>Group 1 - Areas where wind farms will not be acceptable: National constraints</i>	No national parks or national scenic areas. There are a number of nationally important which the council believe should be considered as constraints of national importance but none in this landscape character area.
<i>Group 2a – Areas of significant protection: National and international designations (World Heritage Sites, Natura 2000 & Ramsar sites, SSSIs, National Nature</i>	<i>Community separation for consideration of visual impacts applies for:</i> Tarbrax, South Lanarkshire Woolfords, South Lanarkshire

Reserves, Inventory Gardens and Designed Landscapes, Historic Battlefields)	
Group 2b – Areas of significant protection: Other nationally important mapped environmental interests (areas of wild land, carbon rich soils, deep peat and priority peatland)	There are no areas of wild land identified by SNH in in West Lothian Significant carbon rich soils and peatland habitat known through Phase 1 Habitat Survey: Mire & Bog habitat
Group 2c – Areas of significant protection: Community separation for consideration of visual impact (an area not exceeding 2km around cities, towns and villages identified on the local development plan with an identified settlement envelope or edge etc.)	Community separation for consideration of visual impacts applies for: Addiewell & Loganlea Breich Fauldhouse Livingston (including Mid Calder, Pumpherston & Uphall Station) Longridge Stoneyburn & Bents
Other factors	Cobbinshaw Reservoir and fishery Assessment of cumulative impacts

Landscape Character Unit 4: HARBURN/ HARTWOOD FRINGE



LANDSCAPE AND VISUAL IMPACT ASSESSMENT	
Landscape sensitivity assessment	High Sensitivity
Landscape objective	Protection/ Accommodation
Landscape capacity assessment	LOW
Landmark landscape features & Settings of Landmark Landscape	None

<i>Features</i>	
<i>Principal sensitive routes (tourist and amenity)</i>	Impact on views from: A706 junction with A704
<i>Important viewpoints & Sensitive visual compartments</i>	West Cairn Hill - its Sensitive visual compartments
<i>Other landscape considerations (AGLV, cSLA)</i>	Cumulative effects with built and consented WED See HGDL below
CONSTRAINTS & NON-LVIA CONSIDERATIONS	
<i>Group 1 - Areas where wind farms will not be acceptable: National constraints</i>	No national parks or national scenic areas. There are a number of nationally important which the council believe should be considered as constraints of national importance but none in this landscape character area.
<i>Group 2a – Areas of significant protection: National and international designations (World Heritage Sites, Natura 2000 & Ramsar sites, SSSIs, National Nature Reserves, Inventory Gardens and Designed Landscapes, Historic Battlefields)</i>	<i>Site of Special Scientific Interest:</i> Hermand Birchwood, east of West Calder <i>Site identified in Historic Scotland's Inventory of Gardens and Designed Landscapes:</i> Harburn House, south-east of West Calder
<i>Group 2b – Areas of significant protection: Other nationally important mapped environmental interests (areas of wild land, carbon rich soils, deep peat and priority peatland)</i>	There are no areas of wild land identified by SNH in West Lothian Some Carbon rich soils and peatland habitat known through Phase 1 Habitat Survey: Mire & Bog habitat
<i>Group 2c – Areas of significant protection: Community separation for consideration of visual impact (an area not exceeding 2km around cities, towns and villages identified on the local development plan with an identified settlement envelope or edge etc.)</i>	<i>Community separation for consideration of visual impacts applies for:</i> Addiewell & Loganlea Breich Livingston (including Mid Calder, Pumpherston & Uphall Station) Longridge Polbeth Stoneyburn & Bents West Calder
<i>Other factors</i>	Assessment of cumulative impacts

Landscape Character Type: LOWLAND HILLS & VALLEYS

Landscape Character Unit 5: BATHGATE HILLS



LANDSCAPE AND VISUAL IMPACT ASSESSMENT	
<i>Landscape sensitivity assessment</i>	Area of Highest Sensitivity
<i>Landscape objective</i>	Protection - Wind Energy Development (WED) and any other large scale, uncharacteristic development would be inappropriate
<i>Landscape capacity assessment</i>	NO CAPACITY
<i>Landmark landscape features & Settings of Landmark Landscape Features</i>	None
<i>Principal sensitive routes (tourist and amenity)</i>	Impact on views from: B8046 (and part of Ochiltree road)
<i>Important viewpoints & Sensitive visual compartments</i>	Impact on views from/to: The Knock – Cairnpapple Hill & its Sensitive visual compartment Binny Craig & its Sensitive visual compartment Cockleroy & its Sensitive visual compartment Avon Aqueduct - its Sensitive visual compartment
<i>Other landscape considerations (AGLV, cSLA)</i>	Bathgate Hills and River Avon Valley AGLV Bathgate Hills Candidate SLA
CONSTRAINTS & NON-LVIA CONSIDERATIONS	
<i>Group 1 - Areas where wind farms will not be acceptable: National constraints</i>	No national parks or national scenic areas. There are a number of nationally important sites which the council believe should be considered as constraints of national importance. In this landscape character area: Cairnpapple - neolithic henge and stone circle Torphichen Perceptory

<p>Group 2a – <i>Areas of significant protection: National and international designations</i> (World Heritage Sites, Natura 2000 & Ramsar sites, SSSIs, National Nature Reserves, Inventory Gardens and Designed Landscapes, Historic Battlefields)</p>	<p><i>Sites of Special Scientific Interest:</i> Lohcote Marsh, near Torphichen Petershill, near Bathgate East Kirkton Quarry, near Bathgate</p>
<p>Group 2b – <i>Areas of significant protection: Other nationally important mapped environmental interests</i> (areas of wild land, carbon rich soils, deep peat and priority peatland)</p>	<p>There are no areas of wild land identified by SNH in West Lothian Carbon rich soils and peatland habitat known through Phase 1 Habitat Survey: Mire & Bog habitat</p>
<p>Group 2c – <i>Areas of significant protection: Community separation for consideration of visual impact</i> (an area not exceeding 2km around cities, towns and villages identified on the local development plan with an identified settlement envelope or edge etc.)</p>	<p><i>Community separation for consideration of visual impacts applies for:</i> Bathgate Dechmont Ecclesmachan Linlithgow Livingston (including Mid Calder, Pumpherston & Uphall Station) Torphichen Uphall Whitecross (FC)</p>
<p>Other factors</p>	<p>Beeccraigs Country Park Assessment of cumulative impacts</p>

Landscape Character Type: BROAD VALLEY LOWLANDS

Landscape Character Unit 6: UPPER ALMOND VALLEY



LANDSCAPE AND VISUAL IMPACT ASSESSMENT	
<i>Landscape sensitivity assessment</i>	Medium sensitivity
<i>Landscape objective</i>	Accommodation
<i>Landscape capacity assessment</i>	LOW/ MEDIUM
<i>Landmark landscape features & Settings of Landmark Landscape Features</i>	None
<i>Principal sensitive routes (tourist and amenity)</i>	Impact on views from: A704 A705 Livingston to Seafield A706 and B7010 at Longridge A706 south of Whitburn Almond Valley Path Fauldhouse Rail Path National Cycle Route 75
<i>Important viewpoints & Sensitive visual compartments</i>	Impact on views from/to: Cockleroy & its Sensitive visual compartment
<i>Other landscape considerations (AGLV, cSLA)</i>	Cumulative effects with built and consented WED
CONSTRAINTS & NON-LVIA CONSIDERATIONS	
<i>Group 1 - Areas where wind farms will not be acceptable: National constraints</i>	No national parks or national scenic areas. There are a number of nationally important sites which the council believe should be considered as constraints of national importance. In this landscape character area: Five Sisters Shale Bing and scheduled monument, north of West Calder
<i>Group 2a – Areas of significant protection: National and international designations (World Heritage Sites, Natura 2000 & Ramsar sites, SSSIs, National Nature Reserves, Inventory Gardens and Designed Landscapes, Historic Battlefields)</i>	None
<i>Group 2b – Areas of significant protection: Other nationally important mapped environmental interests (areas of wild land, carbon rich soils, deep peat and priority peatland)</i>	There are no areas of wild land identified by SNH in West Lothian
<i>Group 2c – Areas of significant protection: Community separation for consideration of visual impact (an area not exceeding 2km around cities, towns and villages identified on the local development plan with an identified settlement envelope or edge etc.)</i>	<i>Community separation for consideration of visual impacts applies for:</i> Addiewell & Loganlea Armadale Bathgate Blackburn Breich East Whitburn Fauldhouse Greenrigg Livingston (including Mid Calder, Pumpherston & Uphall Station) Longridge Polbeth Seafield Stoneyburn & Bents West Calder Whitburn
<i>Other factors</i>	Almond Valley Heritage Centre (adjacent, within Livingston) Assessment of cumulative impacts

Landscape Character Unit 7: COUSTON VALLEY



LANDSCAPE AND VISUAL IMPACT ASSESSMENT	
<i>Landscape sensitivity assessment</i>	Medium sensitivity
<i>Landscape objective</i>	Protection - to support landscape sensitivity and visibility analysis
<i>Landscape capacity assessment</i>	NO CAPACITY
<i>Landmark landscape features & Settings of Landmark Landscape Features</i>	None
<i>Principal sensitive routes (tourist and amenity)</i>	Impact on views from: A800/A801
<i>Important viewpoints & Sensitive visual compartments</i>	Impact on views from/to: The Knock – Cairnpapple Hill - its Sensitive visual compartments
<i>Other landscape considerations (AGLV, CSLA)</i>	None, but important to setting of Bathgate Hills AGLV, Bathgate Hills CSLA and Avon Valley CSLA
CONSTRAINTS & NON-LVIA CONSIDERATIONS	
<i>Group 1 - Areas where wind farms will not be acceptable: National constraints</i>	No national parks or national scenic areas. There are a number of nationally important sites which the council believe should be considered as constraints of national importance but none in this landscape character area.
<i>Group 2a – Areas of significant protection: National and international designations (World Heritage Sites, Natura 2000 & Ramsar sites, SSSIs, National Nature Reserves, Inventory Gardens and Designed Landscapes, Historic Battlefields)</i>	None

Group 2b – Areas of significant protection: Other nationally important mapped environmental interests (areas of wild land, carbon rich soils, deep peat and priority peatland)	There are no areas of wild land identified by SNH in West Lothian
Group 2c – Areas of significant protection: Community separation for consideration of visual impact (an area not exceeding 2km around cities, towns and villages identified on the local development plan with an identified settlement envelope or edge etc.)	Community separation for consideration of visual impacts applies for: Armadale Bathgate Torphichen Westfield
Other factors	Assessment of cumulative impacts

Landscape Character Type: LOWLAND PLATEAUX

Landscape Character Unit 8: POLKEMMET MOOR



LANDSCAPE AND VISUAL IMPACT ASSESSMENT	
Landscape sensitivity assessment	Medium sensitivity
Landscape objective	Accommodation
Landscape capacity assessment	MEDIUM
Landmark landscape features & Settings of Landmark Landscape	None

<i>Features</i>	
<i>Principal sensitive routes (tourist and amenity)</i>	Impact on views from: A704 A706 junction with A704 A70 east
<i>Important viewpoints & Sensitive visual compartments</i>	None
<i>Other landscape considerations (AGLV, cSLA)</i>	Cumulative effects with built and consented WED
CONSTRAINTS & NON-LVIA CONSIDERATIONS	
<i>Group 1 - Areas where wind farms will not be acceptable: National constraints</i>	No national parks or national scenic areas. There are a number of nationally important sites which the council believe should be considered as constraints of national importance but none in this landscape character area.
<i>Group 2a – Areas of significant protection: National and international designations (World Heritage Sites, Natura 2000 & Ramsar sites, SSSIs, National Nature Reserves, Inventory Gardens and Designed Landscapes, Historic Battlefields)</i>	None
<i>Group 2b – Areas of significant protection: Other nationally important mapped environmental interests (areas of wild land, carbon rich soils, deep peat and priority peatland)</i>	There are no areas of wild land identified by SNH in West Lothian Carbon rich soils and peatland habitat known through Phase 1 Habitat Survey: Mire & Bog habitat
<i>Group 2c – Areas of significant protection: Community separation for consideration of visual impact (an area not exceeding 2km around cities, towns and villages identified on the local development plan with an identified settlement envelope or edge etc.)</i>	<i>Community separation for consideration of visual impacts applies for:</i> East Whitburn Fauldhouse Greenrigg Longridge Whitburn Harthill (NLC)
<i>Other factors</i>	Polkemmet Country Park Assessment of cumulative impacts

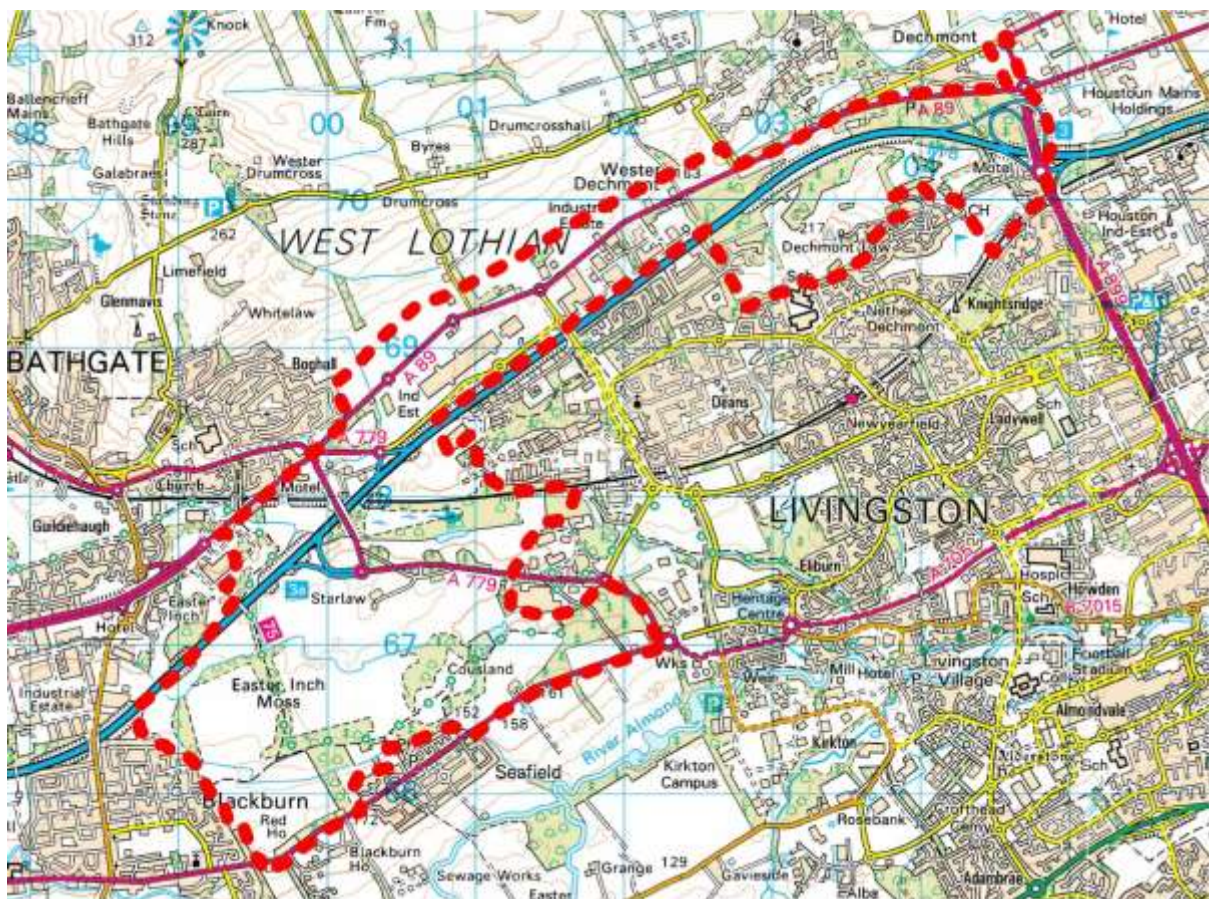
Landscape Character Unit 9: ARMADALE/ BATHGATE PLATEAU



LANDSCAPE AND VISUAL IMPACT ASSESSMENT	
Landscape sensitivity assessment	Medium sensitivity
Landscape objective	Protection - to support landscape sensitivity and visibility analysis
Landscape capacity assessment	NO CAPACITY
Landmark landscape features & Settings of Landmark Landscape Features	None
Principal sensitive routes (tourist and amenity)	Impact on views from: A89 Blackridge to Armadale National Cycle Route 75
Important viewpoints & Sensitive visual compartments	Impact on views from/to: The Knock – Cairnpapple Hill - Sensitive visual compartments
Other landscape considerations (AGLV, cSLA)	West part important in setting of Blackridge Heights AGLV and CSLA Existing and potential cumulative impacts for Blackridge
CONSTRAINTS & NON-LVIA CONSIDERATIONS	
Group 1 - Areas where wind farms will not be acceptable: National constraints	No national parks or national scenic areas. There are a number of nationally important which the council believe should be considered as constraints of national importance but none in this landscape character area.
Group 2a – Areas of significant protection: National and international designations (World Heritage Sites, Natura 2000 & Ramsar sites, SSSIs, National Nature Reserves, Inventory Gardens and Designed Landscapes, Historic Battlefields)	None

Group 2b – Areas of significant protection: Other nationally important mapped environmental interests (areas of wild land, carbon rich soils, deep peat and priority peatland)	There are no areas of wild land identified by SNH in West Lothian Carbon rich soils and peatland habitat known through Phase 1 Habitat Survey: M Bog habitat
Group 2c – Areas of significant protection: Community separation for consideration of visual impact (an area not exceeding 2km around cities, towns and villages identified on the local development plan with an identified settlement envelope or edge etc.)	Community separation for consideration of visual impacts applies for: Armadale Bathgate Blackburn Blackridge East Whitburn Greenrigg Longridge Whitburn
Other factors	Assessment of cumulative impacts

Landscape Character Unit 10: LIVINGSTON/ BLACKBURN PLATEAU



LANDSCAPE AND VISUAL IMPACT ASSESSMENT	
Landscape sensitivity assessment	Medium sensitivity
Landscape objective	Accommodation
Landscape capacity assessment	LOW
Landmark landscape features & Settings of Landmark Landscape Features	None
Principal sensitive routes (tourist and amenity)	Impact on views from: A705 Livingston to Seafield National Cycle Route 75

	Almond Valley Path
<i>Important viewpoints & Sensitive visual compartments</i>	None
<i>Other landscape considerations (AGLV, cSLA)</i>	Forms part of setting of Bathgate Hills AGLV/ CSLA
CONSTRAINTS & NON-LVIA CONSIDERATIONS	
<i>Group 1 - Areas where wind farms will not be acceptable: National constraints</i>	No national parks or national scenic areas. There are a number of nationally important which the council believe should be considered as constraints of national importance but none in this landscape character area.
<i>Group 2a – Areas of significant protection: National and international designations (World Heritage Sites, Natura 2000 & Ramsar sites, SSSIs, National Nature Reserves, Inventory Gardens and Designed Landscapes, Historic Battlefields)</i>	<i>Site of Special Scientific Interest:</i> Tailend Moss, near Deans, Livingston
<i>Group 2b – Areas of significant protection: Other nationally important mapped environmental interests (areas of wild land, carbon rich soils, deep peat and priority peatland)</i>	There are no areas of wild land identified by SNH in West Lothian Carbon rich soils and peatland habitat known through Phase 1 Habitat Survey: M Bog habitat
<i>Group 2c – Areas of significant protection: Community separation for consideration of visual impact (an area not exceeding 2km around cities, towns and villages identified on the local development plan with an identified settlement envelope or edge etc.)</i>	<i>Community separation for consideration of visual impacts applies for:</i> Bathgate Blackburn Dechmont Livingston (including Mid Calder, Pumpherston & Uphall Station) Seafield Uphall
<i>Other factors</i>	Assessment of cumulative impacts

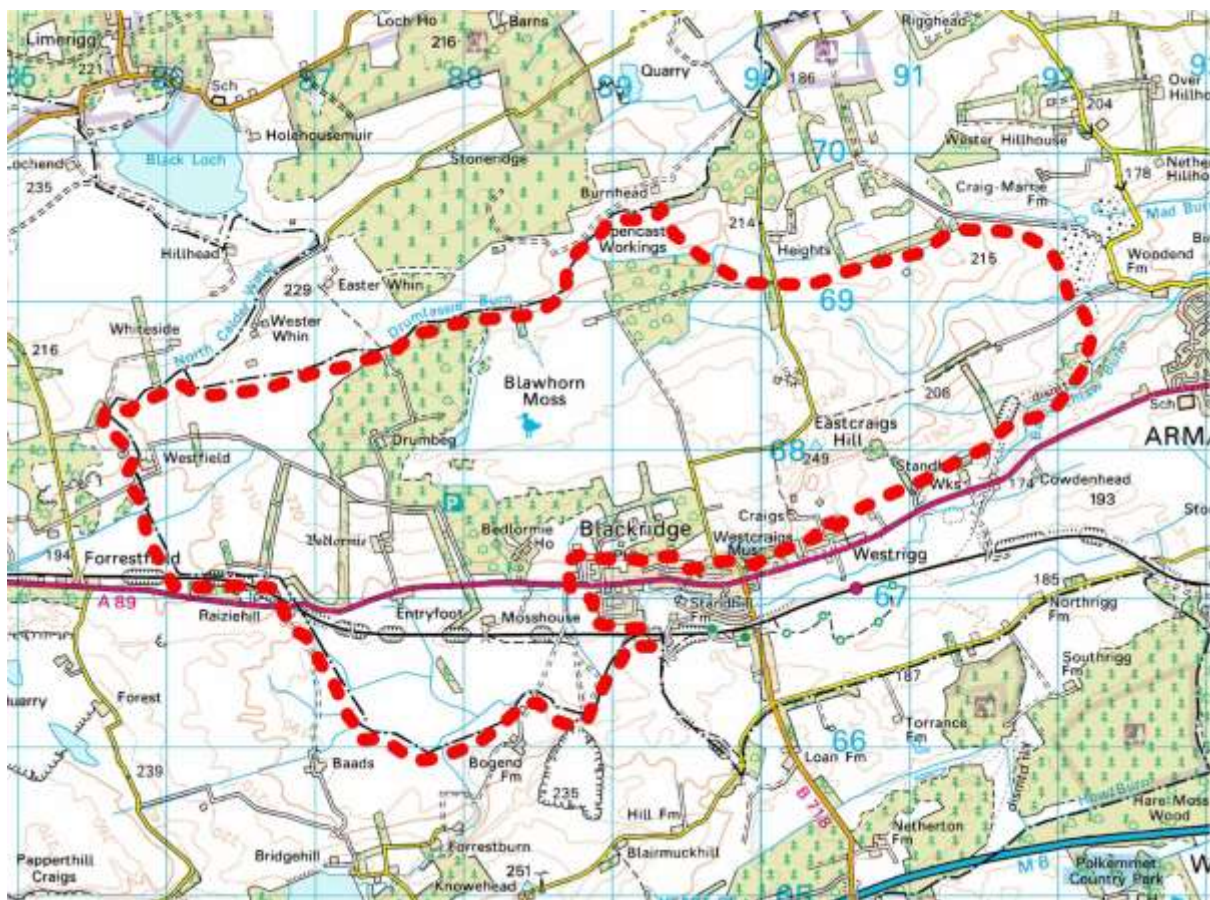
Landscape Character Unit 11: AVONBRIDGE TO ARMADALE PLATEAU EDGE



LANDSCAPE AND VISUAL IMPACT ASSESSMENT	
<i>Landscape sensitivity assessment</i>	High sensitivity
<i>Landscape objective</i>	Protection - to support landscape sensitivity and visibility analysis
<i>Landscape capacity assessment</i>	NO CAPACITY
<i>Landmark landscape features & Settings of Landmark Landscape Features</i>	None
<i>Principal sensitive routes (tourist and amenity)</i>	Impact on views from: A89 Blackridge to Armadale
<i>Important viewpoints & Sensitive visual compartments</i>	Impact on views from/to: The Knock – Cairnpapple Hill - its Sensitive visual compartments
<i>Other landscape considerations (AGLV, cSLA)</i>	Blackridge Heights AGLV/CSLA and Avon Valley CSLA
CONSTRAINTS & NON-LVIA CONSIDERATIONS	
<i>Group 1 - Areas where wind farms will not be acceptable: National constraints</i>	No national parks or national scenic areas. There are a number of nationally important which the council believe should be considered as constraints of national importance but none in this landscape character area.
<i>Group 2a – Areas of significant protection: National and international designations (World Heritage Sites, Natura 2000 & Ramsar sites, SSSIs, National Nature Reserves, Inventory Gardens and Designed Landscapes, Historic Battlefields)</i>	None
<i>Group 2b – Areas of significant</i>	There are no areas of wild land identified by SNH in West Lothian

<i>protection: Other nationally important mapped environmental interests (areas of wild land, carbon rich soils, deep peat and priority peatland)</i>	Some Carbon rich soils and peatland habitat known through Phase 1 Habitat Survey: Mire & Bog habitat
<i>Group 2c – Areas of significant protection: Community separation for consideration of visual impact (an area not exceeding 2km around cities, towns and villages identified on the local development plan with an identified settlement envelope or edge etc.)</i>	<i>Community separation for consideration of visual impacts applies for:</i> Armadale Blackridge Westfield Avonbridge (FC)
<i>Other factors</i>	Assessment of cumulative impacts

Landscape Character Unit 12: BLACKRIDGE HEIGHTS



LANDSCAPE AND VISUAL IMPACT ASSESSMENT	
<i>Landscape sensitivity assessment</i>	Area of Highest Sensitivity
<i>Landscape objective</i>	Protection - Wind Energy Development (WED) and any other large scale, uncharacteristic development would be inappropriate
<i>Landscape capacity assessment</i>	NO CAPACITY
<i>Landmark landscape features & Settings of Landmark Landscape Features</i>	None
<i>Principal sensitive routes (tourist and amenity)</i>	Impact on views from: National Cycle Route 75
<i>Important viewpoints & Sensitive</i>	Impact on views from/to:

<i>visual compartments</i>	Blawhorn Moss & its Sensitive visual compartment
<i>Other landscape considerations (AGLV, cSLA)</i>	Blackridge Heights AGLV Blackridge Heights Candidate SLA Existing and potential cumulative impacts from WED
CONSTRAINTS & NON-LVIA CONSIDERATIONS	
<i>Group 1 - Areas where wind farms will not be acceptable: National constraints</i>	No national parks or national scenic areas. There are a number of nationally important which the council believe should be considered as constraints of national importance but none in this landscape character area.
<i>Group 2a – Areas of significant protection: National and international designations (World Heritage Sites, Natura 2000 & Ramsar sites, SSSIs, National Nature Reserves, Inventory Gardens and Designed Landscapes, Historic Battlefields)</i>	Natura 2000: <i>Special Area of Conservation:</i> Blawhorn Moss, north of Blackridge <i>National Nature Reserve:</i> Blawhorn Moss <i>Sites of Special Scientific Interest:</i> Blawhorn Moss
<i>Group 2b – Areas of significant protection: Other nationally important mapped environmental interests (areas of wild land, carbon rich soils, deep peat and priority peatland)</i>	There are no areas of wild land identified by SNH in West Lothian Significant carbon rich soils and peatland habitat known through Phase 1 Habitat Survey: Mire & Bog habitat
<i>Group 2c – Areas of significant protection: Community separation for consideration of visual impact (an area not exceeding 2km around cities, towns and villages identified on the local development plan with an identified settlement envelope or edge etc.)</i>	<i>Community separation for consideration of visual impacts applies for:</i> Armadale Blackridge Harthill (NLC)
<i>Other factors</i>	Assessment of cumulative impacts

Landscape Character Type: **LOWLAND PLAINS**Landscape Character Unit 13: **KIRKNEWTON PLAIN**

LANDSCAPE AND VISUAL IMPACT ASSESSMENT	
<i>Landscape sensitivity assessment</i>	Medium sensitivity
<i>Landscape objective</i>	Accommodation
<i>Landscape capacity assessment</i>	LOW
<i>Landmark landscape features & Settings of Landmark Landscape Features</i>	None
<i>Principal sensitive routes (tourist and amenity)</i>	Impact on views from: National Cycle Route 75
<i>Important viewpoints & Sensitive visual compartments</i>	Impact on views from/to: West Cairn Hill & its Sensitive visual compartments
<i>Other landscape considerations (AGLV, cSLA)</i>	Pentland Hills AGLV Pentland Hills Candidate SLA
CONSTRAINTS & NON-LVIA CONSIDERATIONS	
<i>Group 1 - Areas where wind farms will not be acceptable: National constraints</i>	No national parks or national scenic areas. There are a number of nationally important sites which the council believe should be considered as constraints of national importance but none in this landscape character area.
<i>Group 2a – Areas of significant protection: National and international designations (World Heritage Sites, Natura 2000 &</i>	<i>Site identified in Historic Scotland's Inventory of Gardens and Designed Landscapes:</i> Hatton House, east of Wilkieston (southern part only, main part within City of Edinburgh)

Ramsar sites, SSSIs, National Nature Reserves, Inventory Gardens and Designed Landscapes, Historic Battlefields)	
Group 2b – Areas of significant protection: Other nationally important mapped environmental interests (areas of wild land, carbon rich soils, deep peat and priority peatland)	There are no areas of wild land identified by SNH in West Lothian
Group 2c – Areas of significant protection: Community separation for consideration of visual impact (an area not exceeding 2km around cities, towns and villages identified on the local development plan with an identified settlement envelope or edge etc.)	Community separation for consideration of visual impacts applies for: East Calder Kirkliston Livingston (including Mid Calder, Pumpherston & Uphall Station) Wilkieston
Other factors	Kirknewton Airfield (adjacent within Edinburgh City) Assessment of cumulative impacts

Landscape Character Unit 14: EAST CALDER/ LIVINGSTON/ BROXBURN PLAIN

(NB: split north and south of LCU 17: Almond Valley)

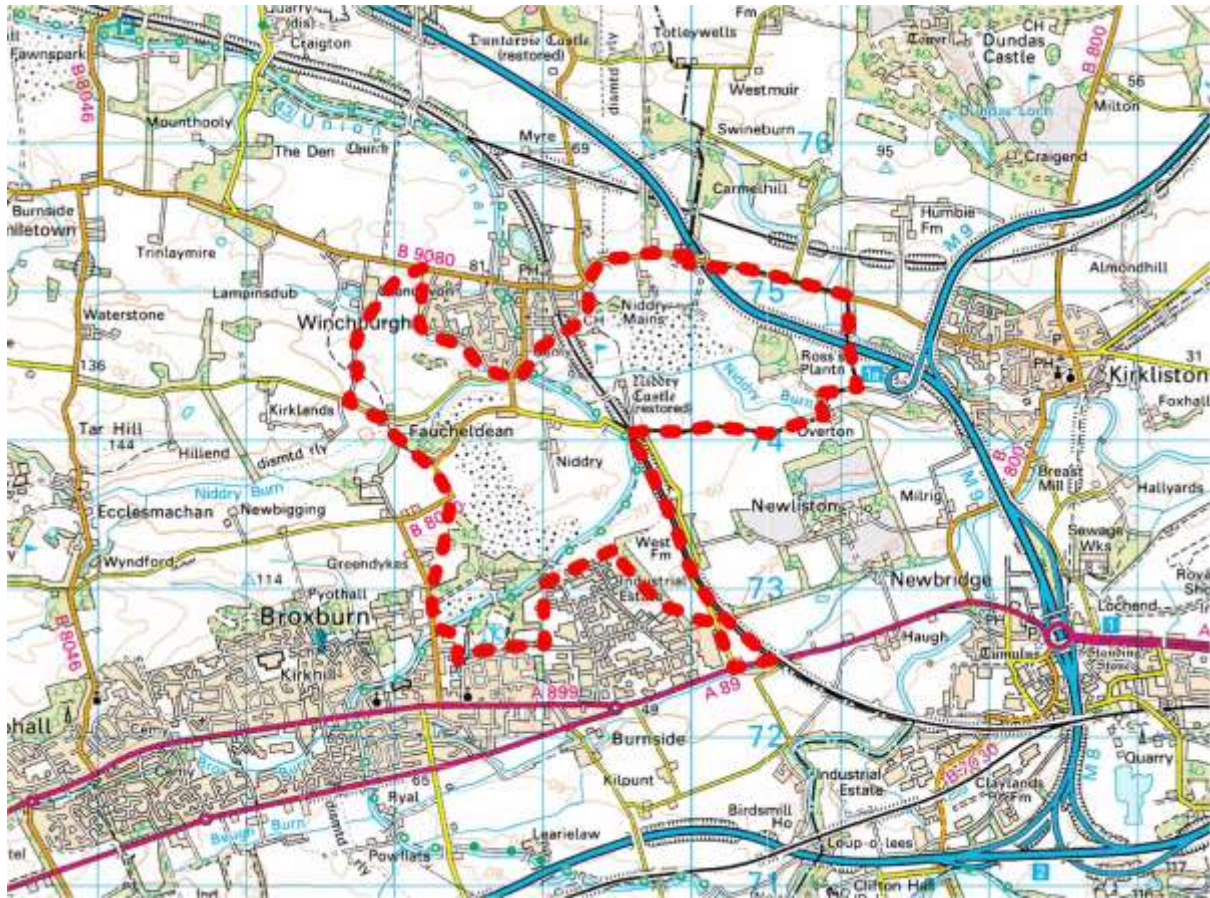


LANDSCAPE AND VISUAL IMPACT ASSESSMENT

Landscape sensitivity assessment	Medium sensitivity
Landscape objective	Accommodation
Landscape capacity assessment	LOW

<i>Landmark landscape features & Settings of Landmark Landscape Features</i>	None
<i>Principal sensitive routes (tourist and amenity)</i>	Impact on views from: M8 A899 Livingston Spine Road Dechmont to Newbridge Cycle Path Union Canal Tow Path Union Canal Feeder Path
<i>Important viewpoints & Sensitive visual compartments</i>	Impact on views from/to: Binny Craig - its Sensitive visual compartment
<i>Other landscape considerations (AGLV, cSLA)</i>	Almond and Linhouse Valleys AGLV Almond and Linhouse Valleys Candidate SLA
CONSTRAINTS & NON-LVIA CONSIDERATIONS	
<i>Group 1 - Areas where wind farms will not be acceptable: National constraints</i>	No national parks or national scenic areas. There are a number of nationally important sites which the council believe should be considered as constraints of national importance. In this landscape character area: Union Canal and Towpath, by settlements of Linlithgow, Philipstoun, Winchburgh and Broxburn
<i>Group 2a – Areas of significant protection: National and international designations (World Heritage Sites, Natura 2000 & Ramsar sites, SSSIs, National Nature Reserves, Inventory Gardens and Designed Landscapes, Historic Battlefields)</i>	None
<i>Group 2b – Areas of significant protection: Other nationally important mapped environmental interests (areas of wild land, carbon rich soils, deep peat and priority peatland)</i>	There are no areas of wild land identified by SNH in West Lothian
<i>Group 2c – Areas of significant protection: Community separation for consideration of visual impact (an area not exceeding 2km around cities, towns and villages identified on the local development plan with an identified settlement envelope or edge etc.)</i>	<i>Community separation for consideration of visual impacts applies for:</i> Broxburn Dechmont East Calder Ecclesmachan, Kirkliston Livingston (including Mid Calder, Pumpherston & Uphall Station) Uphall Wilkieston Newbridge (CEC)
<i>Other factors</i>	Assessment of cumulative impacts

Landscape Character Unit 15: WINCHBURGH/ NIDDRY PLAIN

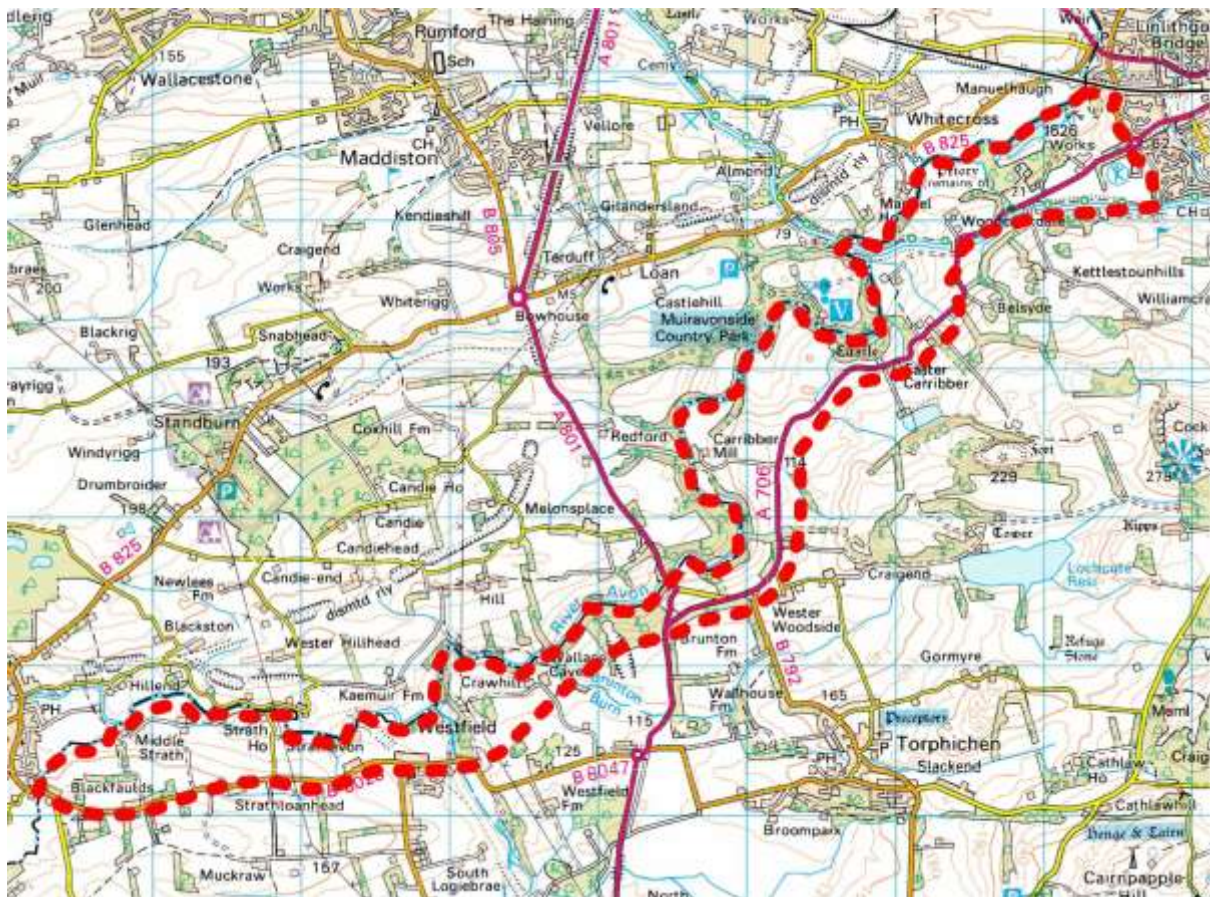


LANDSCAPE AND VISUAL IMPACT ASSESSMENT	
<i>Landscape sensitivity assessment</i>	Medium sensitivity
<i>Landscape objective</i>	Accommodation
<i>Landscape capacity assessment</i>	LOW
<i>Landmark landscape features & Settings of Landmark Landscape Features</i>	None
<i>Principal sensitive routes (tourist and amenity)</i>	Impact on views from: M9 west of Jcn. 1a Union Canal Tow Path
<i>Important viewpoints & Sensitive visual compartments</i>	None
<i>Other landscape considerations (AGLV, cSLA)</i>	This area scored highly in the Local Landscape Designation Review, is important in terms of industrial heritage and maintaining separation of communities to avoid coalescence. It is identified as Countryside Belt.
CONSTRAINTS & NON-LVIA CONSIDERATIONS	
<i>Group 1 - Areas where wind farms will not be acceptable: National constraints</i>	No national parks or national scenic areas. There are a number of nationally important sites which the council believe should be considered as constraints of national importance. In this landscape character area. Union Canal and Towpath, by settlements of Linlithgow, Philipstoun, Winchburgh and Broxburn
<i>Group 2a – Areas of significant</i>	<i>Site identified in Historic Scotland's Inventory of Gardens and Designed Landscapes:</i>

<p><i>protection: National and international designations (World Heritage Sites, Natura 2000 & Ramsar sites, SSSIs, National Nature Reserves, Inventory Gardens and Designed Landscapes, Historic Battlefields)</i></p>	<p>Newliston House, immediately east of Broxburn, is predominantly within Edinburgh City</p>
<p><i>Group 2b – Areas of significant protection: Other nationally important mapped environmental interests (areas of wild land, carbon rich soils, deep peat and priority peatland)</i></p>	<p>There are no areas of wild land identified by SNH in West Lothian</p>
<p><i>Group 2c – Areas of significant protection: Community separation for consideration of visual impact (an area not exceeding 2km around cities, towns and villages identified on the local development plan with an identified settlement envelope or edge etc.)</i></p>	<p><i>Community separation for consideration of visual impacts applies for:</i> Broxburn Winchburgh Kirkliston (CEC) Newbridge (CEC)</p>
<p>Other factors</p>	<p>Assessment of cumulative impacts</p>

Landscape Character Type: LOWLAND RIVER CORRIDORS

Landscape Character Unit 16: AVON VALLEY



LANDSCAPE AND VISUAL IMPACT ASSESSMENT	
<i>Landscape sensitivity assessment</i>	High sensitivity
<i>Landscape objective</i>	Protection - to support landscape sensitivity and visibility analysis
<i>Landscape capacity assessment</i>	NO CAPACITY
<i>Landmark landscape features & Settings of Landmark Landscape Features</i>	None
<i>Principal sensitive routes (tourist and amenity)</i>	Impact on views from: Union Canal Tow Path
<i>Important viewpoints & Sensitive visual compartments</i>	Impact on views from/to: Cockleroy - its Sensitive visual compartment Avon Aqueduct & its Sensitive visual compartment
<i>Other landscape considerations (AGLV, cSLA)</i>	Bathgate Hills and River Avon Valley AGLV Avon Valley Candidate SLA
CONSTRAINTS & NON-LVIA CONSIDERATIONS	
<i>Group 1 - Areas where wind farms will not be acceptable: National constraints</i>	No national parks or national scenic areas. There are a number of nationally important sites which the council believe should be considered as constraints of national importance. In this landscape character area: Union Canal and Towpath, by settlements of Linlithgow, Philipstoun, Winchburgh and Broxburn
<i>Group 2a – Areas of significant protection: National and international designations (World Heritage Sites, Natura 2000 & Ramsar sites, SSSIs, National Nature Reserves, Inventory Gardens and Designed Landscapes, Historic Battlefields)</i>	<i>Site of Special Scientific Interest:</i> Carriber Glen, near Torphichen <i>Sites identified in Historic Scotland's Inventory of Historic Battlefields:</i> Battle of Linlithgow Bridge site (part in Falkirk Council area)
<i>Group 2b – Areas of significant protection: Other nationally important mapped environmental interests (areas of wild land, carbon rich soils, deep peat and priority peatland)</i>	There are no areas of wild land identified by SNH in West Lothian
<i>Group 2c – Areas of significant protection: Community separation for consideration of visual impact (an area not exceeding 2km around cities, towns and villages identified on the local development plan with an identified settlement envelope or edge etc.)</i>	<i>Community separation for consideration of visual impacts applies for:</i> Linlithgow Torphichen Westfield Avonbridge (FC) Whitecross (FC)
<i>Other factors</i>	Assessment of cumulative impacts

Landscape Character Unit 17: ALMOND VALLEY

**LANDSCAPE AND VISUAL IMPACT ASSESSMENT**

<i>Landscape sensitivity assessment</i>	High sensitivity
<i>Landscape objective</i>	Protection
<i>Landscape capacity assessment</i>	NO CAPACITY
<i>Landmark landscape features & Settings of Landmark Landscape Features</i>	None
<i>Principal sensitive routes (tourist and amenity)</i>	Impact on views from: Feeder Canal Path Union Canal Tow Path National Cycle Route 75
<i>Important viewpoints & Sensitive visual compartments</i>	Impact on views from/to: West Cairn Hill – sensitive visual compartment
<i>Other landscape considerations (AGLV, cSLA)</i>	Almond and Linhouse Valleys AGLV Almond and Linhouse Valleys Candidate SLA
CONSTRAINTS & NON-LVIA CONSIDERATIONS	
<i>Group 1 - Areas where wind farms will not be acceptable: National constraints</i>	No national parks or national scenic areas. There are a number of nationally important sites which the council believe should be considered as constraints of national importance but none in this landscape character area.
<i>Group 2a – Areas of significant protection: National and international designations (World Heritage Sites, Natura 2000 & Ramsar sites, SSSIs, National Nature Reserves, Inventory Gardens and Designed Landscapes, Historic</i>	None

Battlefields)	
Group 2b – Areas of significant protection: Other nationally important mapped environmental interests (areas of wild land, carbon rich soils, deep peat and priority peatland)	There are no areas of wild land identified by SNH in West Lothian
Group 2c – Areas of significant protection: Community separation for consideration of visual impact (an area not exceeding 2km around cities, towns and villages identified on the local development plan with an identified settlement envelope or edge etc.)	Community separation for consideration of visual impacts applies for: East Calder Kirkliston Livingston (including Mid Calder, Pumpherston & Uphall Station) Newbridge (CEC)
Other factors	Almondell & Calderwood Country Park Assessment of cumulative impacts

Landscape Character Unit 18: MURIESTON/ LINHOUSE/ CAMILTY WATERS



LANDSCAPE AND VISUAL IMPACT ASSESSMENT	
Landscape sensitivity assessment	High sensitivity
Landscape objective	Protection - to support landscape sensitivity and visibility analysis
Landscape capacity assessment	NO CAPACITY
Landmark landscape features & Settings of Landmark Landscape Features	None
Principal sensitive routes (tourist and amenity)	Impact on views from: A704

	A706 junction with A704 A70 east
<i>Important viewpoints & Sensitive visual compartments</i>	None
<i>Other landscape considerations (AGLV, cSLA)</i>	Almond and Linhouse Valleys AGLV Almond and Linhouse Valleys Candidate SLA
CONSTRAINTS & NON-LVIA CONSIDERATIONS	
<i>Group 1 - Areas where wind farms will not be acceptable: National constraints</i>	No national parks or national scenic areas. There are a number of nationally important sites which the council believe should be considered as constraints of national importance but none in this landscape character area.
<i>Group 2a – Areas of significant protection: National and international designations (World Heritage Sites, Natura 2000 & Ramsar sites, SSSIs, National Nature Reserves, Inventory Gardens and Designed Landscapes, Historic Battlefields)</i>	<i>Sites of Special Scientific Interest:</i> Linhouse Valley, Murieston Calder Wood, near Mid Calder
<i>Group 2b – Areas of significant protection: Other nationally important mapped environmental interests (areas of wild land, carbon rich soils, deep peat and priority peatland)</i>	There are no areas of wild land identified by SNH in West Lothian
<i>Group 2c – Areas of significant protection: Community separation for consideration of visual impact (an area not exceeding 2km around cities, towns and villages identified on the local development plan with an identified settlement envelope or edge etc.)</i>	<i>Community separation for consideration of visual impacts applies for:</i> East Calder Livingston (including Mid Calder, Pumpherston & Uphall Station)
<i>Other factors</i>	Assessment of cumulative impacts

Landscape Character Unit 19: WEST CALDER BURN & BREICH WATER



LANDSCAPE AND VISUAL IMPACT ASSESSMENT	
<i>Landscape sensitivity assessment</i>	Medium sensitivity
<i>Landscape objective</i>	Accommodation
<i>Landscape capacity assessment</i>	LOW
<i>Landmark landscape features & Settings of Landmark Landscape Features</i>	None
<i>Principal sensitive routes (tourist and amenity)</i>	Impact on views from: A704, A706, A705 Fauldhouse Rail Path
<i>Important viewpoints & Sensitive visual compartments</i>	None
<i>Other landscape considerations (AGLV, cSLA)</i>	Cumulative effects with built and consented WED
CONSTRAINTS & NON-LVIA CONSIDERATIONS	
<i>Group 1 - Areas where wind farms will not be acceptable: National constraints</i>	No national parks or national scenic areas. There are a number of nationally important sites which the council believe should be considered as constraints of national importance but none in this landscape character area.
<i>Group 2a – Areas of significant protection: National and international designations (World Heritage Sites, Natura 2000 & Ramsar sites, SSSIs, National Nature Reserves, Inventory Gardens and Designed Landscapes, Historic Battlefields)</i>	<i>Site of Special Scientific Interest:</i> Skolie Burn, Loganlea, Addiewell

Group 2b – <i>Areas of significant protection: Other nationally important mapped environmental interests (areas of wild land, carbon rich soils, deep peat and priority peatland)</i>	There are no areas of wild land identified by SNH in West Lothian
Group 2c – <i>Areas of significant protection: Community separation for consideration of visual impact (an area not exceeding 2km around cities, towns and villages identified on the local development plan with an identified settlement envelope or edge etc.)</i>	<i>Community separation for consideration of visual impacts applies for:</i> Addiewell & Loganlea Breich Fauldhouse Livingston (including Mid Calder, Pumpherston & Uphall Station) Longridge Polbeth Seafield Stoneyburn & Bents West Calder
Other factors	Assessment of cumulative impacts

Landscape Character Type: LOWLAND HILL FRINGES

Landscape Character Unit 20: LINLITHGOW FRINGE



LANDSCAPE AND VISUAL IMPACT ASSESSMENT	
Landscape sensitivity assessment	Area of highest sensitivity
Landscape objective	Protection - to support landscape sensitivity and visibility analysis

<i>Landscape capacity assessment</i>	NO CAPACITY
<i>Landmark landscape features & Settings of Landmark Landscape Features</i>	Linlithgow Loch and Palace Landmark Landscape & Setting of this Landmark Landscape Feature
<i>Principal sensitive routes (tourist and amenity)</i>	Impact on views from: M9 west of Jcn. 2 Union Canal Tow Path
<i>Important viewpoints & Sensitive visual compartments</i>	Impact on views from/to: Cockleroy & its Sensitive visual compartment Avon Aqueduct - its Sensitive visual compartment
<i>Other landscape considerations (AGLV, cSLA)</i>	Airngarth Hill AGLV Airngarth Hill Candidate SLA
CONSTRAINTS & NON-LVIA CONSIDERATIONS	
<i>Group 1 - Areas where wind farms will not be acceptable: National constraints</i>	No national parks or national scenic areas. There are a number of nationally important sites which the council believe should be considered as constraints of national importance. In this landscape character area: Linlithgow Palace and Peel Union Canal and Towpath, by settlements of Linlithgow, Philipstoun, Winchburgh and Broxburn
<i>Group 2a – Areas of significant protection: National and international designations (World Heritage Sites, Natura 2000 & Ramsar sites, SSSIs, National Nature Reserves, Inventory Gardens and Designed Landscapes, Historic Battlefields)</i>	<i>Sites of Special Scientific Interest:</i> Linlithgow Loch
<i>Group 2b – Areas of significant protection: Other nationally important mapped environmental interests (areas of wild land, carbon rich soils, deep peat and priority peatland)</i>	There are no areas of wild land identified by SNH in West Lothian
<i>Group 2c – Areas of significant protection: Community separation for consideration of visual impact (an area not exceeding 2km around cities, towns and villages identified on the local development plan with an identified settlement envelope or edge etc.)</i>	<i>Community separation for consideration of visual impacts applies for:</i> Bridgend Linlithgow Whitecross (FC) Bo'ness (FC)
<i>Other factors</i>	Assessment of cumulative impacts

Landscape Character Unit 21: BATHGATE HILLS FRINGE



LANDSCAPE AND VISUAL IMPACT ASSESSMENT	
<i>Landscape sensitivity assessment</i>	Medium sensitivity
<i>Landscape objective</i>	Accommodation
<i>Landscape capacity assessment</i>	LOW
<i>Landmark landscape features & Settings of Landmark Landscape Features</i>	None
<i>Principal sensitive routes (tourist and amenity)</i>	Impact on views from: B8046/ Ochiltree Road Union Canal Tow Path
<i>Important viewpoints & Sensitive visual compartments</i>	Impact on views from/to: Binny Craig - its Sensitive visual compartment Cockleroy - its Sensitive visual compartment Tower at House of the Binns - its Sensitive visual compartments
<i>Other landscape considerations (AGLV, cSLA)</i>	Important for setting of Bathgate Hills AGLV/CSLA
CONSTRAINTS & NON-LVIA CONSIDERATIONS	
<i>Group 1 - Areas where wind farms will not be acceptable: National constraints</i>	No national parks or national scenic areas. There are a number of nationally important sites which the council believe should be considered as constraints of national importance. In this landscape character area: Union Canal and Towpath, by settlements of Linlithgow, Philpstoun, Winchburgh and Broxburn
<i>Group 2a – Areas of significant protection: National and international designations (World</i>	None

Heritage Sites, Natura 2000 & Ramsar sites, SSSIs, National Nature Reserves, Inventory Gardens and Designed Landscapes, Historic Battlefields)	
Group 2b – Areas of significant protection: Other nationally important mapped environmental interests (areas of wild land, carbon rich soils, deep peat and priority peatland)	There are no areas of wild land identified by SNH in West Lothian
Group 2c – Areas of significant protection: Community separation for consideration of visual impact (an area not exceeding 2km around cities, towns and villages identified on the local development plan with an identified settlement envelope or edge etc.)	Community separation for consideration of visual impacts applies for: Bridgend Broxburn Dechmont Ecclesmachan Linlithgow Livingston (including Mid Calder, Pumpherston & Uphall Station) Philpstoun Uphall Winchburgh
Other factors	Assessment of cumulative impacts

Landscape Character Type: COASTAL MARGINS

Landscape Character Unit 22: WEST LOTHIAN COASTAL FARMLANDS (Inland)



LANDSCAPE AND VISUAL IMPACT ASSESSMENT	
<i>Landscape sensitivity assessment</i>	Medium sensitivity
<i>Landscape objective</i>	Protection - to support landscape sensitivity and visibility analysis
<i>Landscape capacity assessment</i>	NO CAPACITY
<i>Landmark landscape features & Settings of Landmark Landscape Features</i>	None
<i>Principal sensitive routes (tourist and amenity)</i>	Impact on views from: A904 Newton M9 west of Jcn. 2 Union Canal Tow Path
<i>Important viewpoints & Sensitive visual compartments</i>	Impact on views from/to: Cockleroy - its Sensitive visual compartment Tower at House of the Binns - its Sensitive visual compartments
<i>Other landscape considerations (AGLV, cSLA)</i>	Forth Coast AGLV Forth Coast SLA Setting of Forth Rail Bridge
CONSTRAINTS & NON-LVIA CONSIDERATIONS	
<i>Group 1 - Areas where wind farms will not be acceptable: National constraints</i>	No national parks or national scenic areas. There are a number of nationally important sites which the council believe should be considered as constraints of national importance. In this landscape character area: Union Canal and Towpath, by settlements of Linlithgow, Philpstoun, Winchburgh and Broxburn
<i>Group 2a – Areas of significant protection: National and international designations (World Heritage Sites, Natura 2000 & Ramsar sites, SSSIs, National Nature Reserves, Inventory Gardens and Designed Landscapes, Historic Battlefields)</i>	<i>Sites of Special Scientific Interest:</i> Philpstoun Muir, near Linlithgow
<i>Group 2b – Areas of significant protection: Other nationally important mapped environmental interests (areas of wild land, carbon rich soils, deep peat and priority peatland)</i>	There are no areas of wild land identified by SNH in West Lothian
<i>Group 2c – Areas of significant protection: Community separation for consideration of visual impact (an area not exceeding 2km around cities, towns and villages identified on the local development plan with an identified settlement envelope or edge etc.)</i>	<i>Community separation for consideration of visual impacts applies for:</i> Bridgend Broxburn Ecclesmachan Linlithgow Newton & Woodend Philpstoun Winchburgh Queensferry (CEC)
<i>Other factors</i>	Assessment of cumulative impacts

Landscape Character Unit 23: WEST LOTHIAN COASTAL HILLS



LANDSCAPE AND VISUAL IMPACT ASSESSMENT	
<i>Landscape sensitivity assessment</i>	Area of Highest Sensitivity
<i>Landscape objective</i>	Protection - Wind Energy Development (WED) and any other large scale, uncharacteristic development would be inappropriate
<i>Landscape capacity assessment</i>	NO CAPACITY
<i>Landmark landscape features & Settings of Landmark Landscape Features</i>	None
<i>Principal sensitive routes (tourist and amenity)</i>	Impact on views from: A904 Newton
<i>Important viewpoints & Sensitive visual compartments</i>	Impact on views from/to: Tower at House of the Binns & its Sensitive visual compartments A904 Viewpoint & its Sensitive visual compartments
<i>Other landscape considerations (AGLV, cSLA)</i>	Forth Coast AGLV Forth Coast SLA
CONSTRAINTS & NON-LVIA CONSIDERATIONS	
<i>Group 1 - Areas where wind farms will not be acceptable: National constraints</i>	No national parks or national scenic areas. There are a number of nationally important which the council believe should be considered as constraints of national importance. In this landscape character area: Hopetoun House - Historic Garden and Designed Landscape, near South Queensferry <i>World Heritage Site: Forth Rail Bridge (within Edinburgh)</i>
<i>Group 2a – Areas of significant protection: National and international designations (World Heritage Sites, Natura 2000 &</i>	<i>Natura 2000: Special Protection Areas:</i> Firth of Forth (part in West Lothian) <i>Sites of Special Scientific Interest:</i>

Ramsar sites, SSSIs, National Nature Reserves, Inventory Gardens and Designed Landscapes, Historic Battlefields)	Firth of Forth <i>Site identified in Historic Scotland's Inventory of Gardens and Designed Landscapes:</i> Hopetoun House, near the Firth of Forth House of the Binns, north-east of Linlithgow
Group 2b – <i>Areas of significant protection: Other nationally important mapped environmental interests</i> (areas of wild land, carbon rich soils, deep peat and priority peatland)	There are no areas of wild land identified by SNH in West Lothian
Group 2c – <i>Areas of significant protection: Community separation for consideration of visual impact</i> (an area not exceeding 2km around cities, towns and villages identified on the local development plan with an identified settlement envelope or edge etc.)	<i>Community separation for consideration of visual impacts applies for:</i> Newton & Woodend Philpstoun Winchburgh Queensferry (CEC)
Other factors	Assessment of cumulative impacts

Other spatial type: URBAN AREAS

Urban areas are not given landscape character classifications in the source document *Landscape Capacity Study for Wind Energy Development in West Lothian* (2011). Settlement boundaries indicate the border between landscape character areas and urban areas. However some visual receptor points are located within settlements and are listed below.

Within Settlement boundary of...	Impact on views from:
Bathgate	<i>Principal sensitive routes (tourist and amenity):</i> National Cycle Route 75
Blackridge	<i>Principal sensitive routes (tourist and amenity):</i> National Cycle Route 75
Kirknewton	<i>Principal sensitive routes (tourist and amenity):</i> National Cycle Route 75
Linlithgow	<i>Principal sensitive routes (tourist and amenity):</i> Union Canal Tow Path <i>Sites identified in Historic Scotland's Inventory of Historic Battlefields:</i> Battle of Linlithgow Bridge site (part is in Falkirk Council area)
Livingston	<i>Principal sensitive routes (tourist and amenity):</i> A899 Livingston Spine Road National Cycle Route 75
Mid Calder	<i>Principal sensitive routes (tourist and amenity):</i> National Cycle Route 75
Uphall/Broxburn	<i>Principal sensitive routes (tourist and amenity):</i> Dechmont to Newbridge Cycle Path Union Canal Tow Path
Winchburgh	<i>Principal sensitive routes (tourist and amenity):</i> Union Canal Tow Path

Alternative renewable energy types and heat networks

Due to the need to protect West Lothian's most sensitive landscapes through the retention of significant constraints for wind farms and wind energy, the council considers that an appropriate energy mix in the right locations is needed. There is significant potential for other technologies in

West Lothian such as district heating (including biomass and combined heat and power), geothermal and solar. The council is producing planning guidance on a range of renewable energy sources.

5.0 Policy considerations – Assessment checklist

In addition to the spatial framework requirements and landscape character & visual assessment there is a wide range of existing planning policy considerations against which wind energy proposals will be assessed. The following section gives an overview of information that the council will require at the planning application stage.

POLICY CONSIDERATIONS

Landscape character and visual impact considerations

All applications to the council for wind energy developments will need to be accompanied by a Landscape and Visual Impact Assessment (LVIA). The extent of the LVIA will be agreed as part of the pre-application discussions through the production of a Zone of Theoretical Visibility (ZTV) mapping the potential extent of the visibility of the proposal and identifying any key viewpoints, including where the turbine is first sighted on the trunk road network.

The LVIA will consist of two distinct sections:

Landscape impact assessment – This considers the potential changes to the character of the physical landscape as a result of the proposed development.

Visual impact assessment – This considers the potential changes to views and appreciation of a landscape and how people are likely to respond to these changes.

The level and extent of the LVIA will depend on the complexity and scale of the proposal and sensitivity of location. However, the assessment must be based on the general principles, techniques and methodology set out by the Landscape Institute in ‘Guidelines for Landscape and Visual Impact Assessment (3rd or most recent edition)’.

As part of the LVIA, the applicant will be expected to consider impacts on the existing landscape character, and make an informed judgment on the impact of the proposal on the landscape. The impact of the proposal on all landscape character types affected should always be assessed.

Proposals within or in the vicinity of AGLVs will be assessed against the following two policies:

Policy ENV 19 Areas of Great Landscape Value (AGLV): *Within the six AGLVs shown on the proposals map there is a presumption against development which would undermine the landscape and visual qualities for which these areas were designated.*

Policy ENV 20 Proposals outwith AGLV affecting their setting: *Development: proposals outwith an AGLV which would affect its setting from important viewpoints will be subject to detailed visual appraisal and will not be supported if it adversely affects the designated area.*

For AGLVs the council's view is that the key issue is the extent to which wind farm development would affect the landscape characteristics that lead to the designation being made. The majority of AGLVs comprise landscape character types with limited capacity for wind energy development, reflecting the sensitive nature of the landscape character.

Any applications for wind energy development within the AGLVs would be judged on their merits, in accordance with the adopted Local Plan and any relevant SPGs/SGs, with particular consideration given to landscape and visual impacts.

See the previous section on Landscape character assessment for detailed information.

Habitat, protected species, biodiversity, nature conservation, forests, woodlands

Habitat and species designations

The following reflects what is likely to be the key consideration of protected species in West Lothian, but it is not exhaustive. Although the wind turbine foundations may only be a few metres in diameter the construction work may result in a larger zone of disturbance. The range of ecological features which may be impacted upon include:

- *Terrestrial habitats* - potential impacts on land which has high biodiversity value at a European (SAC, SPA, RAMSAR, sites), national (SSSI, NNR, UKBAP priority habitats) or regional and local level (LBAP priority habitats).
- *Species* – impacts on species or their habitats which have a high biodiversity value at a European level, a national level or regional and local level
- *Natural heritage designations* - protecting national and international natural heritage designations is a statutory requirement.

A list of species which should be considered in relation to wind energy developments in West Lothian is given in Figure 16. The list will vary depending on the scale of the proposals and habitats present, and may include other protected species not listed here. In order to comply with the *Habitats Directive* all European Protected Species (EPS) sites must be surveyed prior to determination of any planning application.

FIGURE 16: LIST OF SPECIES TO BE CONSIDERED IN RELATION TO WIND ENERGY DEVELOPMENT

Mammals	Birds & bats	Amphibians
Badgers Otters Red squirrel Water vole	All breeding birds such as hen harrier Birds listed on Schedule 1 of the <i>Wildlife and Countryside Act</i> as amended and those listed on Annex 1 of the EU birds directive Bats – ‘Pippistrelle’ and other local species	Great crested newt

For large wind farm proposals and other wind energy schemes where specific species/habitats are affected, applicants will be required to submit a Habitat Management Plan (HMP) setting out the means of land management that will secure biodiversity objectives. HMPs should provide a focus for landscape scale restoration of large networks of bogs, scrub woodland, heath and other key habitats, benefiting biodiversity and maximising the carbon storage potential of degraded habitats. There is a spatial correlation in West Lothian between peatlands, forestry and upland areas with good wind resource. Early engagement with SNH, SEPA and the council's Development Management Unit should be sought to ensure HMP proposals are acceptable

In addition, regard should be had to the council's draft Supplementary Guidance *Planning for Nature: Development Management and Wildlife*. The guidance covers policy context and designated sites; key habitats and protected species in West Lothian; site appraisal and ecological surveys; good design and mitigation; assessment of planning applications and licensing requirements.

Local nature conservation designations

There are a range of local nature conservation sites in West Lothian. These are of two types:

- *Statutory designations* – Local Nature Reserves
- *Non-statutory designations* – Local Wildlife Sites, Country Parks, Regionally Important Geological Sites (RIGS)

Where schemes are small-scale and an EIA is not required, applicants are encouraged to provide information to support their applications in line with that recommended in SNH guidance '*Assessing the impact of small-scale wind energy proposals on the natural heritage*' (V2) (2014).

Bird sensitivity

There are three main areas of potential risk to birds:

- displacement through indirect loss of habitat
- death through collision or interaction with turbine blades
- direct habitat loss through construction

An assessment of a potential wind farm's effect on the bird interest of a site should thoroughly consider each of these three potential risks for each bird species which uses the site.

EU and national legislation require that full account must be taken of the impact on the qualifying interests of SPAs. In some cases these interests can extend beyond the boundary of the site (for example foraging, roosting and flight paths of bird species associated with SPAs).

Bat sensitivity

Bats are European Protected Species and their roosts are protected by law.

Recent evidence shows that wind turbines can result in a high mortality rate of bats. Research is still being undertaken as to the causes of these high mortality rates, although it is thought this is caused by the occurrence of 'barotrauma'.

There are five bat species listed as being resident in West Lothian in the council's draft Supplementary Guidance: *Planning for Nature*.

Forests and woodlands

Woodlands within West Lothian are under increasing pressure from wind energy developments. The Scottish Government's *Control of woodland removal policy* includes a presumption in favour of protecting woodland resources and woodland removal should only be allowed where it would achieve significant and clearly defined additional public benefits. In appropriate cases compensatory planting may form part of the balance.

In the first instance where the removal of trees and woodlands is under consideration, their conservation value should be assessed as they could be protected woodland sites, included in the Ancient Woodland Inventory, valued as semi-natural woodland, and/or listed as veteran trees. Compensatory planting may be required under the Forestry Commission for Scotland (FCS) Woodland Removal Policy.

In cases where West Lothian has extensive forestry and woodland coverage, this often coincides with upland areas which have potential for wind farms. In order for a full assessment to be undertaken on the removal of woodland, the following requires to be provided as part of the planning application:

- A *Forest Plan* that details all major forest operations over the lifespan of the wind farm. When developing the plan, the developer should follow Forestry Commission Scotland's *Strategic Forest Plan* guidance. All operations should be compliant with the *UK Forest Standard*. The restructuring of the woodland area may increase the diversity of tree species and habitats with biodiversity benefits.
- *Woodland habitat* assessment in terms of its social, economic and environmental value.
- Proposed mitigation for area of woodland to be felled. Where compensatory planting is required, full details should be provided that are compliant with the *UK Forest Standard*. The compensatory planting land must have the necessary forestry consents to allow tree planting.
- Assessment of landscape impact of the felling plans. The developer should refer to *the UK Forest Standard, Forest and Landscape* guidelines when undertaking this assessment.
- Where the technique of *key holing* turbines into woodlands is proposed, this prescription must be supported by a full description of both the top height and yield class of the surrounding woodland, as well as the topography of the site. This information is necessary to demonstrate how these factors influence wind flow and inform the extent of felling that is required to mitigate against reductions in wind yield.

Peat, soils and water

Peatlands and carbon rich soils

If turbines and associated infrastructure (turbine foundations, array road network, drainage, borrow pits, transmission lines and other physical features) are to be located in areas of peat a detailed peat depth survey is required in order to inform the assessment of the proposal. Deep peat (greater than 0.5 metres) should be avoided. Mitigation measures proposed to off-set adverse impacts on the peatland environment require to be identified.

SEPA recommend that developers undertake detailed peat surveys using a maximum 50m grid as this will help to better establish the depth of peat throughout the targeted area and will in due course better inform the layout and assist in minimising the intrusion into existing areas of deep peat (greater than 0.5 metres).

The Scottish Government's published method for assessing carbon losses and savings requires to be carried out. Developers are expected to follow best practice for minimising carbon emissions and disturbance of peat, and the carbon calculator represents a useful tool in assessing proposed practices. Full details of this can be found on the Scottish Government website:

<http://www.scotland.gov.uk/Topics/Business-Industry/Energy/Energy-sources/19185/17852-1/CSavings>
SNH is currently in the process of revising *Scotland's National Peatland Plan*, as well as producing other guidance on peatlands and carbon rich soils which will need to be taken into account in due course. See section 3.0 for locational information.

Water

The water environment (e.g. watercourses, lochs, wetlands, riparian areas) are identified by SEPA as a potential constraint for wind farm development. A principal concern is the potential impact from construction works in or adjacent to water bodies. These works may involve watercourse crossings, river bank modifications and/or culverting. Water abstraction and impacts on water resources (e.g. springs) may be other important considerations.

Where necessary a statement will need to be submitted as part of the planning application setting out protective/ preventative measures. Further advice regarding water quality, including whether any construction works will require a CAR Licence can be found on the SEPA website.

Apart from water quality and quantity, the Water Framework Directive (WFD) also requires maintenance of the good ecological status of water bodies and consideration of any potential impacts on hydromorphological and hydrological processes. Further information is available from <http://www.sepa.org.uk/water.aspx>. These issues may be a constraint to wind farm developments in terms of site location, layout and design.

Historic environment

Historic environmental resources are widely distributed across West Lothian.

Wind energy developments have the potential for direct and/or indirect impacts on the historic environment by virtue of the location of turbines and ancillary development, or changes to ground water levels or surface water patterns, which may affect archaeological deposits.

- *Direct impacts* – construction works in an area of archaeological sensitivity can cause irreversible damage to valuable irreplaceable assets
- *Indirect impacts* – the development of associated infrastructure can have a significant impact on the setting of important historic features within the landscape. This includes views from and towards the feature of interest

Developments can be designed to avoid or minimise such impacts. Historic Scotland's guidance on setting explains how the impact of change can be assessed and mitigated.

<http://www.historic-scotland.gov.uk/setting-2.pdf>

Where development is proposed that might impact on the cultural and historic environment, the developer will need to:

- Identify the cultural and historic assets that might be affected:
 - by searching the Sites and Monuments Record and National Monuments Record (at <http://www.historic-scotland.gov.uk/searchmonuments>) to locate known archaeological sites, monuments and buildings;
 - by contacting West of Scotland Archaeology Service (WoSAS) which has an on-line search facility;
 - by seeking information on designed landscapes which can be found in the Historic Scotland's Inventory of Gardens and Designed Landscapes;
 - by identifying conservation areas in the Development Planning section of the council's website;
- Define the setting of each cultural and historic asset - the location of structures and buildings of a scheme may affect the archaeological, built or cultural resource including through its setting;
- Assess how the proposal is likely to impact on this asset and its setting, for example the effects of direct impacts on sites due to land-take by tracks and ancillary structures; and

- Consider the potential for previously unknown cultural heritage assets being affected by the proposals, either through early discussion with WoSAS (the council's Archaeology Service – see Contacts section), or by engaging independent archaeological advice.

Communities, tourism, recreation, traffic

Communities and residential amenity

There are thirty identified settlements in West Lothian and these are listed in Section 3.0 of this guidance. The indicative *Areas of significant protection* for 'community separation for consideration of visual impact' are set out in Figure 7. Accordingly, within 2km of the edge of towns and villages wind energy proposals the council will continue to be judged on a case by case basis.

There is currently no standard minimum distance specified in Scottish Government guidance between residential properties and wind turbines, other than in relation to shadow flicker, where a separation distance of 10 rotor diameters is recommended. The renewables industry standard for the distance from non-financially involved residential properties to a turbine is approximately 500 – 600 metres.

Noise from wind turbine development has the potential to be a nuisance for noise sensitive uses such as residential accommodation. Information on noise and noise assessment is given in Appendix A.

Communities outwith settlement boundaries and individual properties

For individual properties and small settlements not identified with settlement boundaries protection is provided by the Development Management criteria listed in paragraph 169 of SPP and the policy framework in the adopted local plan. Decisions on individual developments should take into account specific local circumstances and topography.

Noise from wind turbine development has the potential to be a nuisance for noise sensitive uses such as residential accommodation and is of particular concern for properties outwith main settlements. Information on noise and noise assessment is given in Appendix A which publishes the council's draft guidance on noise assessment.

Outdoor recreation and tourism interests

The visual impact of wind farms from viewpoints, visitor attractions and tourist routes is an important consideration. The Important Viewpoints for amenity and tourism identified in the council's Landscape Capacity Study relate well to areas for tourism and recreation uses. (Refer to Figures 12 & 13)

This SG seeks to ensure that important views will not be adversely affected by development. Planning authorities are required to protect Core Paths and other important routes. The right of responsible access for the public is upheld by the council as a statutory duty.

Key issues for developers will include:

- the effect of development on accessible open countryside, paths and tracks;

- the effect of development on landscape and visual effects on the visitor experience (including recreational); and
- the potential for enhancement of recreational opportunities through additional access routes, infrastructure and facilities.

SEPA also has a duty to consider impacts on recreation and amenity. If a proposal has the potential to impact upon recreational use additional information may be requested, for instance, on how well used a waterway is for water sports or boating activities, or how often a riparian site is visited. See SEPA's web-site at <http://www.sepa.org.uk/environment/water/> for further details.

Traffic and transportation

In siting wind turbines close to major roads, it is recommended that pre-application discussions are held with Transport Scotland's Trunk Roads Network Management (TRNM). To ensure safety, a minimum set back from roads and railways of at least the height to tip of the turbine proposed is required.

The construction of wind farm and turbine developments can have significant short term impacts on the local road network. This is particularly important for the movement of large components (abnormal load routing) during the construction period, periodic maintenance and for decommissioning.

For wind farm developments traffic and transportation require that a Transport Assessment/Statement Scoping form be completed and recommend pre-application discussions to ensure full details are submitted with the application. Details of the development will be required such as a programme of works, phases of development, impact on road network, surveys and travel plan.

Aviation, defence and telecommunications safeguarding

Scottish Planning Circular 2/2003 *Safeguarding of Aerodromes, Technical Sites and Military Explosives Storage Areas*: The Town and Country Planning (Safeguarded Aerodromes, Technical Sites and Military Explosives Storage) Direction 2003 identifies the need for safeguarding of Glasgow, Edinburgh and Prestwick airports and NATS (En Route) Ltd technical installations.

Aviation is a material consideration in the determination of onshore wind energy applications. The West Lothian Local Plan addresses aviation policy issues under NWR 26: *Special site planning considerations*. The council will not determine an application without ensuring that acceptable comments from Edinburgh Airports, NATS En Route (NERL) and other relevant aviation consultees have been received.

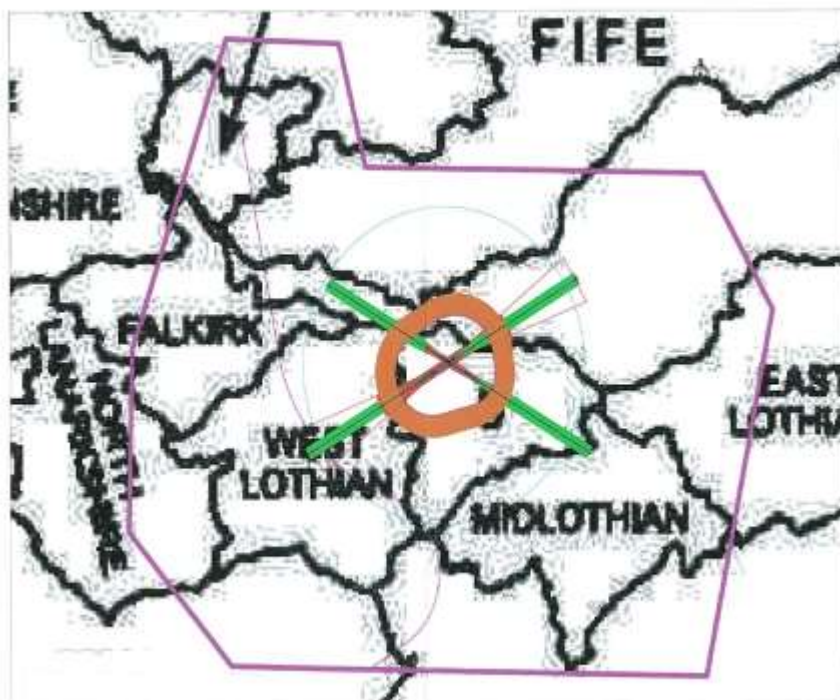
NATS En Route is a statutory consultee for wind turbine applications. NATS (En Route) Ltd (NERL) offer a pre-planning service to developers. All pre-planning enquires and scoping requests should be made via the pre-planning service on NATS website: <http://www.nats.co.uk/environment/windfarms/>

It should be noted that NATS's response when consulted will only be related to the impact upon its own infrastructure and operations. Airports, airfields and other aviation stakeholders should be consulted separately.

Global Infrastructure Partners (GIP) formally took over ownership of Edinburgh International Airport in June 2012 and is responsible for safeguarding its radar and airspace. Edinburgh Airport is located approximately two kilometres to the northeast of the West Lothian Council boundary. Navigation support for its main flight path reaches far into West Lothian.

The West Lothian administrative area falls entirely within the Edinburgh Airport Airspace Area and therefore all applications for wind energy within West Lothian require consultation with the airport. Refer to Figure xx below where the central flight zone and flight paths are marked out in orange and green respectively and are indicative of the air safety implications for the West Lothian area.

FIGURE 17: EDINBURGH AIRPORT – AIRSPACE DIAGRAM



The Ministry of Defence (MOD) undertakes glider and other pilot training at its Kirknewton Airfield base located to the southeast of the council boundary within Edinburgh jurisdiction. The council will consult the MOD on any wind energy, or other applications, which may have an impact on operations at Kirknewton.

Kirknewton Flying Club is also a user of the Kirknewton Airfield and operates recreational pilot training and services. The council will consult on wind energy applications which might have an impact on the operation of light aircraft, gliders, micro-lights and other aviation interests within the council area.

All developers of wind turbines are advised that early engagement with the relevant aviation consultees is essential to determine the nature of any issues and engage in dialogue to identify possible mitigation at an early stage.

The identification of areas through the Spatial Framework or the council's Landscape Capacity Study does not imply that these areas are free from aviation constraints.

The Development Management criteria list at paragraph 169 of SPP2014 requires that “impacts on telecommunications and broadcasting installations, particularly ensuring that transmission links are not compromised”.

SUPPORTING INFORMATION AND SITE PLANNING

Access tracks and cable trenching

An Environmental Statement (ES) should refer to the wind farm cables as generally following the access track routes, with detailed design being left to construction stage.

Decommissioning

Planning applications require to be accompanied by a scheme of decommissioning, equipment removal, site restoration and aftercare, and financial arrangements sufficient to ensure that the necessary works can be carried out.

If the turbine ceases to operate before the consent expires, with no prospect of restarting, there will be provisions in consents (or planning agreements) to bring forward the decommissioning scheme.

Off-shore wind energy

A general overview of off-shore wind energy can be found in the Scottish Government publication: *Blue Seas, Green Energy: A Sectoral Marine Plan for Offshore Wind, Wave and Tidal Energy in Scottish Waters* – consultation draft, April 2014. Policy relating to ‘off-shore wind’ can be found at the Scottish Government’s web-site: Simplified Marine Licensing. <http://www.gov.scot/Publications/2011/03/18141232/8>

Applications on the foreshore above the high-tide line are determined by the council as on-shore wind applications including any land-based associated plant for off-shore wind energy. For applications below the high tide line interested parties should refer to the government’s Simplified Marine Licensing website.

Assessment of cumulative impacts

As part of any submission developers will be asked to consider cumulative impacts of their proposal with others that are at scoping stage or approved. Consideration will need to be given to how many turbines will be visible from key viewpoints, and what the in-combination or in-sequence visual impacts will be (for example, if you are cycling or walking along the Union Canal towpath or National Cycle Route 75).

Generally cumulative impact assessment information is expected to be provided at the following proportionate rates:

- Large scale wind farms – up to 60km radius
- Medium scale wind farms – up to 30km radius
- Small scale wind energy – up to 10km

The council would therefore expect all applications for wind farms of four or more turbines to contain a cumulative impact assessment. In areas where there are multiple small scale proposals

and/or wind farms the council will request that developers of smaller schemes submit a cumulative impact assessment.

Wind developments outwith West Lothian and cross-boundary impacts

Wind energy developments are often located on higher ground where local administrative boundaries occur. It is often the case that, while the site of a wind energy development may be within a certain administrative area, a disproportionate amount of impacts, particularly visual, fall outwith the deciding authorities jurisdiction. For wind energy developments near administrative boundaries, be it within or outwith West Lothian, where impacts may occur across a local boundary, it is important that developers provide an assessment of these cross boundary impacts to ensure that full documentation is provided before an application is lodged for decision making.

Extensions or re-powering existing wind energy developments

Extensions to or re-powering existing wind energy projects within West Lothian or adjoining authorities can contribute to cumulative impacts.

While in general terms the existence of a wind energy consent, at any scale, suggests that a principle has been set to allow the potential of further expansion, extensions to wind farms require to be assessed on a case by case basis. Proposers should take heed of SNH guidance on the scale, design and siting of extensions to existing wind energy developments. A comprehensive list of SNH guidance is provided in the Reference section of this SG.

ASSESSMENT CHECKLIST

To assist in assessment of proposals at planning application stage, this is presented as a checklist indicating which criteria are to be addressed. The criteria relate to both assessment and technical requirements. In some cases, particularly for small scale developments, developers are advised to discuss with the council whether a criterion is relevant; this is indicated in the checklist. While it is intended that the checklist provides a comprehensive guide to developers, it is always possible that individual applications may raise site specific issues which are not addressed in the list. Furthermore, guidance from the Scottish Government and other statutory agencies may change in future therefore developers must comply with guidance that is current at the time of their application.

Further assessment for small scale wind energy proposals is set out in section 6.0 of this supplementary guidance.

<p>Proposals for wind turbine and wind farm developments will be assessed against the criteria set out in the Assessment Checklist for Wind Energy Proposals</p> <ul style="list-style-type: none">✓ proposals in this category <u>must</u> comply with this criterion✓ proposals in this category may require to comply with this criterion: discuss with the council	Single & small-scale wind energy	Wind farms 2 or more turbines 35+m tip ht.
Landscape considerations		
<p>POLICY CONSIDERATIONS</p> <p>SPP, para. 169, Development Management criteria:</p> <ul style="list-style-type: none">▪ Landscape and visual impacts▪ Cumulative impacts <p>Key policies in the <i>West Lothian Local Plan</i>:</p>		

<p>Proposals for wind turbine and wind farm developments will be assessed against the criteria set out in the Assessment Checklist for Wind Energy Proposals</p> <p>✓ proposals in this category <u>must</u> comply with this criterion</p> <p>✓ proposals in this category may require to comply with this criterion: discuss with the council</p>	Single & small-scale wind energy	Wind farms 2 or more turbines 35+m tip ht.
<p>Policy ENV 19 Areas of Great Landscape Value (AGLV)</p> <p>Policy ENV 20 Proposals outwith AGLV affecting their setting</p> <p>Policy ENV 21 Areas of Special Landscape Control (ASLC)</p> <p>Policy ENV 22 Countryside Belts</p> <p>Policy ENV 24 Visually intrusive development along key transport corridors</p> <p>Policy NWR 27 Unacceptable cumulative effects</p>		
<p>Landscape character and visual impact</p> <p>Proposals must not have any unacceptable significant detrimental effects on landscape character and/or significant adverse visual impact. This should take into account turbines, apparatus associated with the development, and borrow pits. The guidance for specific landscape character types contained in the Spatial Framework and <i>Landscape Capacity Study for Wind Energy in West Lothian</i> (2011) shall be taken into account in the assessment of proposals. The revised <i>West Lothian Landscape Character Classification</i> (2014) is the most up to date review of local landscape character areas and must be referred to for assessments to be viable.</p>	✓	✓
<p>Impact on Areas of Great Landscape Value</p> <p>Any applications for wind energy development within the designated AGLVs shall be judged on their merits, in accordance with the WLLP policy, and must not adversely affect the qualities for which these areas have been recognised. (Special Landscape Areas will replace AGLVs once adopted)</p>	✓	✓
<p>Cumulative impacts</p> <p>The cumulative visual and landscape impact of wind farm and wind turbine development must be fully assessed and shown to be acceptable. Applications for 4 or more turbines must contain a full cumulative impact assessment prepared in accordance with current Scottish Natural Heritage guidance. The council will request that applicants provide an assessment appropriate to single/smaller schemes and those that are the subject of valid but undetermined applications. Assessments must consider where appropriate, sequential effects which may extend beyond the council area.</p>	✓	✓
<p>Contents of the LVIA to be submitted with the application – wind farms of over 50kw output</p> <p>Wind farm applications must contain a full landscape and visual impact assessment, demonstrating potential impact to a radius of 35km unless otherwise agreed with the council, using a range of techniques including Zones of Visual Influence, wire line diagrams and photo montages where appropriate. The design iteration process which sets out the design objectives and documents the design process of the development must be provided. Guidance is available in SNH Good practice ‘Siting and designing wind farms in the landscape’ and ‘Visual representation of wind farms’ and other relevant guidance is provided in the reference section of this document.</p>		✓
<p>Contents of the LVIA to be submitted with the application – below 50kw output</p> <p>For wind turbine development of 3 or less, the council will require applicants to follow SNH guidance ‘Assessing the impact of small-scale wind energy proposals on the natural heritage’ and ‘Siting and Design of Small Scale Wind Turbines of between 15 and 50 metres in heights’. These set out appropriate levels of landscape visual impact appraisal for smaller scale projects.</p>	✓	
<p>Habitat, protected species, biodiversity, nature conservation, forests, woodlands</p>		
<p>POLICY CONSIDERATIONS</p> <p>SPP, para. 169, Development Management criteria:</p> <ul style="list-style-type: none"> ▪ Effects on the natural heritage 		

<p>Proposals for wind turbine and wind farm developments will be assessed against the criteria set out in the Assessment Checklist for Wind Energy Proposals</p> <p>✓ proposals in this category <u>must</u> comply with this criterion</p> <p>✓ proposals in this category may require to comply with this criterion: discuss with the council</p>	Single & small-scale wind energy	Wind farms 2 or more turbines 35+m tip ht.
<p>Key policies in the <i>West Lothian Local Plan</i>:</p> <p>Policy ENV 3 European directives (Special Areas of Conservation, Special Protection Areas, Habitat Directives Annexes I and II and Birds Directive Annex 1)</p> <p>Policy ENV 4 Sites of national importance (National Nature Reserves, Sites of Special Scientific Interest)</p> <p>Policy ENV 5 Areas of regional or local importance (Local Nature Reserves, Wildlife Sites, peatland and Regionally Important Geological Sites)</p> <p>Policy ENV 6 Appropriate level of environmental or biodiversity assessment, including Environmental Impact Assessment</p> <p>Policy ENV 11 Presumption against development affecting woodland and trees</p> <p>Policy ENV 14 Protected trees (Tree Preservation Orders, Conservation Areas, amenity or nature conservation value)</p> <p>Policy ENV 30 Protection of Pentland Hills Regional Park</p> <p>Policy NWR 21 Renewables – international natural heritage designations</p> <p>Policy NWR 22 Resistance to any proposals for renewable energy development that will affect the character, visual integrity or recreational qualities of both the Pentland Hills Regional Park and the wider area of the Pentland Hills in West Lothian</p> <p>Policy NWR 23 Presumption against renewable energy proposals in or adjacent designated natural heritage areas or for retention of undeveloped countryside</p>		
<p>Impact on nature conservation interests</p> <p>The development must have no unacceptable significant adverse impact on Local Nature Conservation Sites, sensitive bird areas identified by Royal Society for the Protection of Birds (RSPB) and should take account of the aims and objectives for West Lothian’s ecosystems set out in <i>Planning for Biodiversity Action 2005 – 2009</i>. Where applications are advised by SNH and RSPB at scoping stage that there may be significant cumulative impacts on ecological and/or ornithological interests, developers will be required to undertake a cumulative impact assessment, to include all operating and consented schemes and those that are the subject of valid but undetermined applications.</p> <p>For larger schemes, and other schemes where specific/habitats are affected, developers will be required to submit a Habitat Management Plan (HMP) setting out the means of land management that will secure biodiversity objectives. Restoration proposals should take into account opportunities to enhance biodiversity. Discussion on the HMP should take place at an early stage with SNH, RSPB, and Forestry Commission Scotland (if appropriate).</p>	✓	✓
<p>Impact on trees and woodland</p> <p>Any wind energy proposal that includes woodland removal should be discussed at an early stage with Forestry Commission Scotland and take account of the advice in Scottish Government’s Control of Woodland Removal Policy which includes a presumption in favour of protecting woodland resources and woodland removal. Tree cover loss should only be allowed where it would achieve significant and clearly defined additional public benefits. In appropriate cases compensatory planting may form part of this balance.</p>	✓	✓
<p>Peat, soils and water</p>		
<p>POLICY CONSIDERATIONS</p> <p>SPP, para. 169, Development Management criteria:</p> <ul style="list-style-type: none"> ▪ Impacts on carbon rich soils ▪ Effects on hydrology, the water environment and flood risk <p>Key policies in the <i>West Lothian Local Plan</i>:</p> <p>Policy ENV 5 Areas of regional or local importance (Local Nature Reserves, Wildlife Sites, peatland and Regionally Important Geological Sites)</p> <p>Policy ENV 7 Prime agricultural land</p> <p>Policy NWR 2 Independent assessment of the economic importance of the particular deposits in local and national terms</p>		

<p>Proposals for wind turbine and wind farm developments will be assessed against the criteria set out in the Assessment Checklist for Wind Energy Proposals</p> <p>✓ proposals in this category <u>must</u> comply with this criterion</p> <p>✓ proposals in this category may require to comply with this criterion: discuss with the council</p>	Single & small-scale wind energy	Wind farms 2 or more turbines 35+m tip ht.
<p>Policy NWR 6 Construction mineral extraction</p> <p>Policy NWR 9 Bond to cover restoration and aftercare</p>		
<p>Impact on peat and soils</p> <p>Developments must be designed to minimise soil disturbance when building and maintain roads and tracks, turbines bases and other infrastructure to ensure that the carbon balance savings of the scheme are maximised. Guidance has been issued by the Scottish Government <i>Calculating carbon savings from wind farms on Scottish peat lands – A New Approach</i>. Developers are encouraged to use this guide and its calculator when preparing applications. http://www.gov.scot/Topics/Business-Industry/Energy/Energy-sources/19185/17852-1/CSavings</p> <p>Where relevant developers will be expected to provide geotechnical and hydrological information in support of applications, identifying the presence of peat at each site, including the risk of landslide connected to any development work. Developers should undertake detailed peat surveys using a maximum 50 metre grid where required. To ensure minimum carbon loss developments should be subject to good on-site peat management practices (SNH: <i>Good Practice During Windfarm Construction</i> and up-to-date guidance from SNH). Early discussion with SNH and SEPA is recommended where wind farm developments are likely to affect peatland or mire systems.</p>	✓	✓
<p>Impact on prime agricultural land</p> <p>Wind energy development on Prime Agricultural Land (MacAulay classes 1, 2 and 3.1) shall only be acceptable where restoration proposals will return the land to its former status.</p>	✓	✓
<p>Borrow Pits</p> <p>Borrow pits associated with wind farm development shall only be acceptable where there are no significant adverse effects on environmental protections, protected species, flood risk areas, settlements and residential amenity and where proper provision has been made for the restoration and aftercare of the borrow pit areas.</p> <p>Borrow pits associated with the wind farm development though located outwith the application site will require a separate application and will be assessed against the Natural Resources policy framework in the West Lothian Local Plan.</p>	✓	✓
<p>Impact on water</p> <p>Wind energy proposals must not have an unacceptable adverse impact on the water environment as required by the Water Framework Directive and related regulations. Planning applications for wind farm developments must be accompanied by appropriate drainage strategies.</p>	✓	✓
<p>Historic environment</p>		
<p>POLICY CONSIDERATIONS</p> <p>SPP, para. 169, Development Management criteria:</p> <ul style="list-style-type: none"> ▪ Impacts on the historic environment <p>Key policies in the <i>West Lothian Local Plan</i>:</p> <p>Policy HER 2 Listed Buildings</p> <p>Policy HER 12 Scheduled Monuments</p> <p>Policy HER 15 Protection of significant archaeological sites</p> <p>Policy HER 19 Conservation Areas</p> <p>Policy HER 22 Full protection of Historic Gardens and Designed Landscapes (HGDL)</p> <p>Policy HER 23 Conservation designation where HGDL under threat</p> <p>Policy HER 24 Palace and peel, Linlithgow</p> <p>Policy HER 25 Built heritage and townscape value identified in Appendix 4.4</p> <p>Policy NWR 24 Effects of renewables development on built heritage and full archaeological assessment</p>		

<p>Proposals for wind turbine and wind farm developments will be assessed against the criteria set out in the Assessment Checklist for Wind Energy Proposals</p> <p>✓ proposals in this category <u>must</u> comply with this criterion</p> <p>✓ proposals in this category may require to comply with this criterion: discuss with the council</p>	<p>Single & small-scale wind energy</p>	<p>Wind farms 2 or more turbines 35+m tip ht.</p>
<p>Impact on historic environment</p> <p>Applications for wind energy development must:</p> <ol style="list-style-type: none"> identify historic assets that could be affected by the development consider the potential for direct impacts on historic environment assets from components of the applications such as turbine bases, access tracks and ancillary structures consider the potential for impacts on the setting of historic environment assets by identifying the setting of assets within the vicinity of the proposal and assessing the potential impact of the development on these settings. <p>Wind farm and turbine developments of any scale must accord with the heritage policy framework of WLLP listed as key policies above.</p>	✓	✓
<p>Communities, tourism, recreation, traffic</p>		
<p>POLICY CONSIDERATIONS</p> <p>SPP, para. 169, Development Management criteria:</p> <ul style="list-style-type: none"> ▪ Impacts on communities and individual dwellings ▪ Public access: long distance routes (LDRs), cycle and scenic routes ▪ Impacts on tourism and recreation ▪ Impacts on road traffic ▪ Impacts on adjacent trunk roads <p>Key policies in the <i>West Lothian Local Plan</i>:</p> <p>Policy HOU 9 Protection of residential and visual amenity of existing residents and other occupiers</p> <p>Policy IMP 10 Location near noise sensitive developments</p> <p>Policy IMP 11 Noise sensitive developments not normally permitted near existing noisy land uses</p> <p>Policy COM 2 Proposals which will result in the loss of urban sports and recreational facilities, or formal and informal open space will be resisted</p> <p>Policy NWR 25 Residual noise intrusion</p> <p>Policy TRAN 2 Transport Assessment</p> <p>The Road Vehicles (Construction and Use Regulations 1986 (C & U Regulations) [64] The Road Vehicles (Authorised Weights Regulations 1998 (AW Regulations) [65] The Road Vehicles (Authorised Weight) (Amendment) Regulations 2000 [66]</p>		
<p>Impact on Residential Amenity</p> <p>The development must not have a significant adverse impact on the amenity of residents nearby towns, villages and other properties by means of noise, visual dominance, shadow flicker, reflected light or other emissions.</p> <p>All applications for wind energy developments should contain a site specific noise assessment.</p>	✓	✓
<p>Roads and traffic impacts</p> <p>In siting wind turbines close to major roads, it is recommended that pre-application discussions are held with Transport Scotland's Trunk Roads Network Management (TRNM). To assure safety, a minimum set back from roads and railways of at least the height to tip of the turbine proposed is required</p>	✓	✓
<p>Transportation impacts and access</p> <p>The construction of wind farm development can have significant short term impacts on the local road network. Access for construction traffic must not compromise highway safety, residential amenity or cause significant permanent damage to the environment. Applicants must provide a Transportation Statement or assessment setting out the traffic impact for</p>	✓	✓

<p>Proposals for wind turbine and wind farm developments will be assessed against the criteria set out in the Assessment Checklist for Wind Energy Proposals</p> <p>✓ proposals in this category <u>must</u> comply with this criterion</p> <p>✓ proposals in this category may require to comply with this criterion: discuss with the council</p>	Single & small-scale wind energy	Wind farms 2 or more turbines 35+m tip ht.
<p>the construction and operational periods and demonstrating suitability of the transport routes for turbine components from their source.</p> <p>It is likely that pre and post construction road surveys will be required by the council and that the developer may be required to enter a Section 96 Agreement with the council.</p> <p>Any impacts of road construction/upgrading on Nature 2000 (SPA, SAC) sites or European Protected Species must comply with criteria 1 above. Where appropriate, an appraisal of the ecological, landscape and visual impacts associated with the road construction/upgrading will be required from the developer.</p>		
<p>Impact on Tourism and Recreation</p> <p>Views from key tourist routes and visitor attractions must not be adversely affected to an unacceptable degree. Consideration should be given to the impact of wind energy development on Rights of Ways, core paths identified in the West Lothian Local Plan and potentially other non-core paths. Any impacts identified on recreational routes and uses, requires to be assessed in full and proposed mitigation measure identified. Where appropriate an access plan should be prepared aimed at informing and guiding the development and future management of the site for recreational access use.</p>	✓	✓
<p>Aviation, defence and telecommunications safeguarding</p>		
<p>POLICY CONSIDERATIONS</p> <p>SPP, para. 169, Development Management criteria:</p> <ul style="list-style-type: none"> ▪ Impacts on aviation, defence interests and seismological recording ▪ Impacts on telecommunications and broadcasting installations <p>Key policies in the <i>West Lothian Local Plan</i>: Policy NWR 26 Specific site planning considerations (including aviation)</p>		
<p>Impact on Aviation and Defence</p> <p>The impacts of the proposal on radar performance, defence interest and other air safety considerations must be satisfactorily addressed and demonstrated to the satisfaction of the relevant technical authorities. Developers are strongly advised to seek early engagement with the relevant consultees.</p> <p>The use of suspensive conditions to address aviation issues, on planning consents for wind energy developments will not be considered unless the principle of the type of solution to be developed has been established and there is agreement between the developer and the relevant operator that such a solution can be delivered in a reasonable time frame.</p>	✓	✓
<p>Impact on Transmitting or Receiving Systems</p> <p>It must be demonstrated that no electromagnetic disturbance is likely to be caused by the proposal to any existing transmitting or receiving system or, where such disturbances may be caused, that measures will be taken to remedy or minimise any such disturbances. In relation to TV reception, pre surveys should be carried out and agreed demonstrating the baseline position, and if required, appropriate mitigation measures and remedial procedures should be agreed with the council.</p>	✓	✓
<p>SPP, para. 169, Development Management criteria:</p> <ul style="list-style-type: none"> ▪ Net economic impact ▪ Contributions to energy targets ▪ Effects on greenhouse gas emissions ▪ Need for conditions relating to decommissioning developments ▪ Opportunities for energy storage ▪ Need for obligations to ensure site restoration <p>Key policies in the <i>West Lothian Local Plan</i>:</p>		

<p>Proposals for wind turbine and wind farm developments will be assessed against the criteria set out in the Assessment Checklist for Wind Energy Proposals</p> <p>✓ proposals in this category <u>must</u> comply with this criterion</p> <p>✓ proposals in this category may require to comply with this criterion: discuss with the council</p>	Single & small-scale wind energy	Wind farms 2 or more turbines 35+m tip ht.
<p>Policy EM 9 Sustainable construction, layout and design for employment uses</p> <p>Policy IMP 12 Health and Safety Executive and pipelines</p> <p>Policy IMP 15 High Standards of Design</p> <p>Policy NWR 20 Support for renewable energy schemes that are environmentally acceptable and meet criteria of the local plan</p> <p>Policy NWR 28 Appointment of compliance officer</p>		
<p>Supporting information required at application stage</p>		
<p>Restoration</p> <p>All wind energy applications must acknowledge the need for decommissioning, restoration and aftercare at the end of the permission or the life of the turbines, if earlier, and not renewed by the council. Conditions, including a restoration bond or other approved mechanism as appropriate, will be imposed on any permission granted to this effect, requiring implementation measures to be agreed with the council in accordance with best practice at the time.</p>	✓	✓
<p>EIA</p> <p>The council will require all applications for wind energy development which fall within the scope of the Environmental Assessment legislation to be accompanied by an Environmental Statement, and encourages these to be preceded by a pre-application Scoping Report.</p>	✓	✓
<p>Legal Agreement</p> <p>Where appropriate, the council will normally require an applicant to enter into a legal agreement (Section 75/ Section 96) to address community benefit payments, restoration bond requirements, planning monitoring officer, roads and bridge structures and other matters which cannot be controlled by the imposition of planning conditions.</p>	✓	✓
<p>Economic Benefits</p> <p>Applications where appropriate must include details of the environmental, social and economic benefits that will arise from the project, both locally and nationally, including the overall number of jobs and economic activity associated with the procurement, construction and operation of the development.</p>	✓	✓
<p>Environmental Protection</p> <p>Developers must obtain all required authorisations or licenses under the environmental protection regimes prior to construction. Further details can be found in PAN: <i>Planning Environmental Protection and Regulation</i>.</p>	✓	✓
<p>SEPA Requirements</p> <p>Conditions may be imposed to planning permission requiring submission of Constructed Method Statements and Environmental Management Plans. These documents should also take into consideration SEPA's Pollution Prevention Guidance Notes.</p>	✓	✓
<p>Mitigation</p> <p>Where proposals are shown to have a significant adverse impact in respect of any the above criteria, the developer will be required to demonstrate that appropriate mitigating measures will be applied.</p>	✓	✓
	Single & small-scale wind energy	Wind farms 2 or more turbines 35+m tip ht.

6.0 Small-scale turbines – Siting and design checklist

Defining small-scale wind energy development

Turbine height, as measured to blade tip, is an important factor in establishing how the scale of a proposed turbine would fit with landscape characteristics of the potential site. For the purposes of the Spatial Framework element of this SG ‘small-scale or small wind energy development’ is defined as a maximum of two turbines having an upper limit of 35m to blade tip. Therefore a single wind term above this height restriction will be considered as a ‘wind farm’.

FIGURE 18: GENERAL GUIDANCE ON TURBINE SIZE & LANDSCAPE SCALE

Size Category	Height in metres (blade tip height for wind turbines)
Single storey house	5m
1.5 to 2 storey house	6 – 10m
Farmyard grain silo	10m
Telegraph pole	10.5m
Mature forest trees	20m
Grid pylon	30 - 35m

Extract adapted from SNH’s: *Siting and Design of Small Scale Wind Turbines of between 15 and 50 metres in height* (March 2012)

Cumulative impacts of small-scale turbines

The council is concerned about the potential cumulative impacts from single wind turbines and small wind energy developments. Speculative small-scale wind energy development has the potential to create cumulative impacts from a range of factors including inter-visibility, successive views, dominance over the receiving landscape, and noise. For single turbines, if approved over a range of locations in close proximity to each other, these could lead to unplanned *de facto* wind farms. This is an undesirable outcome and is to be avoided.

Use of Landscape Capacity Study for small-scale wind energy

The council’s Landscape Capacity Study for Wind Energy in West Lothian (2011) assesses each landscape unit in terms of its sensitivity (medium/ high/ highest) against a scale starting from a turbine of 51m to large wind farms with turbines of 130m. Turbines below 51m to blade tip will be assessed against this analysis on a proportional basis and weighted accordingly across assessment criteria.

Applicability of spatial framework for small wind energy developments

The factors which were taken into account in the preparation of the Spatial Framework (Section 3.0) should also be a consideration in relation to smaller developments. Using the Spatial Framework it is possible to indicate where there may be particular restrictions on developments for single/ small wind turbine applications.

Environmental Impact Assessment (EIA) for small wind energy

It should *not* be assumed that small wind energy developments are exempt from EIA. Figure 2: *Scale and EIA Thresholds for Assessing Wind Energy Development* on page 6 of this guidance provides a flow-chart illustrating where EIA applies. The council takes a view on the sensitivity of the proposal for the site and the need for EIA reporting.

The Scottish Government have a useful [EIA webpage](#). It includes a screening checklist for small scale wind energy developments which covers a broad range of issues.

SITING AND DESIGN CHECKLIST

The following Siting and Design Checklist for small wind energy is reproduced from SNH guidance to assist in the assessment of such proposals as they are the most frequent wind energy type of planning application at present.

GENERAL ISSUES	Checklist criteria
<i>Turbine choice</i>	<p>Have you considered a range of different turbine forms in relation to your site?</p> <p>Do the proposed turbines have the most appropriate form, appearance and blade movement for the proposed site? Would another type of turbine fit in better?</p>
<i>Turbine colour</i>	<p>What is the relationship between the proposed turbines and nearby landform and skylines?</p> <p>Are they predominantly seen against the sky or backclothed by landform or trees?</p> <p>Have you thought about how the turbine could look in different seasons and weather conditions?</p> <p>Can turbine colour choice help to make the turbines less prominent?</p>
<i>Turbine size/scale</i>	<p>Have you identified key landscape and visual characteristics (landform/ elevation/ landcover/ built elements/ scale indicators)?</p> <p>Does the proposed turbine relate well to and not dominate these aspects?</p>
<i>Turbine arrays</i>	<p>Is the proposal for a group of turbines?</p> <p>Have you identified where they could be seen from and which are the most sensitive or significant views to the site?</p> <p>How could the turbines best be arranged to relate well to, respect and compliment their setting?</p>
<i>Micro-siting</i>	<p>Has the site been surveyed as fully as possible to minimise the need for micro-siting, especially near to properties and other tall structures?</p>
<i>Ancillary infrastructure</i>	<p>Have existing tracks been utilised wherever possible?</p> <p>Do proposed tracks fit in with the landscape character and compliment the pattern of existing tracks and road networks?</p> <p>Do proposed tracks use surfacing material which relates to the local landscape character?</p> <p>Do proposed tracks and turbine bases avoid steep slopes and minimise need for cut and fill operations?</p>

	<p>Do new ancillary features, such as buildings, walls and fences use materials characteristic of the locality and are they appropriate to the scale and character of the landscape?</p> <p>Has visibility of ancillary features been minimised? Is it proposed to bury connection cables?</p>
<i>Landscape character</i>	<p>Has the local Landscape Character Assessment (LCA) been referred to establish the key landscape characteristics of the site?</p> <p>Was the LCA detailed enough? If not, were OS 1:25000 maps and aerial photos used to help establish this?</p> <p>What is the scale of the landscape? Does the proposal relate well to this?</p> <p>Is the landscape tranquil or busy? Will the blade movement of the proposed turbine(s) change this?</p> <p>Is the landform simple or complex and diverse? Will the proposal confuse or undermine these qualities?</p> <p>Is the proposal likely to affect more than 1 landscape character are or type? Does it relate well to all of those it could potentially affect?</p>
<i>Designated landscapes</i>	<p>Is the proposal within or near to a landscape designated for its special scenic or recreational qualities?</p> <p>Has the proposal been designed to minimise potential impacts on these special qualities?</p>
<i>Landform</i>	<p>Can local landform features be utilised to limit visibility of the proposal?</p>
<i>Landscape pattern and scale</i>	<p>If the scheme is for more than one turbine, does the layout reflect and complement existing landform patterns?</p> <p>Could the turbines be grouped better to fit in with landscape pattern and scale?</p>
<i>Focal features</i>	<p>Will the proposed turbine(s) introduce a new focal landscape feature ensure that does not create visual confusion or compete with other notable features?</p> <p>Does the proposal interrupt views to or from existing focal features?</p> <p>Have opportunities to create a new sculptural image been maximised, especially in heavily modified or designed landscapes?</p>
<i>Perspective</i>	<p>Does the proposal create a false or confusing sense of perspective, especially in combination with other wind energy developments?</p>
<i>Relationship with settlement</i>	<p>Do the turbines respect the scale of adjacent buildings?</p> <p>Does the proposal have a logical visual relationship with relation the settlement pattern?</p> <p>Will the turbines dominate approaches to settlement?</p> <p>Have the turbines been sited to minimise impact on people who live in, work in, travel through the locality or use the area for recreation?</p>
<i>Residential Amenity</i>	<p>Will the proposal impact adversely on residential amenity of a property as assessed indoors and outdoors?</p>
<i>Woodland</i>	<p>Can existing woodland be used to help screen the proposed development without affecting turbine performance?</p> <p>If the trees are broadleaved, how will seasonal differences in the vegetation affect how the turbines look at various times of the year?</p> <p>Are there any proposals in the lifetime of the turbines to fell/restock the trees? What effect will this have on their setting?</p>

<i>CUMULATIVE ISSUES</i>	Checklist criteria
<i>General</i>	Have you considered the relationship between the differing blade movement speeds of different developments? Can this be minimised?
<i>In combination with smaller/micro turbines</i>	Does the introduction of the turbines create local landscape “clutter”, especially where different turbine designs are being proposed close to each other? Could a turbine with the same form as the existing turbines be used?
<i>In combination with other small-scale developments</i>	Are the proposed turbines similar in form, colour and scale to those already existing in the locality? Does the proposal follow the existing small-scale turbine development pattern? Has inter-visibility with other small turbines been minimised from important viewpoints?
<i>In combination with larger turbines</i>	Does the small-scale proposal sit in or associate with the same landscape character type as the larger turbines? If so, does the proposal reflect existing turbine grouping patterns? Have you considered the effect introducing small-scale turbines will have on landscape perspective? Is this likely to create visual confusion? Is the proposal near the coast where there are existing inshore or offshore wind turbines?
<i>Filling in gaps between recognised clusters of wind farms or wind turbines</i>	Will the proposal link 2 previously separate or distinct wind farm areas?
<i>Spatial planning</i>	Does the proposal accord with the spatial plan for wind energy development, where this exists? Does the proposal follow guidelines set down by the Planning Authority in their Planning Guidance?

Extract adapted from SNH's: *Siting and Design of Small Scale Wind Turbines of between 15 and 50 metres in height* (March 2012)

Glossary

ABBREVIATIONS

AGLV	Area of Great Landscape Value
CSGN	Central Scotland Green Network
DNO	Distribution Network Operator
EIA	Environmental Impact Assessment
ES	Environmental Statement
FITs	Feed in Tariffs
HMP	Habitat Management Plan
LBAP	Local Biodiversity Action Plan
LCA/U	Landscape Character Area/ Unit
LCS	Landscape Capacity Study for Wind Energy in West Lothian, DTA, 2011
LDR	Long Distance Route, i.e. Union Canal Towpath, NCR 75
(WL)LLDR	West Lothian Local Landscape Designation Review, LUC, 2013
LNR	Local Nature Reserve
LUC	Land Use Consultants
LVIA	Landscape and Visual Impacts Assessment
NATS	National Air Traffic Services

NERL	NATS (En Route) Ltd
NNR	National Nature Reserve
NPF	National Planning Framework
PAN	Planning Advice Note (from Scottish Government)
RSPB	Royal Society for the Protection of Birds
SLA	Special Landscape Area (will supersede other local landscape designations)
SNH	Scottish Natural Heritage
SPP	Scottish Planning Policy
(WL) LDP	(West Lothian) Local Development Plan (will supersede WLLP)
WLC	West Lothian Council
WLLP	West Lothian Local Plan, 2009

DEFINITIONS

(* indicates from Glossary of *Scottish Planning Policy*, 2014)

Biodiversity*	The variability in living organisms and the ecological complexes of which they are part. This includes diversity within species, between species and of ecosystems (UN Convention on Biological Diversity, 1992).
Borrow pits	Borrow pits are a source of good construction stone on-site. Where borrow pits are feasible there will be the benefit of reduced impacts and costs of transportation of materials, and fewer HGV vehicles on public roads. A borrow pit is a heavily worked area which can result in a high risk of sediment pollution during construction, with potential for permanent hydrological, ecological and visual impacts on the area.
Crane Pads	Crane pads are typically 40x20m for a 2-3MW turbine. In many cases crane pads are reinstated with a thin layer of peat, which is often stripped back at the first major service.
Cultural Heritage	Historical, artistic, literary, linguistic, and scenic associations of places and landscapes.
Cumulative impact *	Impact in combination with other development. That includes existing developments of the kind proposed, those which have permission, and valid applications which have not been determined. The weight attached to undetermined applications should reflect their position in the application process.
Ecosystems services *	The benefits people obtain from ecosystems; these include provisioning services such as food, water, timber and fibre; regulating services that affect climate, floods, disease, waste and water quality; cultural services with recreational, aesthetic, and spiritual benefits; and supporting services such as soil formation, photosynthesis and nutrient cycling.
Feed in Tariffs (FITs)	Government subsidy to support renewable energy developments.
Green networks *	Connected areas of green infrastructure and open space that together form an integrated and multi-functional network.
Historic environment	Includes ancient monuments (scheduled and unscheduled), archaeological sites and landscapes, historic buildings (listed, unlisted and those within Conservation Areas), historic gardens and designed landscapes (both on the Inventory of Gardens and Designed Landscapes, and those not included on the inventory), and their context and setting.
Important viewpoints	These are a set of agreed viewpoints arising from landscape consultancy work, though not a definitive list, they are useful for assessment of visual sensitivity. Visual sensitivity refers to the extent which views from 'important viewpoints' and from key routes within West Lothian are vulnerable to changes in the appearance of the landscape. Visual sensitivity is a professional judgement of the likely effect on the relatively 'unspoilt' nature of the view by wind energy or other land use development.
Inter-visibility	Where one turbine is visible from another turbine.
Landform	Landform is defined as 'a natural feature of the earth's surface'. (Oxford English Dictionary)
Landscape	Landscape means an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors.
Landscape capacity	Refers to the degree of change to which a particular landscape character type or area is able to accommodate change without significant effects on its character, or overall change of landscape character type. Landscape capacity is a professional judgement reflecting the particular landscape characteristics and features of a given area and is likely to vary according to type and nature of change being proposed.
Landscape character	A distinct, recognisable and consistent pattern of elements in the landscape that makes one landscape different from another.
Landscape character area/unit	A single, unique and discrete geographical area within a particular landscape character type. It shares generic characteristics with other areas of the same type but also has its own individual identity. Also referred to as 'landscape area' or a 'landscape unit', they are usually named

	according to place names, rather than names describing generic characteristics, to reflect their distinct identity, such as 'Avonbridge to Armadale Plateau Edge'.
Landscape character type	A generic landscape, relatively homogenous in character and which possesses broadly similar combinations of natural and cultural characteristics, including patterns of geology, landform, soils, vegetation, land use, settlement and field pattern in every area where it occurs. Also referred to as 'landscape type', they are usually named after the broad geographic features which are common to the landscape character type, such as 'Lowland Plateaux'.
Local landscape designation	The process of protecting landscape at a sub-regional level; local landscape designations are the arising spatial policy elements, i.e. Special Landscape Areas.
Micro-renewables /microgeneration	The generation, from low or zero carbon sources, of electricity of up to 50kW capacity and heat of up to 45kW capacity, as set by the Electricity Act 2004.
Micro-siting	In some cases developers need to alter the precise location of the turbines following planning approval due to unforeseen constraints. This relocation is referred to as 'micro-siting' and is best avoided.
National Nature Reserve (NNR) *	An area considered to be of national importance for its nature conservation interests.
National Scenic Area (NSA) *	An area which is nationally important for its scenic quality.
Open Space *	Space within and on the edge of settlements comprising green infrastructure and/or civic areas such as squares, market places and other paved or hard landscaped areas with a civic function. Detailed typologies of open space are included in PAN65.
PADHI *	Planning Advice for Development near Hazardous Installations, issued by the Health and Safety Executive.
Permitted Development (PD)	Planning permission granted for certain classes of development by the Town and Country Planning (General Permitted Development) (Scotland) Order 1992, as amended. Also known as Permitted Development Rights (PDR).
Prime agricultural Land *	Agricultural land identified as being Class 1, 2 or 3.1 in the land capability classification for agriculture developed by Macaulay Land Use Research Institute (now the James Hutton Institute).
Ramsar Site	Wetlands of international importance designated under the Ramsar Convention.
Repowering	"Repowering" refers to power plants in general and includes measures which improve the efficiency and capacity by means of retrofitting with the latest technology. For wind farms this usually means considering fewer but larger turbines.
Scheduled monument *	Archaeological sites, buildings or structures of national or international importance. The purpose of scheduling is to secure the long-term legal protection of the monument in the national interest, in situ and as far as possible in its existing state and within an appropriate setting.
Sensitive receptor *	Aspect of the environment likely to be significantly affected by a development, which may include for example, population, fauna, flora, soil, water, air, climatic factors, material assets, landscape and the interrelationship between these factors. In the context of planning for Zero Waste, sensitive receptors may include aerodromes and military air weapon ranges.
Setting *	Is more than the immediate surroundings of a site or building, and may be related to the function or use of a place, or how it was intended to fit into the landscape of townscape, the view from it or how it is seen from areas round about, or areas that are important to the protection of the place, site or building.
Shadow flicker	Shadow flicker is caused by low sun behind the rotating blades of a wind turbine. This shadow is created by rotating blades and can cause alternating light and dark shadows to be cast on roads or nearby buildings. This can be a source of distraction and annoyance.
Site Infrastructure	This usually includes: track construction; turbine foundations including transformers and crane pads; cable trenching; borrow pits; substations / control and switchgear buildings; construction compounds; and permanent anemometry.
Site of Special Scientific Interest (SSSI) *	An area which is designated for the special interest of its flora, fauna, geology or geomorphological features.
Terrestrial habitats	Ground based environments where a plant or animal naturally or normally lives and grows.
Transport Statement (trunk roads)	Normally consists of a document detailing the traffic generated by the development, an analysis of a junction on to the trunk road to ensure that it operates efficiently and an accident analysis. This is not necessarily an exhaustive list and applicants are advised to contact Transport Scotland to ensure that all the necessary analysis is completed.

References

The main references given are current at the time of drafting. Relevant sources are likely to be revised over the life-time of the SG.

David Tyldesley & Associates, *Landscape Capacity Study for Wind Energy in West Lothian*, 2011

Land Use Consultants, *West Lothian Local Landscape Designation Review*, 2013

NATS en route safeguarding maps <http://www.nats.co.uk/environment/windfarms/nerl-self-assessment-maps/>

Scottish Environmental Protection Agency

Guidance from SEPA on the *Water Environment* <http://www.sepa.org.uk/water.aspx>

Scottish Government:

Calculating carbon savings from wind farms on Scottish peat lands – A New Approach, 2007

<http://www.scotland.gov.uk/Publications/2008/06/25114657/0>

Planning Policy and Advice (Legislation, circulars, SPP and PANs)

<http://www.scotland.gov.uk/Topics/Built-Environment/planning>

▪ PAN 58: *Environmental Impact Assessment*

Policy on Control of Woodland Removal

[http://www.forestry.gov.uk/pdf/fcfc125.pdf/\\$FILE/fcfc125.pdf](http://www.forestry.gov.uk/pdf/fcfc125.pdf/$FILE/fcfc125.pdf)

Scottish Planning Policy, June 2014

Scottish Natural Heritage

Assessing the impact of small-scale wind energy proposals on the natural heritage (V2) June 2014

Assessing the cumulative impact of onshore wind energy developments, 2012

Bats and Wind Turbines, 2012

Cumulative Effect of Windfarms, 2005

Good practice during wind farm construction, 2010

Guidance on Assessing Connectivity with Special Protection Areas (SPAs), 2012

Renewables Trends in Scotland, 2010

Siting and Design of small scale wind turbines of between 15 and 50 metres in height, 2012

Siting and designing windfarms in the landscape (V2), 2014

Survey methods for assessing the impacts of onshore wind farms, 2005, revised 2010

Visual assessment of windfarms best practice, 2006

Visual representation of wind farms: Good Practice Guidance, 2007

SESplan, *Strategic Development Plan for Edinburgh and Southeast Scotland*, 2013

West Lothian Council

West Lothian Landscape Character Classification, 2014

West Lothian Local Plan, 2009

West Lothian Local Development Plan: Main Issues Report, August 2014

Acknowledgement

The council gratefully acknowledges the use and adaptation of text and tables from the following two documents which are commended as models of good practice:

South Lanarkshire Council: Proposed South Lanarkshire Local Development Plan, *Wind Energy Supplementary Guidance*, May 2013 – consultative draft

Loch Lomond and The Trossachs National Park: *Supplementary Planning Guidance - Renewable Energy*, 2013

Contacts

For further information or advice please contact:

For Development Planning (policy) enquiries:

Sarah Collings, Planning Officer

T: 01506 282-429

sarah.collings@westlothian.gov.uk

For Development Management (applications) enquiries:

Chris Norman, Development Management Manager

T: 01506 282-412

chris.norman@westlothian.gov.uk

Tony Irving, Senior Planner

T: 01506 282-410

tony.irving@westlothian.gov.uk

West Lothian Council, County Buildings, Linlithgow EH497EZ

For Environmental Health (noise) enquiries:

Brian Carmichael, Environmental Health Officer

T: 01506 283-287

brian.carmichael@westlothian.gov.uk

For Transportation enquiries:

Chris Nicol, Engineer

T: 01506 282-326

chris.nicol@westlothian.gov.uk

APPENDICES

APPENDIX A: INTERIM PLANNING GUIDANCE NOTE: ASSESSMENT OF WIND TURBINE NOISE

The document can be found at the following web-link: <http://www.westlothian.gov.uk/media/2512/SPG-Assessment-of-wind-turbine-noise/pdf/interimpolicywindturbinoise.pdf>

APPENDIX B: COMMUNITY ENERGY BENEFITS

In general, funds from wind energy developments should consider grant applications for projects within an identified 10km radius of each participating renewable energy development site. Applications can be considered from outwith the 10km radius if it can be demonstrated that the beneficiaries of the project reside within the eligible area. The grant award in these cases should be proportionally based on the percentage of residents from eligible communities benefiting from the project.

At present the council runs a community development trust for wind energy known as the West Lothian Development Trust. More information can be obtained at the following web-link:

<http://www.westlothian.gov.uk/article/5159/West-Lothian-Development-Trust>

Any discussions with developers on community contributions with the council should not be construed as pre-determining an application. Community contributions are not a material consideration in the assessment of a proposed development.

The council will refer to Circular 3/2012 Planning Obligations and Good Neighbour Agreements when assessing community wind energy projects.

Further information can be found in the guidance *Good Practice Principles for Community Benefits from On-shore Renewables Energy Developments*.

<http://www.scotland.gov.uk/Publications/2013/11/8279>