Planning Services
Development Planning & Environment

SUPPLEMENTARY GUIDANCE (SG)

Wind Energy Development

Spatial framework and assessment criteria for on-shore wind energy development in West Lothian

Adopted 25 June 2021

Contents

one

Introduction and Regulatory Context

1.1 This Supplementary Guidance 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 the Town and Country Planning (Development Planning) (Scotland) Regulations 2008 and forms part of the West Lothian Local Development Plan (LDP). It is a material consideration in the determination of planning applications and expands upon Policy NRG 3 of the LDP.

This SG sets out the council's spatial approach to wind energy development and details the criteria against which wind energy proposals will be assessed. The guidance is intended to assist developers in ensuring they submit all the required information to support their planning applications. An assessment checklist is provided in Section 7 of the guidance to assist interested parties when considering proposals for wind energy developments.

1.3 In the course of preparing the LDP, the council undertook a landscape appraisal exercise. One of the key observations from this was the high level of visibility of landscape in West Lothian, due largely to the routing of major road and rail transport arteries across the area. This 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 under one of the main flight paths for Edinburgh Airport.

1.4 For the purposes of this supplementary guidance, the scale of wind turbines is defined as:

- single and small wind turbine developments - a maximum of two turbines having an upper limit of 35 metres to blade tip; and
- wind farm developments - more than two turbines above 35 metres to blade tip.

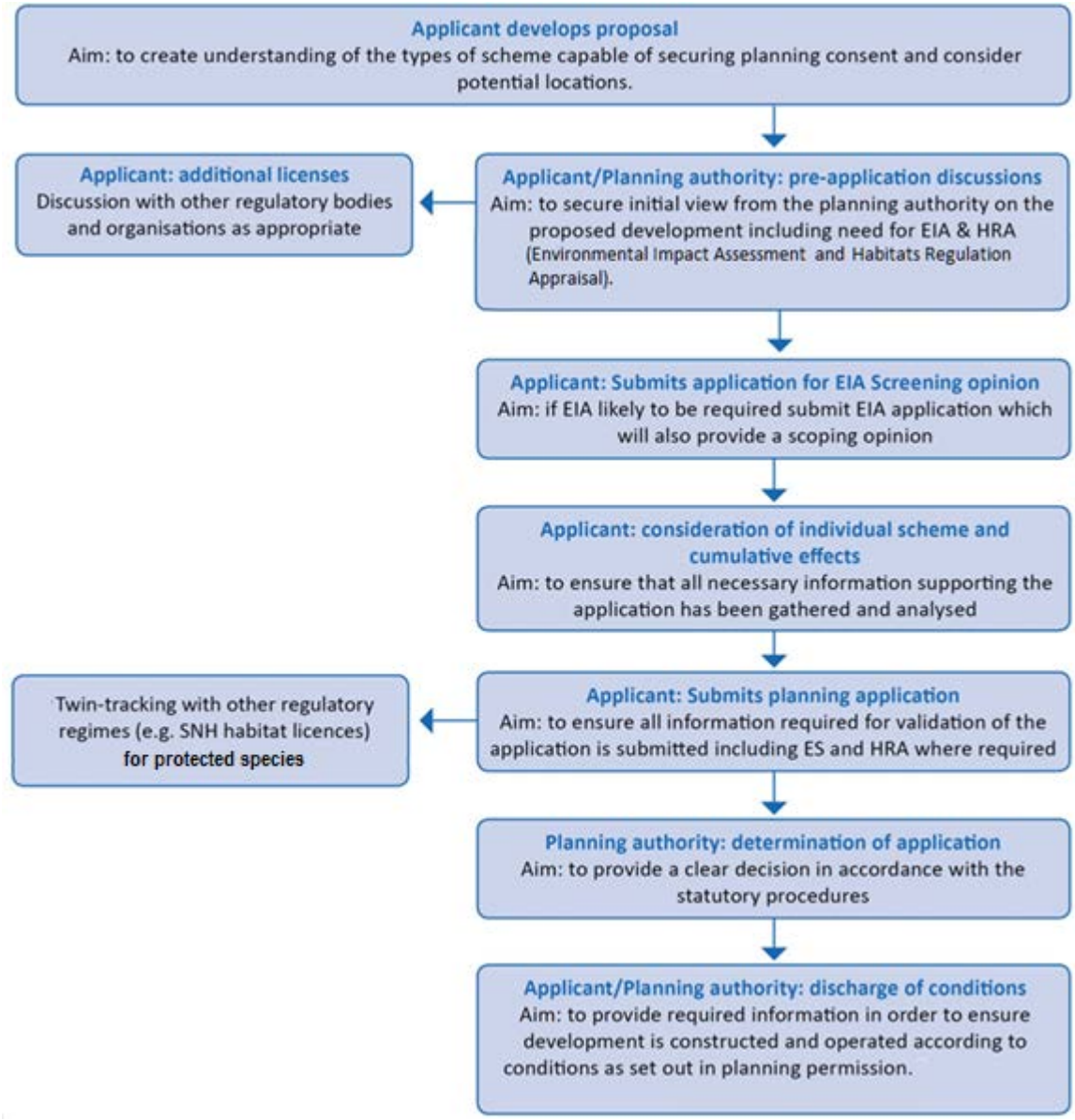
1.5 More recently the introduction of 'tall' on-shore wind turbines (i.e. in excess of 120m to blade tip) has given rise to a gear change in the potential of wind farms to contribute to the national energy supply. This is because each tall wind turbine produces significantly more megawatts of power than turbines below these height limits. It is likely that re-powering of older wind farms will attract tall turbines. The council's capacity study did not however include the tall turbine scale and the Scottish Government is anticipated to be producing guidance on 'tall turbines' in due course.

1.6 The responsibility for determining planning applications for wind farm development is split between West Lothian Council and the Scottish Government Energy Consents Unit, the regulatory authority, and is determined by the generating capacity of the proposals. Where the generating capacity is less than 50 megawatts the council has jurisdiction and where the generating capacity is greater than 50 megawatts Section 36 of the Electricity Act 1989[1] gives control to Scottish Government, although the council does still have a role as a statutory consultee. For the avoidance of doubt, this guidance will be used by the council when considering proposals in both categories of development.

1.7 The table below sets out how this SG 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. Appendices A, B and C in relation to community benefits, wind turbine noise and landscape character areas are provided for further information and set out other factors to be taken into consideration by interested parties in proposing wind farm developments.

[1] See *Section 36* for further information on the operation of the process

Figure 1: Summary Flowchart of Planning Process for Wind Energy Applications

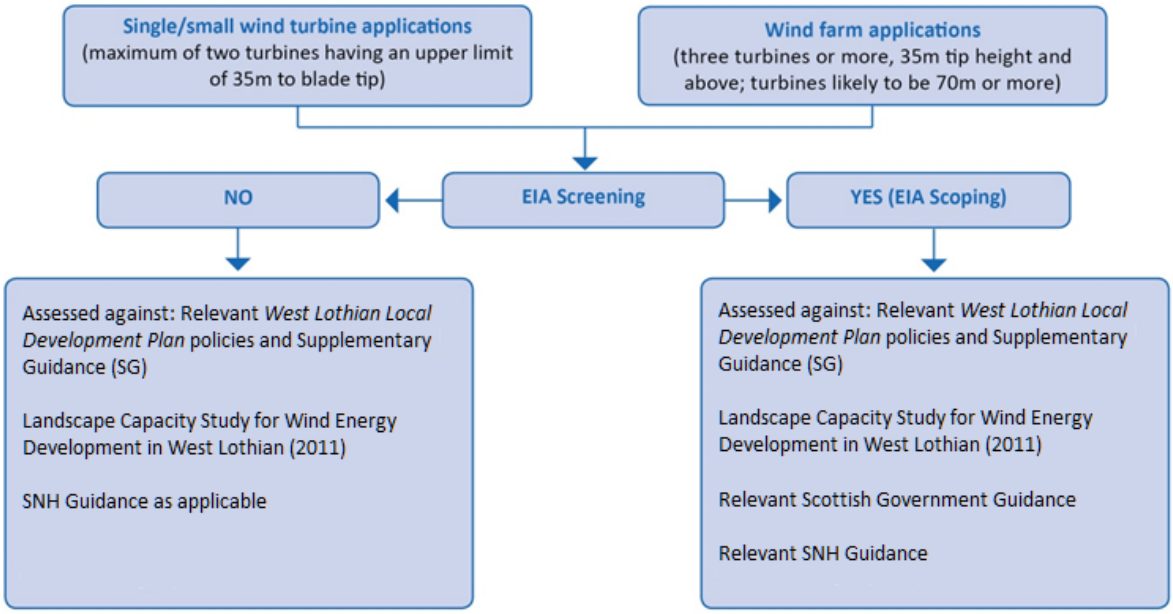


Environmental Impact Assessment (EIA) and Habitats Regulation Appraisal (HRA)

1.8 When determining an application for planning permission for a wind energy proposal the council has a statutory duty to consider whether an Environmental Impact Assessment is required, having regard to the significance of potential environmental impacts. Consideration must also be given to whether a proposal would impact on so called 'sensitive areas' as described in Planning Circular 1/2017: *Environmental Impact Assessment Regulations*

1.9 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 that may be required

1.10 A summary of the main regulatory regimes is outlined in Figure 3 (also see Glossary for an explanation of acronyms.

Figure 3: Main Permission and Licenses Required for Wind Energy Development

Planning Authority	Scottish Government (s.36 Electricity Act 1989)	SEPA (CAR & PPC)	NatureScot (Previously SNH)	Scottish Forestry	Aviation, MoD & Telecommunications
Determination <50 MW generating capacity	Determination > 50 MW generating capacity	Water abstraction and river engineering works (CAR) Waste management (WM) Pollution prevention and control (PPC)	Licences for protected species	Felling permissions ~~and~~ associated environmental impact assessments Forest Design Plans	Any impact on aviation, defence and telecommunications activity to be assessed and (where relevant) mitigation measures agreed.

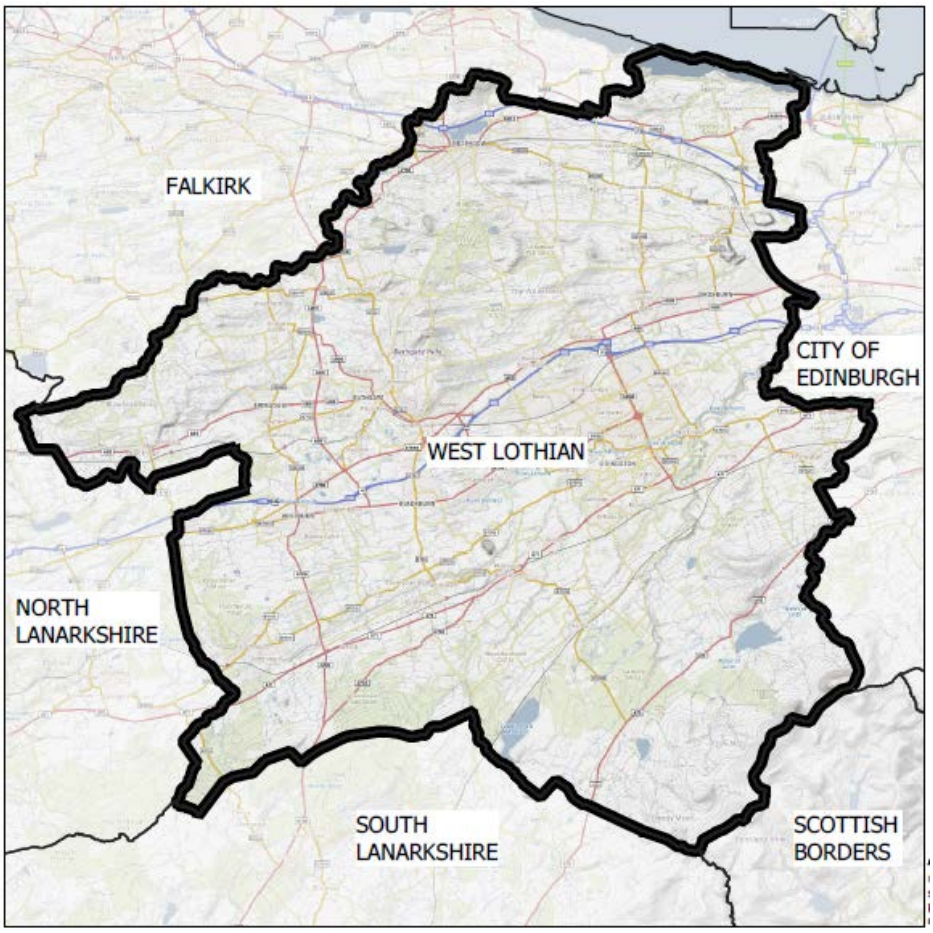
1.11 Other factors to consider are as follows:

- Authorisation is required under the Water Environment (Controlled Activities) (Scotland) Regulations 2011 (CAR) to carry out engineering works in or in the vicinity of inland surface waters (other than groundwater) or wetlands. Inland water means all standing or flowing water on the surface of the land (e.g. rivers, lochs, canals, reservoirs).

- The management of surplus peat or soils may require an exemption under the Waste Management Licensing (Scotland) Regulations 2011. Proposed crushing or screening will require a permit under the Pollution Prevention and Control (Scotland) Regulations 2012. Consider if other environmental licences may be required for an installations or processes.
- Below these thresholds you will need to comply with CAR General Binding Rule 10 which requires, amongst other things, that all reasonable steps must be taken to ensure that the discharge does not result in pollution of the water environment. The detail of how this is achieved may be required through a planning condition.
- Details of regulatory requirements and good practice advice for the applicant can be found on the Regulation section of SEPA's website or by contacting waterpermitting@sepa.org.uk or wastepermitting@sepa.org.uk
- A Controlled Activities Regulations (CAR) construction site licence will be required for management of surface water run-off from a construction site, including access tracks, which:
- is more than 4 hectares,
- is in excess of 5km, or
- includes an area of more than 1 hectare or length of more than 500m on ground with a slope in excess of 25˚

See SEPA's Sector Specific Guidance: Construction Sites (WAT-SG-75) for details. Site design may be affected by pollution prevention requirements and hence we strongly encourage the applicant to engage in pre-CAR application discussions with a member of the regulatory services team in your local SEPA office.

West Lothian and neighbouring council areas (1:50,000)



two

Planning Policy Context

2.1 This supplementary guidance (SG) has been developed with regard to and in compliance with the relevant national, strategic and local development plan policies.

National policy

2.2 The Scottish Government's *National Planning Framework 3* (NPF3) was published in June 2014 and includes a number of national initiatives, developments and targets which support the use and development of renewable energy technologies. The importance of wind energy development is emphasised in NPF3 in order to reduce reliance on carbon fuels and thus combat climate change as well as for its potential socio-economic benefits.

Scottish Planning Policy (SPP) 2014

2.3 *SPP* explicitly requires local planning authorities through Local Development Plans to:

- support the development of a diverse range of electricity generation from renewable energy technologies - including the expansion of renewable energy generation capacity; and
- guide development to appropriate locations and to advise on the issues that will be taken into account when specific proposals are being assessed.

2.4 SPP requires that all planning authorities prepare spatial frameworks for wind energy development following a standardised methodology and for development plans to set out criteria for the decision-making process for determining applications on wind energy.

2.5 These considerations include economic impacts, energy targets, greenhouse gas emissions, cumulative impacts, 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

2.6 In accordance with SPP this guidance sets out and explains the factors which will be taken into account when the council determines proposals for wind energy development with assessment criteria relevant to the consideration of applications being dependant on the scale of a development and its relationship to the surrounding area.

Scottish Energy Strategy

2.7 In December 2017, the Scottish Government published its strategic vision for Scotland's future energy system – *The Future of Energy in Scotland: Scottish Energy Strategy*. This is a long-term strategy for the next thirty years and adopts challenging renewable energy targets built around three main principles:

- a whole-system view
- an inclusive energy transition
- a smarter local energy model

2.8 The Scottish Government's Energy Strategy targets are expected to be met from a range of renewable energy sources, including on and off shore wind, but also hydro, solar, biomass and geothermal.

2.9 The Scottish Government's most recent energy/emissions targets were published in 2019 as the *Climate Change (Emissions Reduction Targets) (Scotland) Act 2019*.

The new Act amends the Climate Change (Scotland) Act 2009 and sets targets to reduce Scotland's emissions of all greenhouse gases to net-zero by 2045 at the latest, with interim targets for reductions of at least 56% by 2020, 75% by 2030, 90% by 2040.

The Strategic Development Plan (SDP1)

2.10 Policy 10 of the *Strategic Development Plan* for Edinburgh and South East Scotland (SESplan) (SDP, 2013) sets out the broad policy relative to renewable energy development.

> *Policy 10 - SUSTAINABLE ENERGY TECHNOLOGIES*
>
> *The Strategic Development Plan seeks to promote sustainable energy sources.*
>
> *Local Development Plans will:*
>
> *a. Support the future development and associated infrastructure requirements of Longannet and Cockenzie power stations in relation to their role as non-nuclear baseload capacity generators and the reuse of waste heat from these developments. Support Energy Park Fife at Methil and developments connected with offshore renewable energy at Leith and Rosyth; and*
>
> *b. Set a framework for the encouragement of renewable energy proposals that aims to 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 West Lothian Local Development Plan (LDP)

2.11 The *West Lothian Local LDP* was adopted in September 2018. Background documents to the LDP have informed this guidance, including the *West Lothian Landscape Capacity Study*, *the West Lothian Landscape Character Classification* and the *West Lothian Local Landscape Designation Review*. Policy NRG 3 of the LDP provides further context for preparation of this guidance. The policy 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.

> *Policy NRG3 - WIND ENERGY DEVELOPMENT*
>
> *The council supports the development of wind energy schemes in principle.*
>
> *Wind energy proposals will be assessed against the detailed spatial framework and the criteria set out in Supplementary Guidance – "Wind Energy Development". Development will be supported where it can be satisfactorily demonstrated that proposals will not individually or cumulatively have a significantly adverse impact on local communities, the natural and historic environment, public safety and the economy of the local area.*
>
> *The council will have regard to the precautionary principle when assessing wind energy proposals where nationally or internationally important landscape and natural heritage resources are potentially being impacted on.*

Part 1 : Spatial Framework for Wind Energy

three

Spatial Framework for Wind Energy

Scottish Planning Policy 2014 (SPP) - Spatial framework methodology

3.1 Scottish Government policy supports and enables energy infrastructure developments with spatial frameworks for wind energy assisting the delivery of future energy supply for Scotland.

3.2 SPP seeks to ensure a consistent approach across Scotland by identifying a requirement for all local development plans to include a spatial framework for onshore wind energy.

3.3 SPP requires that Development Plans should indicate the minimum scale of onshore wind development that their spatial framework is intended to apply to. In the case of West Lothian the spatial framework, applies to (as defined at 1.7 above): *wind farm developments of more than two turbines above 35 metres to blade tip.*

3.4 Scottish Planning Policy requires that spatial frameworks identify certain constraints and effectively divides each authority area into 3 categories indicating the different levels of protection and potential acceptability of onshore wind energy developments. Table 1 – as copied from SPP - provides the basis for the sieving process set out in this guidance which parties should have regard to in considering wind energy developments.

Table 1: Spatial Frameworks

<table>
<tr><td colspan="3">Group 1: Areas where wind farms will not be acceptable:

National Parks and National Scenic Areas.</td></tr>
<tr><td colspan="3">Group 2: Areas of significant protection:

Recognising the need for significant protection, in these areas wind farms may be appropriate in some circumstances. Further consideration will be required to demonstrate that any significant effects on the qualities of these areas can be substantially overcome by siting, design or other mitigation.</td></tr>
<tr><td>National and international designations:

• World Heritage Sites;
• Natura 2000 and Ramsar sites;
• Sites of Special Scientific Interest;
• National Nature Reserves;
• Sites identified in the Inventory of Gardens and Designed Landscapes;
• Sites identified in the Inventory of Historic Battlefields.</td><td>Other nationally important mapped environmental interests:

• areas of wild land as shown on the 2014 SNH map of wild land areas;
• carbon rich soils, deep peat and priority peatland habitat.</td><td>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. 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.</td></tr>
<tr><td colspan="3">Group 3: Areas with potential for wind farm development:

Beyond groups 1 and 2, wind farms are likely to be acceptable, subject to detailed consideration against identified policy criteria.</td></tr>
</table>

3.5 There are additional international and national designations beyond West Lothian's boundaries in adjacent local authority areas which may require inclusion and consideration at planning application stage and in the preparation of a supporting Environmental Statement (i.e. Special Protection Areas and wildlife connectivity sites) but for the purposes of this guidance information pertaining to Groups 1-3 is confined to West Lothian. Within a West Lothian context therefore, the following considerations apply.

Group 1: Areas where wind farms will not be acceptable

3.6 National Parks and National Scenic Areas are the only areas where wind farms are not acceptable. There are no national parks or national scenic areas in West Lothian and thus there are no Group 1 Areas identified in this guidance

Group 2: Areas of significant protection

3.7 Group 2 Areas of significant protection 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).

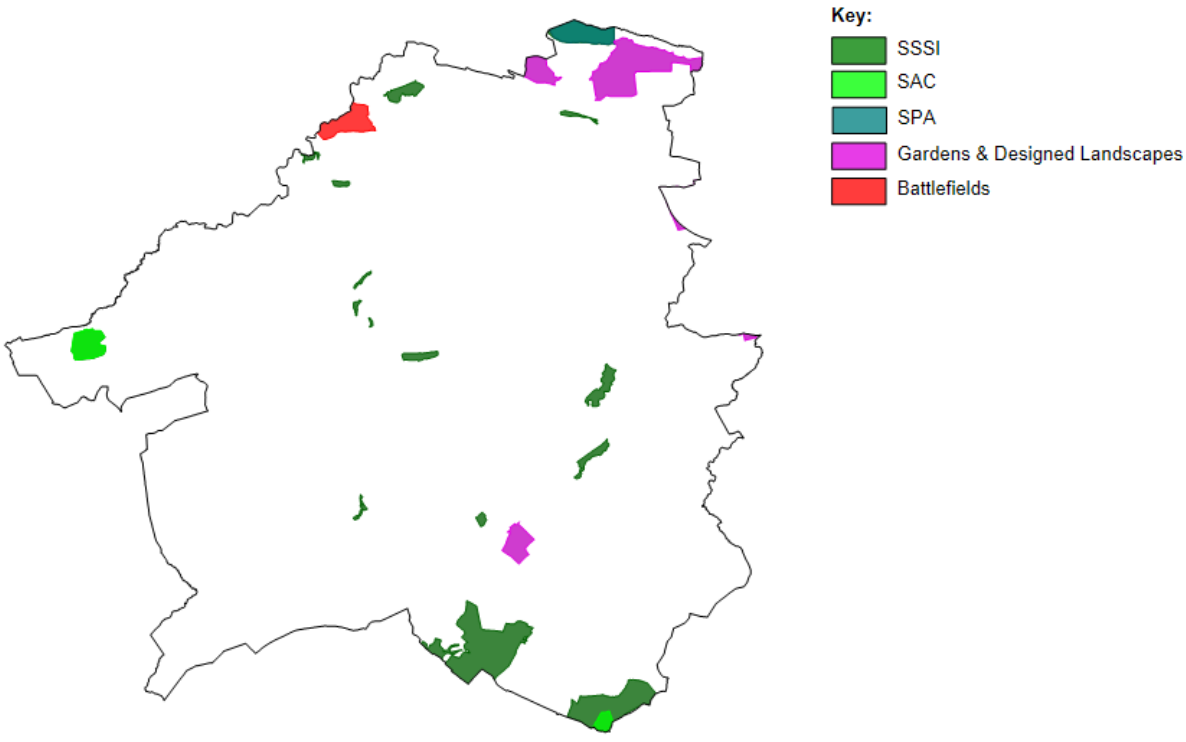
Table 2: Group 2a - International and National Designations in West Lothian

DESIGNATION	WEST LOTHIAN SITES
World Heritage Sites	Forth Rail Bridge (within City of Edinburgh Council area with protection of landscape setting requirements in West Lothian)
European and Ramsar sites: Special Areas of Conservation Special Protection Areas	 Blawhorn Moss, near Blackridge Craigengar, Pentland Hills Firth of Forth (part in West Lothian)
Sites of Special Scientific Interest	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
National Nature Reserves	Blawhorn Moss, by Blackridge

Sites identified in Historic Scotland's Inventory of Gardens and Designed Landscapes	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)
Sites identified in Historic Scotland's Inventory of Historic Battlefields	Battle of Linlithgow Bridge site (part is within Falkirk Council area)

3.8 These areas are identified below in Map 1: Spatial Framework Group 2a. It should, however, be noted that Group 2a areas are not totally excluded from wind farm development as SPP advises that development in these areas may be appropriate in some limited circumstances. In such an event 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. Further information on viewshed analysis around the Firth of Forth including those viewsheds which require protection through the planning process can be found in *The Forth Bridge World Heritage Site: Key Viewpoints*

Map 1: Spatial Framework Group 2a: Areas of Significant Protection - International and National Designations



Group 2b areas: Other nationally important mapped environmental interests

3.9 Peatlands cover 20% of Scotland's landmass and are important stores of carbon. NatureScot published *Scotland's National Peatland Plan* (2015) which reinforces SPP guidance and advises that:

> *In the preparation of spatial frameworks for onshore wind farms, carbon rich soils, deep peat and priority peatland habitat are recognised as nationally important mapped environmental assets. These are afforded significant protection where effects on the qualities of these areas from wind farm development cannot be substantially overcome.*
>
> LDP Policy ENV 6 Peatlands and Carbon Rich Soils offers significant protection to peatland.

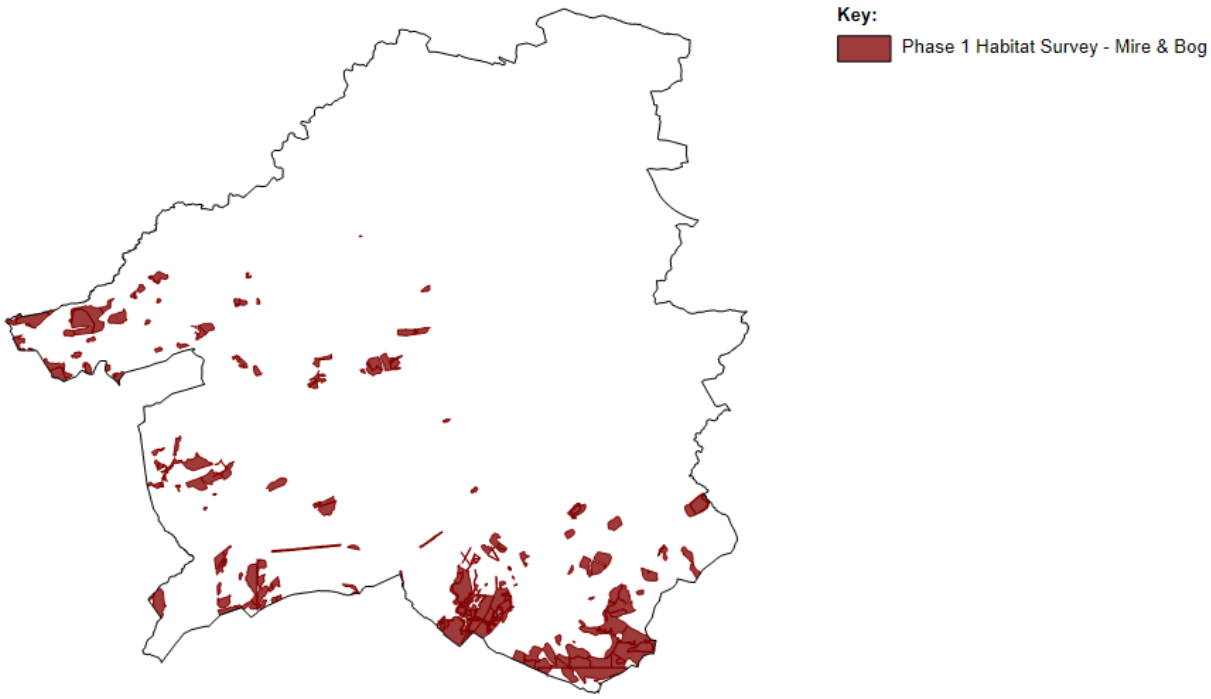
3.10 The *Carbon Calculator for Wind Farms on Scottish Peatlands factsheet* is a particularly helpful source of information. Information from the council's *Phase 1 Habitat Survey* also provides a local source of data. Mire and Bog Habitat was surveyed and mapped in 1993 and is indicative of the location of these important habitats and carbon stores. NatureScot has also provided a *Carbon and Peatland Map 2016* which provides an indication of the likely presence of peat in each mapped area. Reference to carbon rich soils can also be found in the Scotland Soil website where reference to soil categories 5 and 6 on the carbon richness map can be taken to indicate the presence of carbon rich soils.

Table 3: Group 2b - Other Nationally Important Mapped Environmental Interests

Group 2b areas: Other nationally important mapped environmental interests	West Lothian assessment
Areas of wild land as shown on the 2014 NatureScot map of wild land areas	There are no areas of 'wild land' as identified by NatureScot 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 See NatureScot's *Carbon rich soils, deep peat and priority peatland habitats map* (2015) for further details

3.11 Site specific surveys will still be required for all development proposals. Further information is given in Section 5.0 *Policy Considerations* of this document under the heading 'Peat, soils and water'. Areas identified within Group 2b are shown on Map the map below.

Map 2: Spatial Framework Group 2b: Areas of Significant Protection - Other Nationally Important Mapped Environmental Interests



Group 2c areas: Community separation for consideration of visual impact

3.12 Column 3 of Table 1 in Scottish Planning Policy (see above) identifies specific factors for the establishment of Group 2c areas for spatial frameworks.

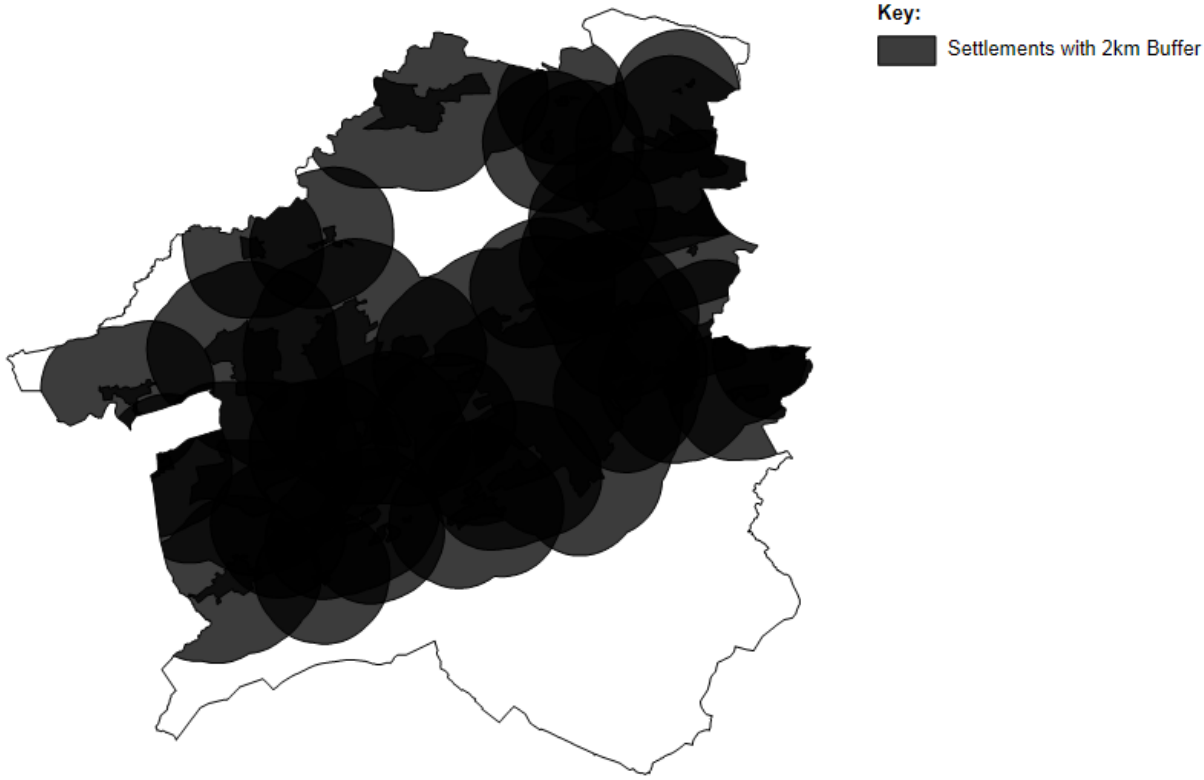
3.13 The determination of the extent of these areas is based on '*landform and other features which restrict views out from the settlement*' and requires consideration of the impacts on visual amenity in and around requisite settlements. Settlements within West Lothian and those within 2km of West Lothian's administrative boundary are listed in the following table. An indicative map of these Group 2c communities is shown on page 17.

Table 3: Community Separation Considerations for Visual Impact

Group 2c areas: Community separation for consideration of visual impact	
Communities within West Lothian	*Communities in adjacent local authorities within 2km of council boundary requiring consideration and assessment*
Addiewell & Loganlea Armadale Bathgate Blackburn Blackridge Breich Bridgend Broxburn	*City of Edinburgh* Kirkliston Newbridge South Queensferry *Falkirk* Avonbridge Blackness

Dechmont Ecclesmachan East Calder East Whitburn Fauldhouse Greenrigg Kirknewton Linlithgow Livingston (including Mid Calder, Pumpherston & Uphall Station) Longridge Newton & Woodend Philpstoun Polbeth Seafield Stoneyburn & Bents Torphichen Uphall West Calder Westfield Whitburn Winchburgh Wilkieston	Bo'ness Whitecross *North Lanarkshire* Harthill *South Lanarkshire:* Tarbrax Woolfords

Map 3: Spatial Framework Group 2c: Areas of Significant Protection - Community Separation for Consideration of Visual Impact



3.14 The tables below summarise the results of a desktop analysis of the indicative potential mitigating landforms and other factors which may alter the 2km visual separation distances from visual impacts of wind farms on communities. In considering proposals for wind energy development full consideration of visual impact on communities should be undertaken and included as part of the supporting information required at planning application stage and as listed in the Development Management criteria in paragraph 169 of *SPP* .

Table 4: Community Separation Considerations for Visual Impact: Desktop Assessment

Communities with settlement boundaries in LDP	*Indicative potential intervening land form*	*Other indicative potential mitigating factors on visual impacts*
Group 2C Communities within West Lothian		
Addiewell & Loganlea	*N/a*	*Various woodland & forests*
Armadale	*Hill/ridge to north-west*	*Forest to south-west*
Bathgate	*Hills to north*	*Industrial estates to south*
Blackburn	*N/a*	*" " " " to north and west*
Blackridge	*Uplands to north*	*Woodlands to south-east*
Breich	*N/a*	*Forest to south*
Bridgend	*Ridge to south*	*N/a*
Broxburn	*Shale bings and ridge to north*	*Rail embankment to north and east; emerging Community Woodland to north*
Dechmont	*Hills to north*	*Forest/ woods to south*
Ecclesmachan	*Hills to west*	*Forest/ woods to west*
East Calder	*N/a*	*Forest/ woods to south and north*
East Whitburn	*Ridge to south*	*Forest/ woods to south and south-west*
Fauldhouse	*Ridge to north*	*Forest/ woods to south and north*
Greenrigg	*N/a*	*Various woodland & forests*
Kirknewton	*Hills to east*	*Various woodland & forests*
Linlithgow	*Hills to north and south*	*Forest/ woods to south*
Livingston (inc. Mid Calder, Pumpherston & Uphall Station)	*N/a*	*Various woodland & forests; industrial Estates*
Longridge)	*N/a*	*Various woodland & forests*
Newton & Woodend	*Ridge to north*	*Various woodland & forests*
Philpstoun	*N/a*	*Various woodland & forests*

Polbeth	*N/a*	*Various woodland & forests*
Seafield	*N/a*	*Various woodland & forests*
Stoneyburn & Bents	*Ridge to north-west*	*Various woodland & forests*
Torphichen	*Hills/ridges to north and south*	*Various woodland & forests*
Uphall	*Ridge to north-west*	*Various woodland & forests*
West Calder	*N/a*	*Various woodland & forests*
Westfield	*Ridge to north-west and SW*	*Various woodland & forests*
Whitburn	*Moor to south-west*	*Various woodland & forests*
Winchburgh	*Various bings*	*Various woodland & forests*
Wilkieston	*Hills to south-east*	*Various woodland & forests*
Group 2C Communities in adjacent local authorities within 2km requiring consideration and assessment:	*Indicative potential intervening land form (Assessment only for West Lothian)*	*Other indicative potential mitigating factors on visual impacts (Assessment only for West Lothian)*
City of Edinburgh Council:		
South Queensferry	*N/a*	*Various woodland & forests*
Kirkliston	*N/a*	*Various woodland & forests*
Newbridge	*N/a*	*Various woodland & forests*
North Lanarkshire Council :		
Harthill	*N/a*	*Various woodland & forests*
South Lanarkshire:		
Woolfords	*Ridge to north-west*	*Various woodland & forests*
Tarbrax	*N/a*	*Various woodland & forests*
Falkirk Council:		
Avonbridge	*Ridges to south-west*	*Various woodland & forests*
Whitecross	*N/a*	*Various woodland & forests*
Bo'ness	*Ridge to south*	*Various woodland & forests*
Blackness	*N/a*	*Various woodland & forests*

Group 3: Areas with potential for wind farm development

3.15 SPP 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)

3.16 'Group 3: Areas with potential for wind farm development' combines the outcomes of map sieving exercises for the above outline Groups i.e.:

- Group 1: Areas where wind farms will not be acceptable
- Group 2a: Areas of significant protection: National and international designations
- Group 2b: Areas of significant protection: Other nationally important mapped environmental interests
- Group 2c: Areas of significant protection: Community separation for consideration of visual impacts

3.17 Map 4 shows the Groups 1 + 2a + 2b + 2c areas as 'all constraints combined' shown as the different tints. Thus the white areas within the plans are the potential 'Group 3' areas. However these Group 3 areas are not automatically acceptable areas for the development of windfarms and each proposal will require to be tested against a range of pertinent planning policies.

Map 4: Spatial Framework Group 3 - All Constraints Combined

Key

GREY	Settlements with 2 kilometre buffer zones
BROWN	Peatlands (mire & bog)

- SSSI
- SAC
- SPA
- Gardens & Designed Landscapes
- Battlefields

Part 2 : Guidance and Assessment

four Landscape Character: Guidance and Constraints

4.1 The sensitivity of the landscape and its ability to accommodate wind turbines / wind farms is an important consideration in the general assessment of wind energy proposals. Landscape character assessment (LCA) and landscape and visual impact assessment (LVIA) are specialist areas with a very precise vocabulary. The following relevant terms are defined in the Glossary section on page 52: cumulative impact, important viewpoints, inter-visibility, landform, landscape, landscape capacity, landscape character, landscape character area / unit, landscape character type, local landscape designation, and, setting. Please refer to Appendix C – Landscape Character Areas: Summaries.

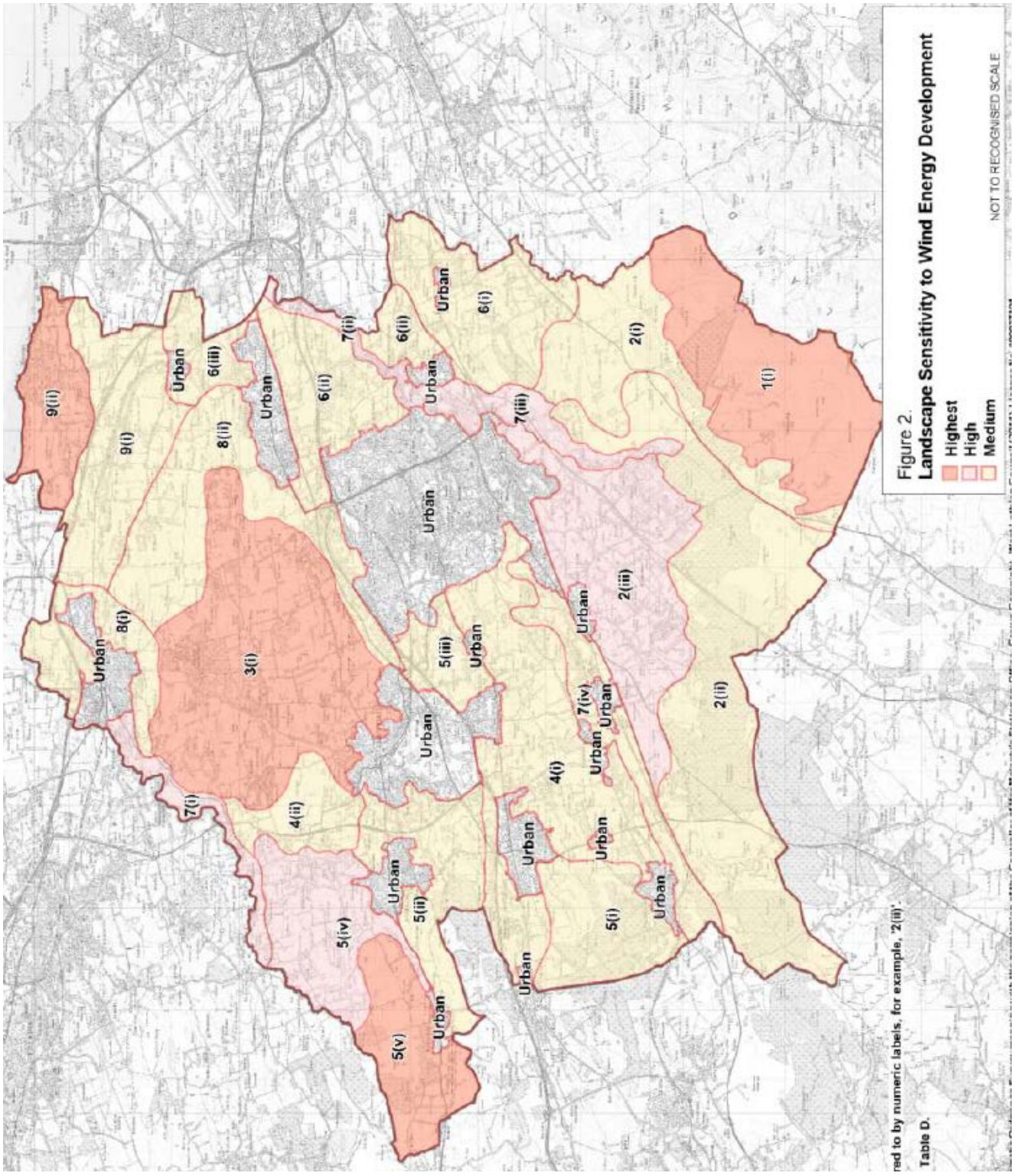
4.2 For wind energy proposals, key considerations are potential impacts on landscape character and potential visual impacts. The council commissioned a *Landscape Capacity Study for Wind Energy* (LCS) to determine the extent of wind energy potential based on landscape and visual assessment in West Lothian. The methodology used was confined to an assessment of landscape character and a visibility analysis and excludes criteria such as cumulative impacts and aviation constraints.

4.3 Map 5 illustrates the 23 landscape units within West Lothian and shows their sensitivity to potential wind energy development. An assessment of higher sensitivity for a landscape translates into a lower capacity for wind energy development. A full explanation of the methodology and the colour-coding for the map is given in the LCS and is summarised below for assistance.

Key to Map 5

Highest	Orange	Highest sensitivity areas to wind energy development
High	Pink	High sensitivity areas to wind energy development
Medium	Yellow	Medium sensitivity areas to wind energy development
Low	N/a	No low sensitivity landscape areas were identified in West Lothian

Map 5: Landscape Sensitivity to Wind Energy Development



(N.B. – map extracted from the council's Landscape Capacity Study that includes numbering which relates to that report)

Please refer to Appendix C – Landscape Character Areas: Summaries for more detailed maps.

Landscape capacity for wind energy based on Landscape Capacity Study

4.4 Based on the landscape sensitivity assessment and the visual analysis it can be seen from Map 6 that some areas within the landscape units remain – are not greyed out and included landscape sensitivity colour-coding - which may have potential for wind energy. However, this is purely an assessment using landscape and visual sensitivity criteria and cannot be taken in isolation of the other assessments set out in the guidance, specifically policy considerations and the assessment checklist.

4.5 The Landscape Capacity Study defines two Landmark Features and their landscape settings – Pentland Hills Uplands and Linlithgow Loch and Palace – as well as 9 important viewpoints and their sensitive visual compartments (which are listed below). Collectively these features form the *Sensitive Visual Compartment and Landmark Features* layer which is superimposed over the landscape unit sensitivity analysis resulting in a remaining area which may have capacity for wind energy. Areas of Highest *Sensitivity* are assessed as having no capacity for wind energy.

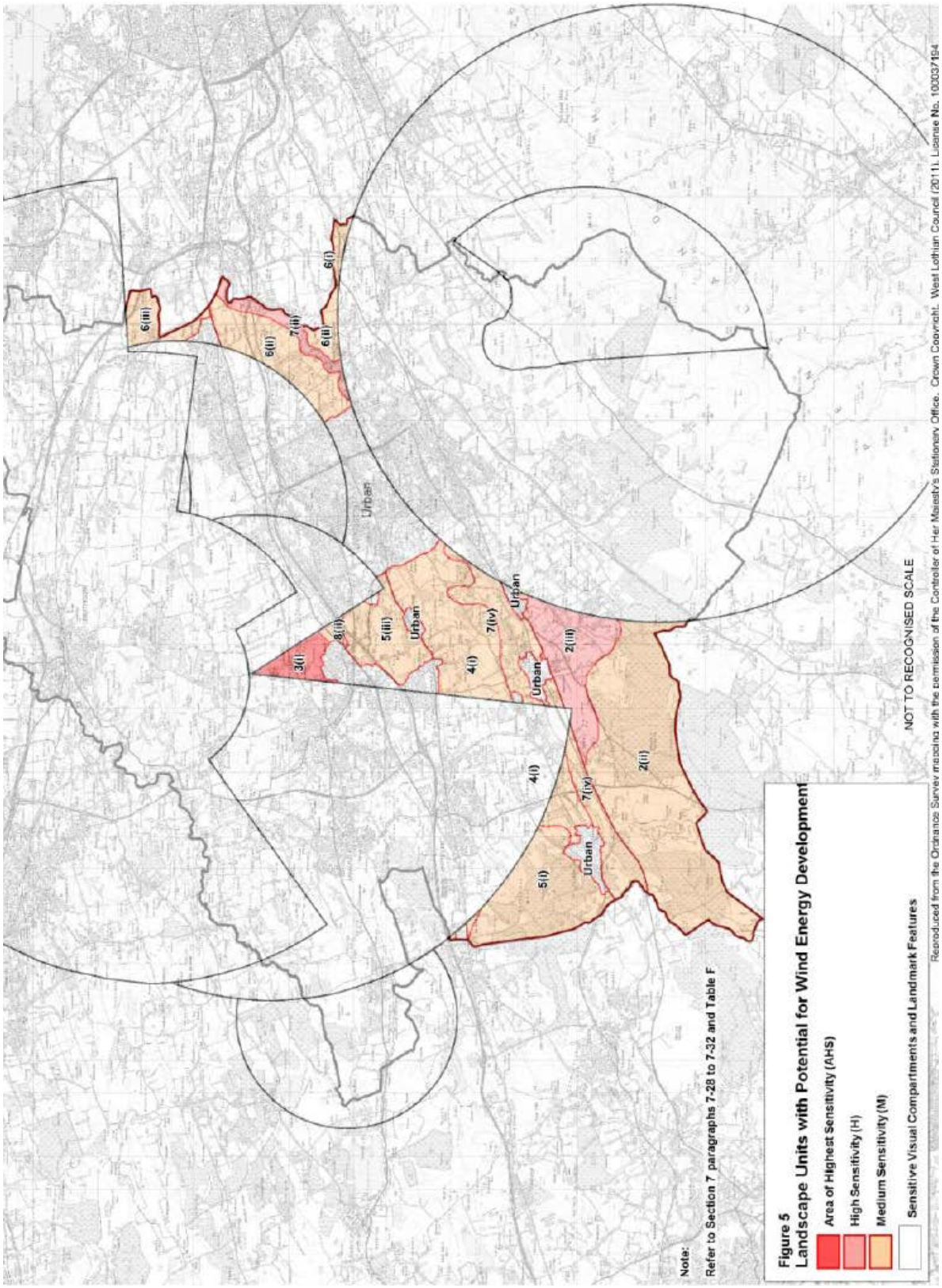
Table 5: Landmark landscape features & Identified viewpoints

Landmark landscape features:	*Identified viewpoints:*
▪ Pentlands Hills Uplands ▪ Linlithgow Loch and Palace	▪ Tower at House of The Binns ▪ A904 Viewpoint to the Forth Bridges ▪ Avon Aqueduct ▪ Cockleroy hill top, Beecraigs Park ▪ Binny Craig, Bathgate Hills ▪ The Knock / Cairnpapple Hill, Bathgate Hills ▪ Blawhorn Moss National Nature Reserve, Blackridge ▪ Harperrig Reservoir, Pentlands ▪ West Cairn Hill, Pentlands

Key to Map 6

Highest Sensitivity Areas	Red	Highest sensitivity areas to wind energy development
High Sensitivity Areas	Pink	High sensitivity areas to wind energy development
Medium Sensitivity Areas	Orange	Medium sensitivity areas to wind energy development
Sensitive visual compartments & Landmark Features – greyed out areas on map following which relate to the identified Landmark landscape features and Identified viewpoints		

Map 6: Landscape Units with Potential for Wind Energy Development



(N.B. – map extracted from the council's Landscape Capacity Study and includes numbering which relates to that report)

Existing wind farms and potential for wind energy development

Based solely on landscape and visual assessment, there are eight potentially acceptable locations for wind energy identified in the *Landscape Capacity Study for Wind Energy Development in West Lothian* (2011). These potential sites are set out below. Of these the most likely potentially deliverable locations, allowing for changes due to build out are those highlighted in green text:

- 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

4.7 These sites are shown on Map 7 however, not all these sites are likely to be practicable in terms of the scale of any wind energy development proposed, not least because of potential conflict with the operations of Edinburgh Airport, and detailed assessment through the planning application process will be required. For more urban sites, small scale wind turbines would be anticipated.

4.8 Generally speaking wind energy development has slowed down since UK Government subsidies started to be reduced. Feed In Tariffs (FIT) scheme in support of renewables has undergone several changes since being introduced in 2010 including deployment caps on all technologies and capacities (with the exception of CHP – combined heat and power). However, since Map 7 was drafted some additional wind farms (two or more turbines) have been consented and are not identified this map, most notably:

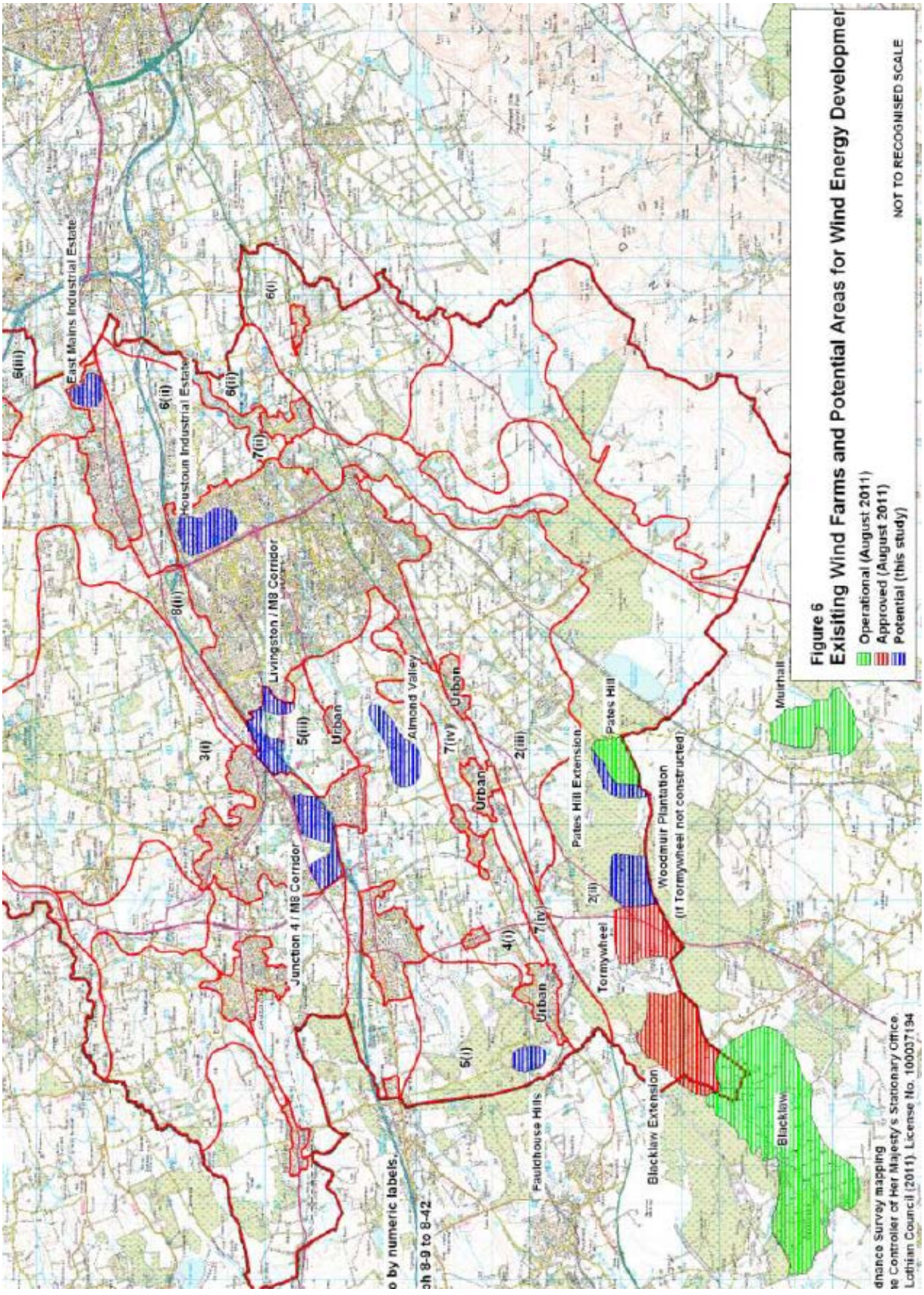
Operational:

- Black Law – operational 2005
- Pates Hill – operational 2010
- Burnhead Moss – operational 2015
- Nether Longford – operational 2015
- Cowdenhead – operational 2015
- Pearie Law – operational 2016
- Harburnhead – operational 2016
- Black Law Phase 1 Extension – operational 2017
- Tormywheel – operational 2017
- Drumduff – operational 2017

Consented but no construction started:

- Tormywheel Extension
- Longhill Burn (Woodmuir Plantation)
- Camilty
- Heathland (cross boundary with SLC, 1 turbine in West Lothian. Revised proposal being prepared with 3 turbines in WLC)

Map 7: Potential Areas of Search Based on Landscape Capacity Study



(N.B. – map extracted from the council's Landscape Capacity Study and includes numbering which relates to that report; existing wind farm mapping circa August 2011)

five

Policy Considerations

5.1 The council is generally supportive of proposals for renewable energy technologies and encourages developers to make use of an easy-to-use 'assessment checklist' (see chapter 7) when preparing a submission for planning approval.

5.2 In addition to the spatial framework requirements and the landscape character & visual assessment already discussed, there is a wide range of other planning policy considerations against which wind energy proposals will be assessed. This section of the guidance provides an overview of the information that the council will ordinarily require at planning application stage. This is, however, not exhaustive and the council reserves the right to require additional information where it considers it necessary to do so.

5.3 The Development Management criteria from paragraph 169 of *SPP* are set out below and integrated into this section of the guidance.

- Net economic impact
- Contributions to energy targets
- Effects on greenhouse gas emissions
- Cumulative impacts
- Impacts on communities and individual dwellings
- Landscape and visual impacts (LVIA)
- 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

5.4 The main source of information for national policy considerations relative to wind energy is the Scottish Government. At the time of publication there are two specific web locations, one dealing with *energy infrastructure / consents* and another providing *onshore wind energy advice*.

5.5 Another useful source of advice can be obtained from the *Scottish Natural Heritage* website advises on how development interacts with natural habitats, including areas of peat and forestry guidance, and also on decommissioning.

5.6 The West Lothian LDP contains the key policies which are material considerations in the assessment of wind energy proposals. These are set out in the table following.

Table 6: Relevant West Lothian Local Development Plan Policies

POLICY REFERENCE	TOPIC
ENV 1	Landscape character & special landscape areas
ENV 6	Peatlands and carbon rich soils
ENV 9	Woodlands, forestry, trees and hedgerows
ENV 11	Protection of Water Environment / Coastline and Riparian Corridors
ENV 17	Protection of International Nature Conservation Sites
ENV 18	Protection of National and Local Nature Conservation Sites
ENV 19	Protection of Local Biodiversity and Geodiversity Sites
ENV 20	Species Protection and Enhancement
ENV 28	Listed Buildings
ENV 30	Historic Gardens and Designed Landscapes
ENV 31	Historic Battlefields: Battle of Linlithgow Bridge (1526)
ENV 32	Archaeology
ENV 33	Scheduled Monuments

Landscape character and visual impact considerations

5.7 All applications submitted to the council for wind energy developments require to be accompanied by a Landscape and Visual Impact Assessment (LVIA. This should demonstrate the potential impact of a development to a radius of 35km (unless otherwise agreed with the council).

5.8 A LVIA should have two distinct elements:

(1) *Landscape impact assessment* – This considers the potential changes to the character of the physical landscape as a result of the proposed development.
(2) *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.

5.9 As part of the LVIA, applicants 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.

5.10 The LVIA should map the potential extent of the visibility of the proposal and identify any key viewpoints, including where the turbine will be sighted on the trunk road network. It should embrace a range of techniques including Zones of Visual Influence, wire line diagrams and photo montages where appropriate.

5.11 The details and complexity of the LVIA will be dictated by the complexity and scale of the proposal and the relative 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.

5.12 For single wind turbine development, the council will require applicants to follow NatureScot 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.

5.13 Wind turbines with a blade tip height of 150m or above are required to be fitted with visible lighting to comply with current Civil Aviation Guidance. The LVIA should assess and illustrate the effects of visible turbine lighting. The effects of lighting could significantly impact settlements and areas of rural character and all forms of mitigation should be explored."

5.14 Proposals within or in the vicinity of special landscape areas (SLAs) will be assessed against policy ENV 1 of the LDP:

5.15 The council offers a *pre-application advice service* which landowners, applicants and agents can use to establish whether proposals would be likely to secure planning permission. There is however a fee for this service. The extent of the LVIA can be discussed as part of this service. See the *Pre-Application Enquiry webpage* and the related scale of *planning fees* for details. Fees are calculated with regard to the complexity of the proposals and there are additional charges for site visits and meetings.

Policy ENV 1 - LANDSCAPE CHARACTER & SPECIAL LANDSCAPE AREAS

Development will not be permitted where it may significantly and adversely affect local landscape character. Where development is acceptable it should respect this landscape character and be compatible in terms of scale, siting and design. New rural development will be required to incorporate design elements to maintain the diversity and distinctiveness of local landscapes and to enhance landscape characteristics where they have been weakened.

Within the Special Landscape Areas (SLAs) shown on the proposals map there is a presumption against development which would undermine the landscape and visual qualities for which the areas were designated. Development proposals 'outwith' these areas which would affect its setting from strategic viewpoints will be subject to detailed visual appraisal and will not be supported if it adversely affects the designated area.

Development proposals which are likely to have a significant landscape impact must be accompanied by a landscape and visual impact assessment demonstrating that, with appropriate mitigation, a satisfactory landscape fit can be achieved.

The council will seek to protect and enhance landscape character and local landscape designations in accordance with Supplementary Guidance Landscape character and local landscape designations' and 'Green Networks.

5.16 See the previous section on Landscape character assessment for detailed information and the *West Lothian Landscape Character Classification 2014* which provides background information about landscape areas and types. Please refer to Appendix C – Landscape Character Areas: Summaries and maps.

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

Habitat and species designations

5. 17 Early engagement with SEPA, NatureScot and the council's Development Management unit are encouraged to ensure that the proposals within the planning submission, including the Habitat Management Plan (HMP), are acceptable. As much detailed information as possible should be provided at an early stage particularly in relation to HMPs. NatureScot *advice sheets* can be accessed from the NatureScot website.

5.18 Although the foundations of wind turbine structures may only be a few metres in diameter the construction work may in practice create a larger zone of disturbance and therefore requires to be taken proper account of. The zone of disturbance can also include, for example, tracks, cabling, hard standings and associated construction sites. The ranges 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.

NB: This is not an exhaustive list and each site will require to be considered separately.

5.19 Species which should generally be considered in relation to wind energy developments in West Lothian are set out in table below. 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. As required by NatureScot Species Planning Advice Sheets, surveys for all protected species should be submitted with planning applications to allow for consideration of licensing tests.

Table 7: List of species to be considered in relation to wind energy development

Mammals	Birds	Amphibians
Badger Otter Beaver Red squirrel Water vole Bats Other mammals referenced in the Wildlife and Countryside Act (as amended)	All wild birds, their nests and their eggs are protected by law unless a special exception is made in the Act. And that many of the rarer birds have additional protection under Schedule 1 of the *Wildlife and Countryside Act* as amended and those listed on Annex 1 of the EU birds directive	Great crested newt

5.20 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 SEPA, Scottish Forestry and the council's Development Management Unit is encouraged to ensure HMP proposals are acceptable. It should be noted that NatureScot only wish to be consulted on HMPs in circumstances where there are designated site issues or other specialist considerations.

5.21 When preparing a planning application regard should also be had to the council's Planning Guidance *Planning for Nature: Development Management and Wildlife*. This overarching guidance addresses policy context and identifies designated sites; key habitats and protected species in West Lothian. It advises on site appraisal, ecological surveys, good design and mitigation measures and contains helpful information relating to licensing requirements.

Local nature conservation designations

5.22 There are a number of local nature conservation sites in West Lothian and they fall within two categories:

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

5.23 A 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 in accordance with extensive guidance from NatureScot. Where applications are advised by NatureScot 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.

5.24 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 NatureScot, RSPB, and Scottish Forestry/Forestry and Land Scotland (as appropriate).

5.25 Where wind energy proposals are small-scale and an EIA is not required, applicants should provide information to support their applications in line with that recommended in NatureScot guidance *Assessing the impact of small-scale wind energy proposals on the natural heritage.*

Bird sensitivity

5.26 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

5.27 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 known to be present on the site.

5.28 EU and national legislation requires that full account must be taken of the impact on the qualifying interests of Special Protection Areas (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

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

5.30 There are five bat species listed as being resident in West Lothian in the council's Planning Guidance: *Planning for Nature: Development Management and Wildlife*

5.31 Recent evidence shows that wind turbines can result in a high mortality rate of bats. Taller turbines reach higher above the ground, have much larger rotor swept areas, and thus further overlap the normal flight heights of nocturnal migrating songbirds and bats.

While direct collision is thought to be responsible for most of the bat fatalities observed at wind facilities research suggests that a high proportion of bat fatality may be due to barotrauma (i.e., injury resulting from suddenly altered air pressure). Fastmoving wind turbine blades create vortices and turbulence in their wakes, and bats may experience rapid pressure changes as they pass through this disturbed air, potentially causing internal injuries leading to death.

5.32 *NatureScot provides helpful guidance on bats and onshore wind turbines* which should be referred to.

Forests and woodlands

5.33 Woodlands within West Lothian are under increasing pressure from a wide range of development pressures. The Scottish Government's *Policy on Control of Woodland Removal: Implementation Guidance* 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. Renewable energy developments are referred to as a type of development where woodland removal is acceptable provided compensatory planting is provided.

5.34 There is a joint SEPA-NatureScot-Forestry Commission for Scotland position statement *'Use of Trees Cleared to Facilitate Development on Afforested Land'* which should be referred to where felling is considered.

5.35 In the first instance where felling is required (e.g. key hole felling and progressive restructuring) or 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 Scottish Forestry's Control of *Woodland Removal Policy*.

5.36 In cases where West Lothian has extensive forestry and woodland coverage, this often coincides with upland areas which have potential for wind farms. Full assessment will be required as per the Scottish Government's Policy on Control of Woodland Removal and the following documentation 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 Scottish Forestry's *Strategic Forest Plan* guidance. All operations should be compliant with the *UK Forestry 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 Forestry 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.

5.37 It is important to draw a clear distinction in the Forest Plan between infrastructural felling and ongoing forest management felling as the consenting regime differs between the two. Infrastructural felling is required to construct and operate the windfarm and is consented through planning legislation. Ongoing forest management felling includes the wider restructuring of the forest and is consented via the *Forestry and Land Management (Scotland) Act 2018*. In either event, all operations should be compliant with the UK Forest Standard. Progressive restructuring of the woodland area can offer many benefits, not only for the improvement of the woodlands silviculture, but also for providing the opportunity to key hole turbines, mitigate against wind yield losses and minimise deforestation.

5.38 Applications for planning permission must include detailed provision for compensatory planting and this will ordinarily be secured through planning conditions.

5.39 For proposals for wind farms on forested land key-holing should be carried out wherever possible rather than clear felling as large scale felling can result in a peak release of nutrients which can affect local water quality. SEPA is likely to have concerns relating to any proposals to fell to waste where the waste generated by the process will be managed by techniques such as chipping, mulching or spreading. Felling operations should be undertaken with a view to preventing and reducing waste arisings. Further information can be found at *SEPA guidance Management of Forestry Waste*

Peat, soils and water

Peatlands and carbon rich soils

5.40 Peatlands and carbon rich soils, including wetlands, may be afforded significant protection in relation to development. Site specific surveys will be required for all wind energy development proposals in this category. NatureScot has revised *Scotland's National Peatland Plan* (2015), as well as producing other guidance on peatlands and carbon rich soils which will need to be taken into account in assessment work. The NatureScot web-page for their *Carbon and Peatland 2016 Map* identifies Class 1 and 2 as nationally important priority peatland habitat. It advises that NatureScot guidance on spatial planning (2015) emphasises:

"The location of a proposal in the mapped area does not, in itself, mean that the proposal is unacceptable, or that carbon rich soils, deep peat and priority peatland habitat will be adversely affected. The quality of peatland tends to be highly variable across an application site and a detailed assessment is required to identify the actual effects of the proposal."

Further information can be found on the *Scotland Soils* web-site.

5.41 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.

5.42 SEPA recommend that developers undertake a detailed peat survey in line with Scottish Government Guidance (link below) using a maximum 100m grid spacing. Peat should be probed to full depth and clearly presented on a spatial map with the proposed infrastructure overlain.

43 The Scottish Government's published method for assessing *carbon losses and savings* requires to be carried out. In line with SEPA's Local Development Plan Guidance on Soil Developers are expected to follow best practice for the avoidance of carbon emissions and disturbance of peat, and the 'carbon calculator' represents a useful to tool in assessing proposed practices.

In addition, SEPA recommends the following web-sites:

- *Regulatory Position Statement: Developments on Peat*
- *Developments on peatlands, Guidance on the assessment of peat volumes, reuse of excavated peat and the minimisation of waste 2012*
- *Peatland Survey Guidance 2017*

Borrow Pits

5.44 Borrow pits associated with wind farm development shall only be acceptable where there are no significant adverse effects on environmental designations, 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. 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 relevant policy in the West Lothian Local Development Plan.

Prime Agricultural Land

5.45 Wind energy development on Prime Agricultural Land (as defined by the James Hutton Institute classes 1, 2 and 3.1) shall only be acceptable where restoration proposals will return the land to its former status.

Water

5.46 The water environment (e.g. watercourses, lochs, wetlands, riparian areas) is 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.

5.47 Applications for planning permission must include a statement setting out protective/preventative measures unless the council explicitly agrees to waive this requirement. Further advice regarding water quality, including whether any construction works will require a *controlled activities regulations (CAR)* Licence can be found on the SEPA website.

5.48 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 hydro-morphological and hydrological processes. These issues may be a constraint to wind farm developments in terms of site location, layout and design.

5.49 The WFD which directs responsible authorities (including SEPA and West Lothian Council) to maintain the good ecological status of water bodies (should) address the following issues:

- to implement via the River Basin Management Planning process, measures which not only maintain the quality and quantity of water and
- the promotion of improvements in the *quality of the water environment.*

5.50 Unnecessary engineering works must be avoided and developers will be required to demonstrate they have put in place all suitable mitigation measures to minimise adverse effects. Additionally, sustainable drainage systems (SUDS) will require to be employed on-site and should comply with the *CIRIA's The SuDs Manual C753*. Temporary Sustainable Drainage measures will require to be employed to avoid siltation of the finalised drainage scheme.

5.51 Wetland habitats are protected under the Water Framework Directive and should be surveyed as part of the water environment and habitats assessment for all development proposals. Further guidance on wetland survey requirements can be found within SEPA Planning Guidance Document LUPS-GU31 - *Guidance on Assessing the Impacts of Development Proposals on Groundwater Abstractions and Groundwater Dependent Terrestrial Ecosystems.*

5.52 Flood risk - all windfarm infrastructure should be located outwith areas of medium to high flood risk in order that there is no piecemeal reduction in flood plain storage. If a flood risk is identified then a Flood Risk Assessment should be carried out following the guidance set out in *SEPA's Technical Flood Risk Guidance for Stakeholders*

5.53 Further guidance on all the issues relevant to SEPA can be found in SEPA guidance *Planning Advice on Windfarm Developments*

5.54 All proposals and applications for wind energy development will be sent to Scottish Water for review so that the council can assess for any impact on the following:

- Drinking water quality and quantity
- Below-ground assets
- Radio telemetry interference

5.55 This allows Scottish Water to assess any potential impact on operations and to suggest adequate control measures if required.

5.56 Surveying for Groundwater Dependent Terrestrial Ecosystems (GWDTE) is likely to be required and the output from this surveying may put restrictions on the siting of wind farm infrastructure. GWDTEs are types of wetland, specifically protected under the Water Framework Directive. Full details of groundwater surveying can be found in SEPA's guidance note LUPS-GU31 *"Guidance on Assessing the Impact of Development Proposals on Groundwater Abstractions and Groundwater Dependent Terrestrial Ecosystems (GWDTEs)"*

5.57 The water environment - the impact of wind energy development (including dust, blasting and impact on water) must be assessed in accordance with Planning Advice Note PAN 50 Controlling the Environmental Effects of Surface Mineral Workings (Paragraph 53); in relation to groundwater; information (Paragraph 52 of PAN 50) only needs to be provided where there is an existing abstraction or GWDTE within 250m of the borrow pit.

Historic Environment

5.58 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.

5.59 Impact may be of a direct nature, for example where: construction works would take place an area of archaeological sensitivity and could cause irreversible damage to valuable irreplaceable assets. Impacts may, however, also be less obvious and more indirect, for example where the proposed development serves to change the setting of important historic features within the landscape, including views from and towards the feature of interest.

5.60 Developments must therefore be conceived and designed to avoid or minimise such impacts. Historic Environment Scotland's guidance on setting explains how the impact of change can be assessed and mitigated in *Managing Change in the Historic Environment: Setting*

5.61 Where development is proposed that has the potential to impact on the cultural and historic environment, developers will require to:

- Identify the cultural and historic assets that might be affected:
- by searching the *Historic Environment Scotland National Record of the Historic Environment* 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 Environment Scotland's Inventory of Gardens and Designed Landscapes;*
- by identifying if the site lies within a *conservation area;*
- define the setting of each cultural and historic asset - the location of structures and buildings of a scheme which 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), or by engaging independent archaeological advice.

Due to the upland and rural nature of most wind energy proposals, non-designated heritage assets are also likely to factor at assessment stage of proposals.

Communities, tourism, recreation, traffic

Communities and residential amenity

5.62 There are thirty identified settlements in West Lothian and these are listed in Section 3.0 of this guidance.

5.63 The indicative *Areas of significant protection* for 'community separation for consideration of visual impact' are set out in on pages 14-19 in accordance with Scottish Planning Policy guidance on spatial frameworks for wind energy. 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 with respect to LVIA for community and residential amenity.

5.64 There is currently no standard minimum distance specified in Scottish Government guidance between individual residential properties and wind turbines, other than in relation to 'shadow flicker'. In certain circumstances shadow flicker from turbines can cause a nuisance for neighbouring properties and a separation distance of 10 rotor diameters is usually recommended. Shadow flicker is the flickering effect caused when rotating wind turbine blades periodically cast shadows through constrained openings such as the windows of neighbouring properties.

5.65 A Health Impact Assessment (HIA) should accompany all applications for wind farms.

5.66 Wind turbine noise has the potential to be a nuisance for nearby residential properties. Guidance on noise and the methodology to be used for noise assessment purposes is set out in Appendix B.

Communities outwith settlement boundaries and individual properties

5.67 For individual properties and smaller settlements outside settlement boundaries assessment is through the Development Management criteria listed in paragraph 169 of *SPP* and the policy framework in the *LDP*. Decisions on individual developments will take into account specific local circumstances and topography.

5.68 Wind turbine noise has the potential to be a nuisance for nearby residential properties. Guidance on noise is set out in Appendix B.

Outdoor recreation and tourism interests

5.69 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, figures 12 & 13 of the *West Lothian Landscape Capacity Study* refer).

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

5.71 Any impacts identified on recreational routes and uses, require to be assessed in full and proposed mitigation measure identified, including during construction (this could include temporary stopping of routes and measures to mitigate the impact of route closures on others). Where appropriate an Access Plan should be prepared with the purpose of informing and guiding the development and future management of the site for recreational access use.

Key issues for developers will include:

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

5.72 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. *SEPA* should be consulted for further advice.

Traffic and transportation

5.73 If it is proposed to site wind turbines close to major roads, it is recommended that pre-application discussion is held with Transport Scotland's Trunk Roads Network Management (TRNM), to ensure safety and establish setbacks from roads and railways.

5.74 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.

5.75 For wind farm developments the council requires 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

5.76 Aviation is a material consideration in the determination of onshore wind energy applications.

5.77 Key guidance related to development and aviation is set out in:

- *Scottish Planning Circular 2/2003 Safeguarding of Aerodromes, Technical Sites and Military Explosives Storage Areas;* and

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

5.78 The council will decline to determine an application until it is in receipt of consultation responses from Edinburgh Airport, NATS En Route (NERL) and any other relevant aviation consultees.

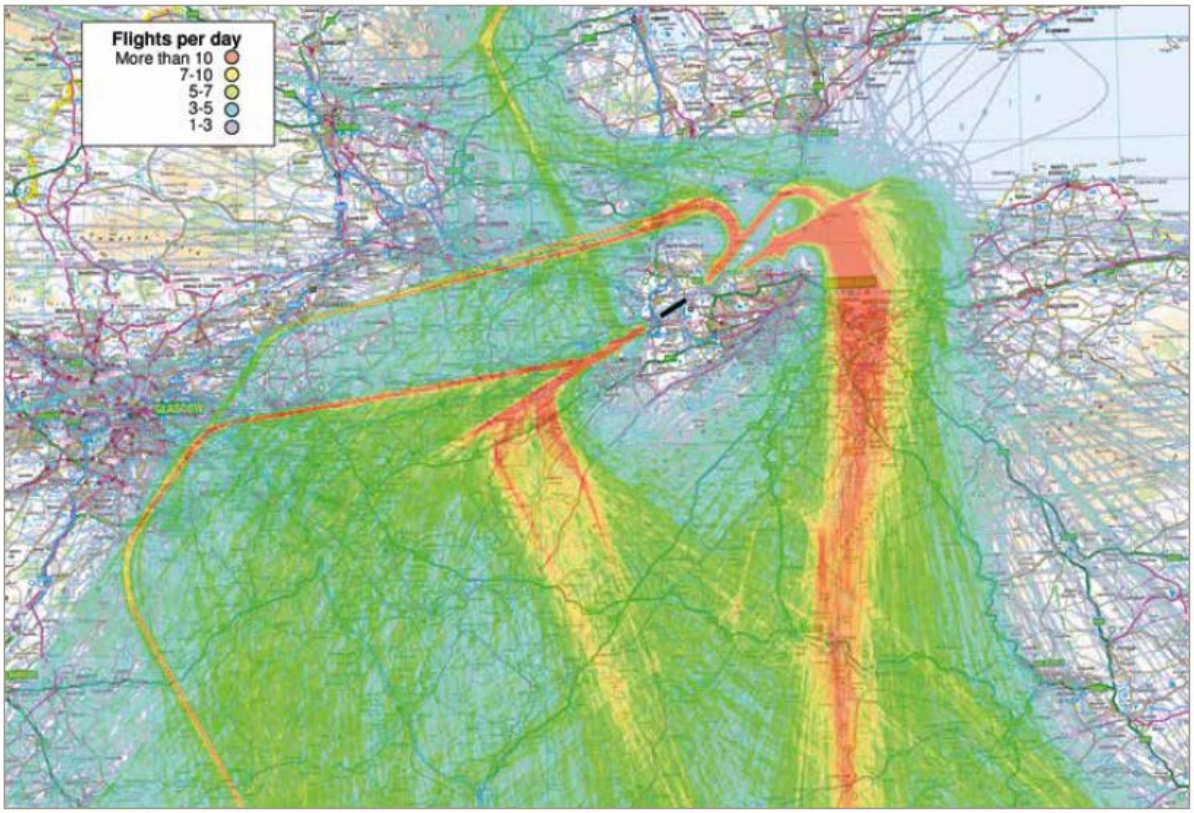
5.79 NATS (En Route) Ltd (NERL) offer a pre-planning service to developers. All pre-planning enquires and scoping requests should be made via the pre-planning service on *NATS* website. It should be noted that NATS's response when consulted will only be related to the impact upon its own infrastructure and operations. Airports, airfields and other aviation stakeholders require to be consulted separately.

5.80 The operators of Edinburgh International Airport, Edinburgh Airport Limited, are responsible for safeguarding its radar and airspace. The airport is located approximately two kilometres to the northeast of the West Lothian Council boundary but navigation support for its main flight path reaches far into West Lothian.

5.81 The West Lothian administrative area falls entirely within the 'Edinburgh Airport Airspace Area' and therefore all applications for wind energy development within West Lothian require consultation with the airport operator. Map 8 identifies the current (2020) arrival and departure flight paths. However the airport continues to pursue airspace change proposals and this may change in future.

5.82 Technical solutions to the conflicts between wind turbines and aviation radar and navigation systems are evolving and through early consultation with aviation authorities in many cases solutions can be found. However the use of suspensive conditions to address aviation issues will generally 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.

Map 8: Edinburgh Airport – Current Arrival and Departure Flight Paths



5.83 Other aviation activity is undertaken by the Ministry of Defence (MOD) who conduct glider and other pilot training operations at Kirknewton Airfield located to the southeast of the West Lothian council just inside the administrative boundary with City of Edinburgh Council. Proposals for wind energy development in this area will as a matter of course be notified to the MOD in order to establish the likelihood on any impact on operations at Kirknewton.

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

5.85 Early engagement with the relevant aviation consultees is essential in order to determine the scope and nature of any issues and where possible to identify and agree appropriate mitigation measures.

NB: The identification of areas through the Spatial Framework or the council's Landscape Capacity Study should not be taken to imply that these areas are free from aviation constraints.

5.86 Proposals for wind energy development will be appraised with regard to the Development Management criteria list at paragraph 169 of *SPP* which requires that "*impacts on telecommunications and broadcasting installations, particularly ensuring that transmission links are not compromised".*

5.87 It must be satisfactorily demonstrated that no electromagnetic disturbance is likely to be caused by a proposal to any existing transmitting or receiving system or, that measures can 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.

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Supporting Information and Site Planning

Access tracks and electricity cable trenching

6.1 Turbines are likely to be connected by multiple electrical circuit 'arrays', with the output connecting to a substation. The cabling for this would be expected to be laid in trenches of varying width (depending on the number of cables) and approximately 1 m in depth alongside the site tracks. An Environmental Statement (ES) should address the wind farm electricity cabling as generally following the access track routes, with detailed design being provided as part of the planning application.

Decommissioning

6.2 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.

6.3 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.

Assessment of cumulative impacts

6.4 Paragraph 169 of SPP states - 'Planning authorities should be clear about likely cumulative impacts….recognising that in some areas the cumulative impact of existing and consented energy development may limit the capacity for further development'. Within the West Lothian LDP area, landscape and visual impacts are likely to be the most significant cumulative consideration, but due account will also be taken of other cumulative impacts issues, e.g. natural heritage considerations such as birds.

6.5 As part of any submission developers will be asked to consider the cumulative impacts of their proposal. Consideration will 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 cycling or walking along the Union Canal towpath or National Cycle Route 75).

6.6 Upon request to the council planning authority, it may be possible to negotiate a smaller study area for cumulative assessment on the grounds that it is more proportionate, useful for assessment purposes and reduces the volume of assessment information to be provided and assessed.

6.7 The council requires all applications for wind farms of two or more turbines to contain a cumulative impact assessment unless the council explicitly agrees to waive this requirement. In areas where there are multiple small scale proposals and/or wind farms the council may invite developers of smaller schemes to submit a cumulative impact assessment.

6.8 Only operational, consented and schemes going through the planning process are usually included in any cumulative impact assessment i.e. not proposals in scoping.

Wind developments outwith West Lothian and cross-boundary impacts

6.9 It may be the case that, while the site of a wind energy development is within a certain administrative area, a disproportionate amount of impacts, particularly visual, fall outwith the determining 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

6.10 Scottish Planning Policy, para. 174, advises that… Proposals to repower existing wind farms which are already in suitable sites where environmental and other impacts have been shown to be capable of mitigation can help to maintain or enhance installed capacity, underpinning renewable energy generation targets. The current use of the site as a wind farm will be a material consideration in any such proposal.

6.11 Where a significant increase in scale is proposed as a consequence of re-powering turbines, the council is aware that there is a balance to be struck between exponentially larger energy outputs from the much larger sweep of taller turbine rotors against the landscape and visual impacts of the required new spacing and layout.

6.12 Generally speaking, the existence of a wind farm consent should establish the principle of such development in that particular location and makes it more likely that further expansion would be considered favourably. Such proposals would however continue to be assessed on their merits on a case by case basis.

Off-shore wind energy

6.13 West Lothian has a short coast line along the Firth of Forth which is constrained by overlapping spatial planning designations for both landward and marine areas. Off-shore wind energy applications are not anticipated.

6.14 In October 2018, the government's Marine Scotland Directorate published a consultation paper: *Offshore wind, wave and tidal energy applications: consenting and licensing manual*. It is anticipated that this will be adopted in due course providing the policy context for any potential off-shore wind turbine applications in West Lothian.

6.15 On-line guidance is provided by *Scottish Natural Heritage* on assessment criteria and includes useful links to the various consenting authorities.

6.16 National planning policy relating to 'off-shore wind' energy (development below the high tide line) can be found at the Scottish Government's web-site: *Simplified Marine Licensing*.

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Assessment Checklist

Proposals for wind turbine and wind farm developments will be assessed against the criteria set out in this Assessment Checklist.

Landscape considerations	
▪ Proposals will be assessed for compliance with LDP Policy ENV 1 *Landscape Character & Special Landscape Areas* ▪ Please refer to Appendix C – Landscape Character Areas: Summaries and maps.	
▪ The cumulative visual and landscape impact of wind farm and wind turbine development must be fully assessed and shown to be acceptable. ▪ Applications for 2 or more turbines should contain a full cumulative impact assessment prepared in accordance with current Scottish Natural Heritage guidance.	
▪ Wind farm applications must contain a full Landscape and Visual Impact Assessment (LVIA). Proposals will be assessed against appropriate guidance from NatureScot. ▪ For single wind turbine development, the council will require applicants to follow NatureScot 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'.	

Habitat, protected species, biodiversity, nature conservation, forests, woodlands	
▪ A development must be shown to 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 in accordance with extensive guidance from NatureScot. ▪ Where there is expected 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. ▪ 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 also take into account opportunities to enhance biodiversity. Discussion on the HMP should take place at an early stage with NatureScot, RSPB and Scottish Forestry / Forestry and Land Scotland.	

▪ Wind energy proposal that include woodland removal should be discussed at an early stage with Scottish Forestry / Forestry and Land Scotland and also take account of the advice in Scottish Government's *Control of Woodland Removal: Implementation Guidance.* ▪ Tree cover loss will generally be resisted and only allowed where it would achieve significant and clearly defined additional public benefits. In appropriate cases compensatory planting may form part of this balance.	
Peat, soils and water	
▪ Developments must be designed to minimise soil disturbance, particularly from the construction of roads and tracks, turbines bases and other infrastructure to ensure that the carbon balance savings of the scheme are maximised. ▪ Developers are encouraged to use the most current on-line guidance issued by NatureScot and the Scottish Government when preparing applications.	
▪ Wind energy development on 'Prime Agricultural Land' is generally discouraged.	
▪ Proposals allied to wind farm development must avoid unacceptable adverse impacts on the water environment and planning applications must be accompanied by appropriate drainage strategies and include details of protective measures.	
Historic environment	
▪ Applications for wind energy development must identify historic assets that could be affected by the proposed 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) and consider the potential for impacts on the setting of historic environment assets by identifying the setting of assets within the vicinity of the proposal. ▪ Wind farm and turbine developments of any scale must accord with the heritage policy framework LDP planning policies.	
Communities, tourism and recreation, traffic	
▪ Proposals must have particular regard to their impact, singularly and cumulatively on communities and individual dwellings, public access, long distance routes (LDRs), cycle and scenic routes, tourism and recreation, local road traffic and on adjacent trunk roads. ▪ Views from key tourist routes and visitor attractions must not be adversely affected. ▪ Any negative impacts identified in relation to recreational routes and uses require to be assessed in full and proposed mitigation measure identified. If required, an Access Plan should be prepared.	

▪ When proposing to site wind turbines close to major roads, it is recommended that pre-application discussions are held with Transport Scotland's Trunk Roads Network Management (TRNM). ▪ As a general guide turbines should adhere to a minimum set-back distance from roads and railways of at least one and a half times the height of the turbine. ▪ The impact of construction on the local road network must be established. Consequently a Transportation Statement (TS) setting out the traffic impact for the construction and operational periods and demonstrating suitability of the transport routes for turbine components from their source shall be submitted with any planning application. ▪ Access for construction traffic must not compromise highway safety, residential amenity or cause significant permanent damage to the environment. ▪ It is likely that the council will require pre and post construction road surveys to be undertaken and developers may be required to enter a Section 96 Agreement with the council. ▪ Where deemed appropriate, an appraisal of the ecological, landscape and visual impacts associated with road construction/upgrading will be required to be submitted by the developer with any planning application.	
Residential *visual* amenity	
• It is considered that a residential visual amenity survey area is required if the impact on residential visual amenity could potentially be so great as to materially affect the living conditions of the occupiers. • It is considered that a residential visual amenity survey area is required if the impact on residential visual amenity could potentially be so great as to materially affect the living conditions of the occupiers. • The approach taken by reporters in Scotland and inspectors in England confirms that no individual has a legal right to a particular view. However, there may be circumstances where the proximity, size and scale of a wind energy development, would render a residential property 'so unattractive a place to live' - albeit not uninhabitable - that planning permission should be refused. This may be the case where turbines affect visual amenity in a way that is 'unpleasantly overbearing' or where they are 'inescapably dominant and overwhelming'. • The appropriate distance from residential properties should, therefore, be determined by the size and proximity of the turbines, orientation of views, local topography, the position of buildings, vegetation and trees and the spread or extent of the turbines. Policy principle: The turbine/s should not have an overbearing presence or dominate adjacent residential buildings	

Requirements for Residential Visual Amenity Survey The residential visual amenity survey should assess the impact of the proposal from the following parameters: ▪ distance of the property from the development ▪ extent of the development in the view from the property ▪ angle of view in relation to orientation of the property ▪ proportion of the view from the property occupied by the development ▪ local context in which the development is seen ▪ extent of other built development visible from the property, in particular vertical elements ▪ screening effect of intervening landscape elements such as local landform and vegetation (woodland, tree cover and hedges). The Residential Visual Amenity Survey and assessment should be undertaken in accordance with the Landscape Institutes best practice guidance: '*Guidelines for Landscape and Visual Assessment, 3rd Edition*'.	

Aviation, defence and telecommunications safeguarding	
▪ The impacts of a 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. ▪ It must be satisfactorily demonstrated that no electromagnetic disturbance is likely to be caused by the proposal to any existing transmitting or receiving system or, that measures can 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.	

Supporting information required at application stage	
Restoration ▪ 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.	
Environmental Impact Assessment (EIA) ▪ All applications for wind energy development which fall within the scope of the Environmental Assessment legislation to be accompanied by an Environmental Statement, and should be preceded by a pre-application Scoping Report.	
Legal Agreements ▪ The council will ordinarily require an applicant to enter into a legal agreement to secure community benefit payments, restoration bond requirements and other matters which cannot be satisfactorily controlled by the imposition of planning conditions.	
Economic Benefits ▪ Where deemed appropriate, applications must include details of the environmental, social and economic benefits that will arise from the project, both locally and nationally, including estimates of the overall number of jobs and economic activity associated with the procurement, construction and operation of the wind energy development.	
Environmental Protection ▪ Developers are required to obtain all other necessary authorisations or licenses under the environmental protection regimes prior to construction. Further details can be found in *PAN 51*: *Planning Environmental Protection and Regulation*.	
SEPA Requirements ▪ Conditions may be imposed on the grant of planning permission which require the submission of Constructed Method Statements and Environmental Management Plans. These documents must also have regard to SEPA's Pollution Prevention Guidance Notes.	

eight Small-Scale Turbines Siting and Design Checklist

Defining small-scale wind energy development

8.1 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 turbine above this height restriction will be considered as a 'wind farm'.

Table 8: 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	6m – 10m
Farmyard grain silo	10m
Telegraph pole	10.5m
Mature forest trees	20m
Grid pylon	30m - 35m

Extract adapted from NatureScot'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

8.2 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

8.3 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

8.4 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

8.5 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 5 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.

8.6 The Scottish Government provides a web page dedicated to *environmental assessment* which includes a screening checklist for small scale wind energy developments and covers a broad range of issues.

8.7 The following Siting and Design Checklists for small wind energy is reproduced from NatureScot 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
Turbine choice	▪ Have you considered a range of different turbine forms in relation to your site? ▪ Do the proposed turbines have the most appropriate form, appearance and blade movement for the proposed site? Consider whether another type of turbine might achieve a better fit?
Turbine colour	▪ What is the relationship between the proposed turbines and nearby landform and skylines? ▪ Will the turbines be predominantly seen against the sky or is there a landform backdrop or trees? ▪ How will the turbine look in different seasons and weather conditions and can turbine colour choice help to make the turbines less prominent?
Scale / size of turbine	▪ What are the sites key landscape and visual characteristics (landform/ elevation/ landcover/ built elements/ scale indicators)? ▪ Does the proposed turbine relate well to and not dominate these aspects?
Turbine arrays	▪ Where a proposal is for a group of turbines, have you identified where they could be seen from and which are the most sensitive or significant views to the site? ▪ Consider how the turbines might best be arranged in order to respect and compliment their setting
Micro-siting	▪ Has the site been surveyed as fully as possible to minimise the need for micro-siting, especially near to properties and other tall structures?

Ancillary infrastructure	▪ Have existing tracks been utilised wherever possible to minimise the need for new paths and roads? ▪ Do proposed tracks fit sensitively with the landscape character and compliment the pattern of existing tracks and road networks? ▪ Will the proposed tracks use surfacing material which will be sympathetic and which relates to the local landscape character? ▪ Do proposed tracks and turbine bases avoid steep slopes and minimise the need for cut and fill operations? ▪ 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? ▪ Has visibility of ancillary features been minimised? Is it proposed to bury connection cables?
Landscape character	▪ Has the local Landscape Character Assessment (LCA) been taken into account in order to establish the key landscape characteristics of the site? ▪ Were OS 1:25000 maps and aerial photos used to help establish this? ▪ Does the proposal relate well to the landscape? ▪ Is the landscape tranquil or busy? Will the blade movement of the proposed turbine(s) change this? ▪ Is the landform simple or complex and diverse? Will the proposal confuse or undermine these qualities? ▪ Is the proposal likely to affect more than 1 landscape character or type? ▪ Does it relate well to all of those it could potentially affect?
Designated landscapes	▪ Is the proposal within or near to a landscape designated for its special scenic or recreational qualities, and if so, has the proposal been designed to minimise potential impacts on these special qualities?
Landform	▪ Can local landform features be utilised to limit visibility of the proposal?
Landscape pattern and scale	▪ If the scheme is for more than one turbine, does the layout reflect and complement existing landform patterns? ▪ Could the turbines be grouped better to fit in with landscape pattern and scale?
Focal features	▪ Will the proposed turbine(s) introduce a new focal landscape feature, visual confusion or compete with other notable features? ▪ Does the proposal interrupt views to or from existing focal features? ▪ Have opportunities to create a new sculptural image been maximised, especially in heavily modified or designed landscapes?
Perspective	• Does the proposal create a false or confusing sense of perspective, especially in combination with other wind energy developments?

Relationship with settlement	▪ Do the turbines respect the scale of adjacent buildings? ▪ Does the proposal have a logical visual relationship with relation the settlement pattern? ▪ Will the turbines dominate approaches to settlement? ▪ 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?
Residential Amenity	▪ What is the impact on residential amenity of a property as assessed indoors and outdoors?
Woodland	▪ Can existing woodland be used to help screen the proposed development without affecting turbine performance? ▪ If the trees are broadleaved, how will seasonal differences in the vegetation affect how the turbines look at various times of the year? ▪ Are there any proposals in the lifetime of the turbines to fell/restock the trees, and if so, what effect will this have on their setting?
Aviation, Defence and Telecommunications Safeguarding	▪ The impacts of a 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. ▪ It must be satisfactorily demonstrated that no electromagnetic disturbance is likely to be caused by the proposal to any transmitting or receiving system or, that measures can 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.

Cumulative Issues	Checklist criteria
General	▪ Has the relationship between the differing blade movement speeds of different developments been considered? ▪ Can this be minimised?
In combination with smaller/micro turbines	▪ 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?
In combination with other small-scale developments	▪ 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?

In combination with larger turbines	▪ 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? ▪ Has the effect of introducing small-scale turbines on landscape perspective been considered? Is this likely to create visual confusion? ▪ Is the proposal near the coast where there are existing inshore or offshore wind turbines?
Filling in gaps between recognised clusters of wind farms or wind turbines	▪ Will the proposal link 2 previously separate or distinct wind farm areas?
Spatial planning	▪ 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 NatureScot's: Siting and Design of Small-Scale Wind Turbines of between 15 and 50 metres in height (March 2012)

Further information can be found in Appendix B – Assessment of Wind Turbine Noise and Appendix C – Landscape Character Areas: Summaries and maps.

Glossary

Abbreviations

CAR	*Water - Controlled Activities Regulations (SEPA application type)*
CSGN(T)	*Central Scotland Green Network Trust*
DNO	*Distribution Network Operator*
EIA	*Environmental Impact Assessment*
ES	*Environmental Statement*
FIT	*Feed in Tariff*
HES	*Historic Environment Scotland*
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 (Scottish Government)*
PPC	*Pollution Prevention & Control (SEPA application type)*
RSPB	*Royal Society for the Protection of Birds*
SLA	*Special Landscape Area*
SNH	*Scottish Natural Heritage (now NatureScot)*
SPP	*Scottish Planning Policy*
(WL) LDP	*(West Lothian) Local Development Plan (will supersede WLLP)*
WLC	*West Lothian Council*

Definitions
(* indicates sourced 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. This UK government finance scheme is in closure phase.
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.
Viewshed	The view of an area from a specific vantage point

Contacts

For further information or advice please contact:

- Development Planning & Environment (for policy enquiries): DPgeneral@westlothian.gov.uk
- Development Management (for proposal and applications enquiries): planning@westlothian.gov.uk

Appendix A

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. At present the council runs a *Community Development Trust for Wind Energy* in the Breich Valley area known as the 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 *Scottish Government: Good Practice Principles Community Benefits Onshore Renewable Energy Developments*

Appendix B Assessment of Wind Turbine Noise

This advice note provides guidance for applicants on the minimum information required to allow a full assessment of the potential noise impacts of a proposed wind turbine development. It also considers the appropriate methodology and criteria to determine turbine noise emissions at noise sensitive receptors.

West Lothian Council has determined that noise from large turbine developments shall meet the following limits at noise sensitive receptors;

- 35dB $L_{A90(10\ min)}$ for all wind speeds up to 10 m/s for single turbines or wind farms (ETSU[1] simplified method) at the nearest noise sensitive receptors
- 35dB $L_{A90(10\ min)}$day time hours and 40dB* $L_{A90(10\ min)}$night time hours or ETSU derived limits of background noise level plus 5dB (whichever is greater) for all wind speeds up to 12m/s.
- Up to 45dB $L_{A90(10\ min)}$ or ETSU derived limits of background noise level plus 5dB (whichever is greater) for all wind speeds up to 12m/s, at properties with valid financial interest.
  *40dB $L_{A90(10min)}$ night time, reflects the changes to sleep disturbance criteria levels set by the World Health Organisation, *Guidelines on Community Noise 1999.*

Small wind turbines

Small turbines with a power rating of 50kW or less and a rotor swept area of 200m[2] or less (16m rotor diameter) shall meet the following noise limits where the noise emissions are calculated in accordance with BWEA/Renewable UK Guidelines[2]. Note that the relationship between the noise parameters $L_{Aeq(10min)}$ and $L_{A90(10min)}$ for large turbines will not apply to the smaller turbines and noise limits are therefore set in terms of $L_{Aeq(10min)}$.

- 35dB $L_{Aeq\ (10\ min)}$ day time hours and 40dB $L_{A90(10\ min)}$night time hours or ETSU derived limits of background noise level plus 5dB (whichever is greater) for all wind speeds up to 12m/s.
- Up to 45dB $L_{Aeq\ (10\ min)}$ or ETSU derived limits of background noise level plus 5dB (whichever is greater) for all wind speeds up to 12m/s, at properties with valid financial interest.

The aforementioned noise restrictions for any turbine development must consider the impact from all turbines consented and or proposed (existing within the planning process) within the development area. This may include developments within other Local Authority areas. The IOA guidance[3] in relation to cumulative impacts should be followed when assessing which turbine developments should be considered.

Noise Impact Assessment

All planning applications for wind turbine developments must be accompanied by a site specific noise impact assessment undertaken in accordance with *ETSU-R-97*, the Institute of Acoustics (IOA) A *Good Practice Guide to the Application of ETSU* and the IOA *Supplementary Guidance Notes*[4] which provide detailed guidance on the IOA *Good Practice Guide.*

All noise impact assessments must determine the predicted noise levels at the curtilage of identified noise sensitive receptors in the vicinity of the proposed turbine development.

Where the noise impact assessment demonstrates that predicted noise levels of less than 35dB $L_{A90(10min)}$ or, in the case of small turbines 35dB $L_{Aeq(10min)}$, can be achieved at non-financially involved receptors, no site specific background noise survey will be required.

Noise predictions must be based on the turbine octave band sound power level data as determined in accordance with IoA *Good Practice Guide* using the following methodology;

Large Turbines – the use of ISO 9613-2 using the advice given within the IoA *Good Practice Guide* on input parameters.

Small Turbines (those less than 50kW and outwith the scope of the IOA Guidance) - the use of equation 3.5.1 of the British Wind Energy Association - *Small Wind Turbine Performance and Safety Standard* (29 Feb 2008). This equation uses hemispherical sound propagation and should be based on the use of the declared apparent sound power level at 8m/s at hub height. Where there is sufficiently robust octave band test data available, the methodology of ISO 9613-2 can be used to predict turbine noise emissions. A correction of +3dB however will be applied to the predicted turbine noise emissions to account for hemispherical propagation.

Cumulative Noise Impacts

Any proposed, consented or existing turbine within 2km of the proposed turbine development must be taken account of when establishing cumulative noise impact, where the proposed turbine produces noise emissions are within 10dB of any existing, consented or proposed (within the planning process) turbine noise emissions.

In determining any cumulative assessment it may be assumed that any consented turbines will operate to their full consented noise limits. Predicted turbine noise emissions may be used where relevant adjacent turbine developments have not yet been consented.

In certain circumstances, particularly in the case of one or two turbines developments, the full ETSU noise limit or the council's night time limit may not be granted. The consented noise limit may be calculated as a margin above the predicted noise emissions. This ensures that there may be noise headroom available for other developments.

The use of Candidate Turbines

Candidate turbines are often used to predict turbine noise emissions for a noise impact assessment. Where final turbine specification is different to that used to determine noise emissions, a further desktop site specific assessment will be required to demonstrate predicted noise levels are within the consented noise limits.

Noise Impact Assessment Reports

Noise reports must contain the information (where relevant) highlighted in Chapter 6, Table 1, of the IoA *Good Practice Guide*. In addition, WLC will require the following:

(a) Turbine specification, including hub height used to determine noise immissions;
(b) Table of twelve digit grid references for the turbine(s);
(c) Table of twelve digit grid references for the noise sensitive receptors;
(d) Distances from turbine to noise sensitive receptors;
(e) Turbine and receptor elevations;
(f) Details of any financially involved property;
(g) Details of the sound power levels, broadband and A-weighted octave band data, for the turbine and supporting documentation (test report, manufacturers specifications) from which sound power levels have been extracted;
(h) A clear statement on uncertainty figures, tonality and any scaling of data used;
(i) Where requested by the council, a copy of all background raw noise data used including marked excluded data and corrections, where applied, used in the construction of the background polynomial graphs. Such data will be presented in CSV format.

Definitions

Curtilage	A domestic garden boundary.
Financial Interest	Either, owning the land on which the turbines are to be sited, or, leasing the land on a long (greater than 20 year) lease, or, being a shareholder or owner of the development company. Where property is owned by someone with a financial interest in the development, but is leased to a third party, the occupiers of the property do not have any legal interest in the site and may be protected against amenity intrusions. Persons who have invested money in the wind turbine/farm and seek to gain a financial return from it.
Noise Sensitive Receptor	Properties used for residential purposes (including nursing homes,). Caravan and camping sites and holiday lets under separate ownership may be regarded as noise sensitive receptors depending on their usage. Noise sensitive receptors will include consented development with live planning permission. Unoccupied/abandoned/derelict property may be regarded as noise sensitive depending on the circumstances.

References

[1] The Assessment & Rating of Noise from Wind Farms. ETSU-R-97

[2] British Wind Energy Association (now Renewable UK, Small Wind Turbine Performance and Safety Standard; BWEA (29 Feb 2008)

[3] A Good Practice Guide to the Application of ETSU-R-97 for the Assessment and Rating of Wind Turbine Noise. Institute of Acoustics 2013

[4] Supplementary Guidance Notes 1-6 to the *Good Practice Guide*, Institute of Acoustics

Appendix C

Landscape Character Areas

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 supplemented by an LVIA table provides standard landscape character information, taking into account key findings of the council's *Landscape Capacity Study for Wind Energy Development in West Lothian* (2011). The tables below also take cognisance of the key areas of constraint as set out in SPP and include a traffic-light approach to landscape sensitivity. Non landscape criteria such as aviation are not included in the summaries below.

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 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.

There are no national parks or national scenic areas in West Lothian, however, there are a number of nationally important sites within the administrative boundary which the council believes should be considered as constraints of national importance. These are noted in the tables below and are: Hopetoun House and Estate, Linlithgow Palace and Peel, Cairnpapple neolithic henge and stone circle, Torphichen Perceptory, Union Canal and Towpath, and, Five Sisters Shale Bing.

The extract below from the Council's landscape capacity study gives background to the identification of landscape objectives.

Landscape Objectives with Reference to key Thresholds for Landscape Protection, Accommodation or Change *(Landscape Capacity Study, pages 36-37: for Figure 5 see page 26 of this document)*

7-16 In assessing overall capacity it is helpful to identify and consider key thresholds or 'tipping points' of landscape change that may occur as a result of wind energy development, as recommended in NatureScot's guidance on Siting and Designing Wind Farms in the Landscape. The guidance advises that in judging whether or not an area should be kept free of windfarm impacts it is helpful to develop a clear view about which of three possible landscape objectives should apply: landscape protection, landscape accommodation or landscape change. These should not be seen as rigidly distinct objectives.

7-17 Landscape Protection is required where the objective is to maintain the existing landscape character and visual resource, to retain or reinforce its present character and protect its quality and integrity. Capacity is limited since it is likely to be difficult to accommodate wind farms in these areas, although small scale turbine development and micro-generation may be acceptable where it relates well to the existing landscape in terms of scale and design, and where it relates well to the existing built environment. The landscape remains as a landscape with no wind farms or with infrequent wind energy development.

7-18 Landscape protection will be the most appropriate objective within the sensitive visual compartments / cones where the setting of landmark landscape features and important viewpoints require protection (shown uncoloured in Figure 5), and in areas assessed as being Areas of Highest Sensitivity (shown coloured red in Figure 5). This objective will also be appropriate in areas of High sensitivity (shown coloured pink in Figure 5) where there are potential constraints requiring landscape protection.

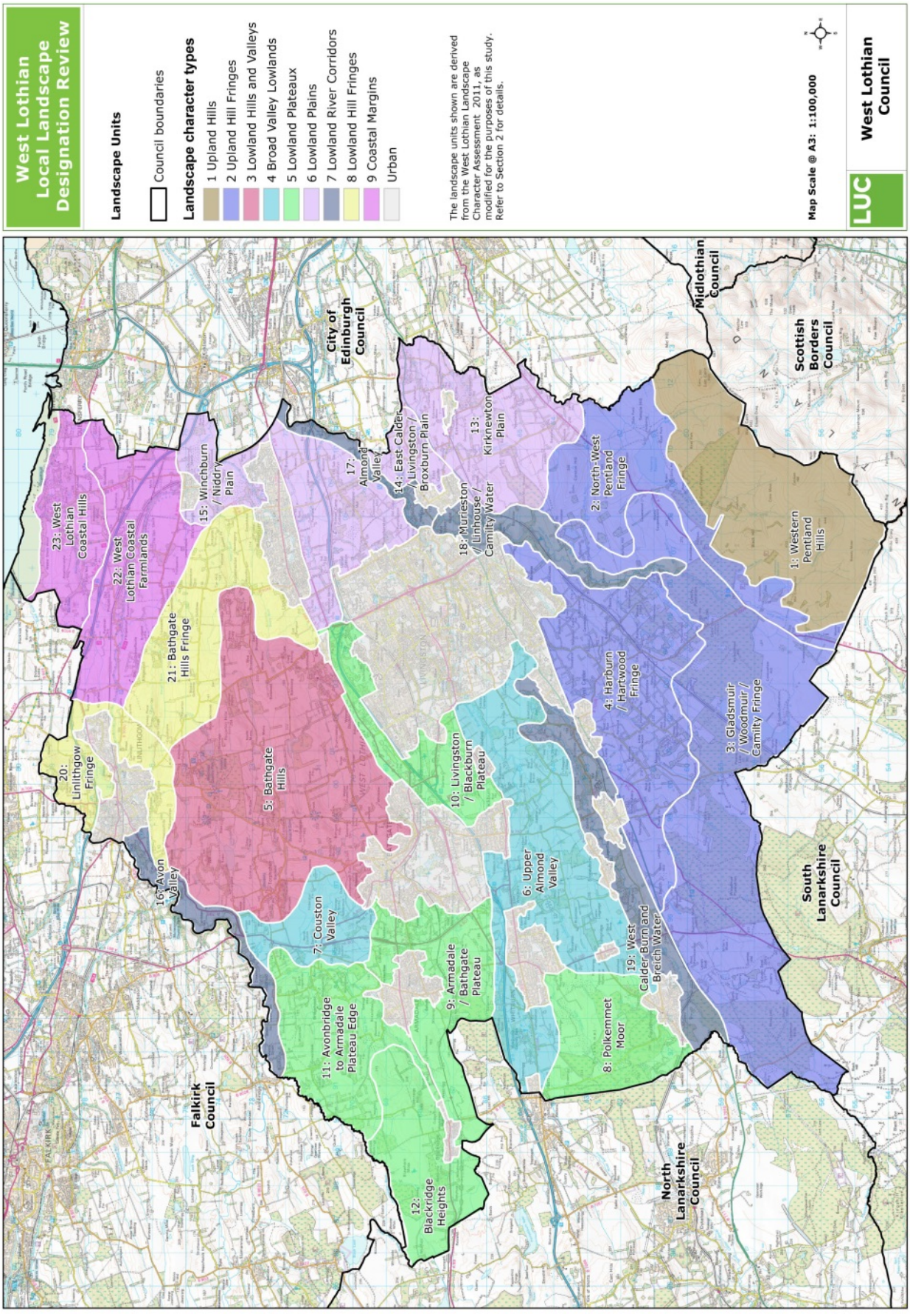
7-19 Landscape Accommodation is required where some wind energy development could be acceptable as long as overall landscape character and visual amenity is retained. Rather than seeking to protect the landscape, with this objective there may be important landscape-related constraints in terms of the siting and scale of wind energy development, but suitably designed wind farms which generally fit within the landscape could potentially be accommodated even though they may have an impact on the landscape locally. The landscape is a landscape with wind energy development.

7-20 Landscape accommodation will be the most appropriate objective within areas of High sensitivity (shown coloured pink in Figure 5) where there are no potential constraints requiring landscape protection, and in areas of Medium sensitivity (shown coloured orange in Figure 5) with some landscape-related constraints but where some wind energy development could be accommodated if overall landscape character is retained.

7-21 Landscape Change is appropriate in areas where it is accepted that landscape character can change as a result of wind energy development, creating new character and possibly the perception of a wind farm landscape. In general, there will be significant capacity for wind energy development in areas where landscape change is considered acceptable. In such areas, good landscape design principles still need to be followed to ensure that the development is appropriate in terms of scale and design.

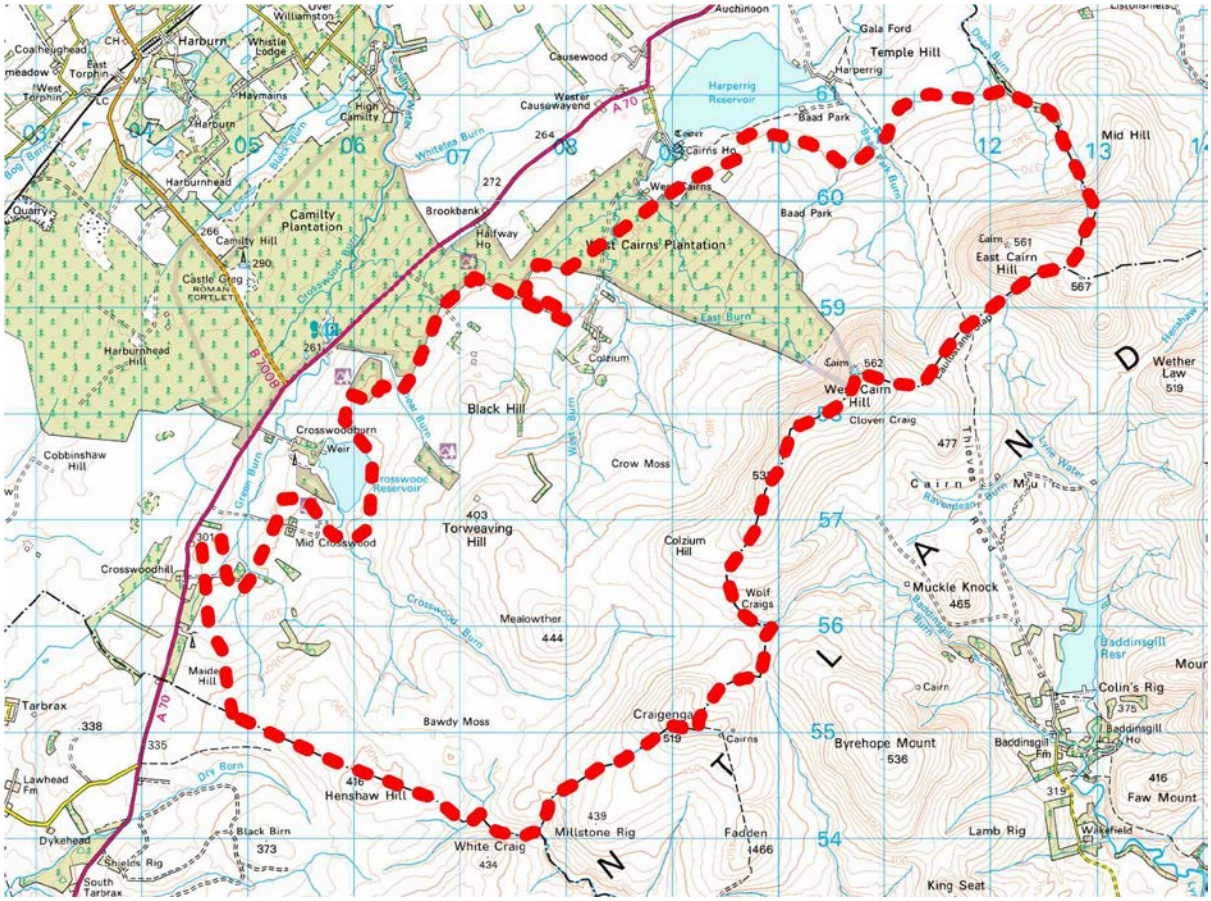
7-22 Landscape change could be the most appropriate objective in areas assessed as Low sensitivity (however, no such areas have been identified in this study), or could possibly be appropriate in some areas of Medium sensitivity (shown coloured orange in Figure 5) where there are no potential landscape-related constraints or where landscape character and visual amenity is already affected by existing wind energy development. Any further wind energy development would breach the threshold or 'tipping point' of landscape change but the council may consider the resulting landscape, visual and cumulative effects to be acceptable.

Landscape Character Units in West Lothian



Landscape Character Type: UPLAND HILLS

Landscape Character Unit 1: WESTERN PENTLAND HILLS



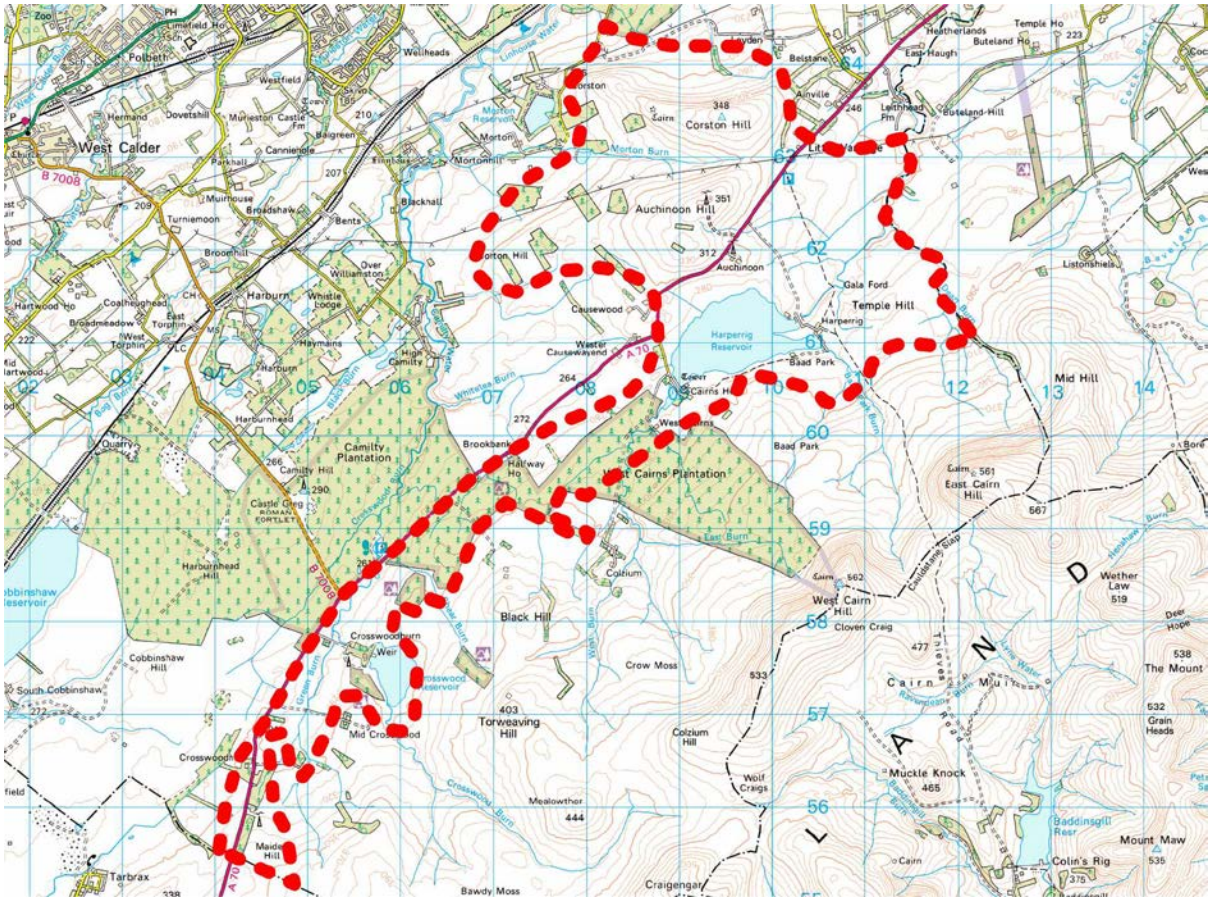
LANDSCAPE AND VISUAL IMPACT ASSESSMENT	
Landscape sensitivity assessment	Area of Highest Sensitivity
Landscape objective	Protection - Wind Energy Development (WED) and any other large scale, uncharacteristic development would be inappropriate
Landscape capacity assessment	NO CAPACITY
Landmark landscape features & Settings of Landmark Landscape Features	Impact on views from/to: Pentland Hills Uplands & Setting of this Landmark Landscape Feature
Principal sensitive routes (tourist and amenity)	Impact on views from/to: A70 east and south (Lang Whang) National Cycle Route 75
Important viewpoints & Sensitive visual compartments	Impact on views from/to: West Cairn Hill & its Sensitive visual compartment Harperigg Reservoir & its sensitive visual compartment
Other landscape considerations (SLA)	Pentland Hills SLA

CONSTRAINTS & NON-LVIA CONSIDERATIONS	
Group 1 - Areas where wind farms will not be acceptable: National constraints	No national parks or national scenic areas.
Group 2a – *Areas of significant protection*: *National and international designations* (World Heritage Sites, European & Ramsar sites, SSSIs, National Nature Reserves, Inventory Gardens and Designed Landscapes, Historic Battlefields)	European site: *Special Area of Conservation:* Craigengar *Site of Special Scientific Interest:* Craigengar *Site of Special Scientific Interest:* Cobbinshaw Moss, near Harburn *Site of Special Scientific Interest:* Cobbinshaw Reservoir, near Harburn

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 NatureScot in West Lothian Significant carbon rich soils and peatland areas; significant areas of Mire & Bog habitat mapped in Phase 1 Habitat Survey
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:* Tarbrax, South Lanarkshire
Other factors	Pentland Hills Regional Park Rights of Way/ Paths: Cauldstane Slap; Crosswood Burn Assessment of cumulative impacts 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.

Landscape Character Type: UPLAND HILLS FRINGES

Landscape Character Unit 2: NORTH-WEST PENTLAND FRINGE

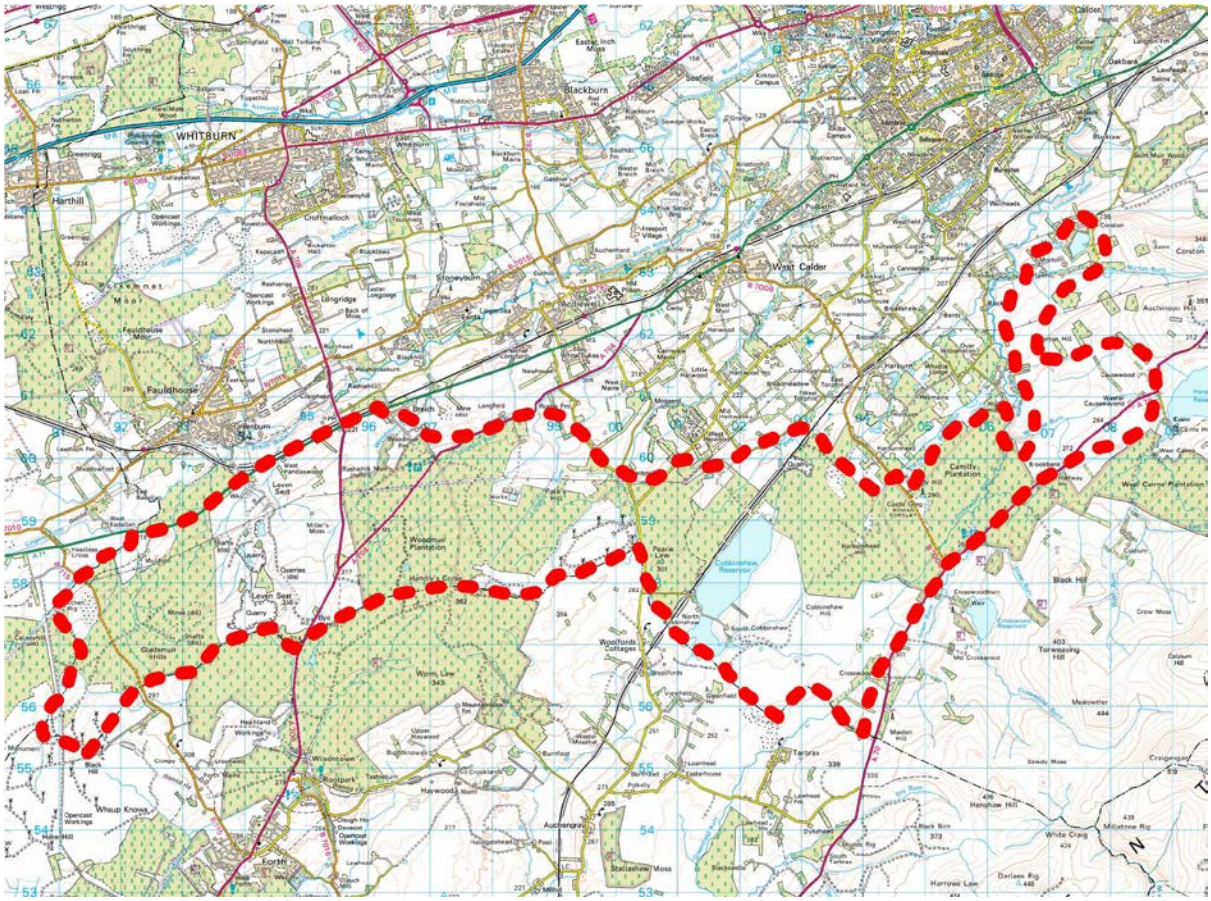


LANDSCAPE AND VISUAL IMPACT ASSESSMENT	
Landscape sensitivity assessment	High sensitivity
Landscape objective	Protection - to support landscape sensitivity and visibility analysis
Landscape capacity assessment	NO CAPACITY
Landmark landscape features & Settings of Landmark Landscape Features	Impact on views from/to: Setting of the Pentland Hills Uplands Landmark Landscape Feature

Principal sensitive routes (tourist and amenity)	Impact on views from: A70 South 'Lang Whang' A70 East 'Lang Whang'
Important viewpoints & Sensitive visual compartments	Impact on views from/to: West Cairn Hill - its sensitive visual compartment Harperigg Reservoir and its sensitive visual compartment
Other landscape considerations (SLA)	Pentland Hills SLA

CONSTRAINTS & NON-LVIA CONSIDERATIONS	
Group 1 - Areas where wind farms will not be acceptable: National constraints	No national parks or national scenic areas.
Group 2a – *Areas of significant protection*: *National and international designations* (World Heritage Sites, European & 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 NatureScot in West Lothian 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:* Livingston (including Mid Calder, Pumpherston & Uphall Station) Tarbrax, South Lanarkshire
Other factors	Pentland Hills Regional Park Rights of Way/ Paths: Cauldstane Slap; Crosswood Burn Assessment of cumulative impacts 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.

Landscape Character Unit 3: GLADSMUIR/ WOODMUIR/ CAMILTY FRINGE

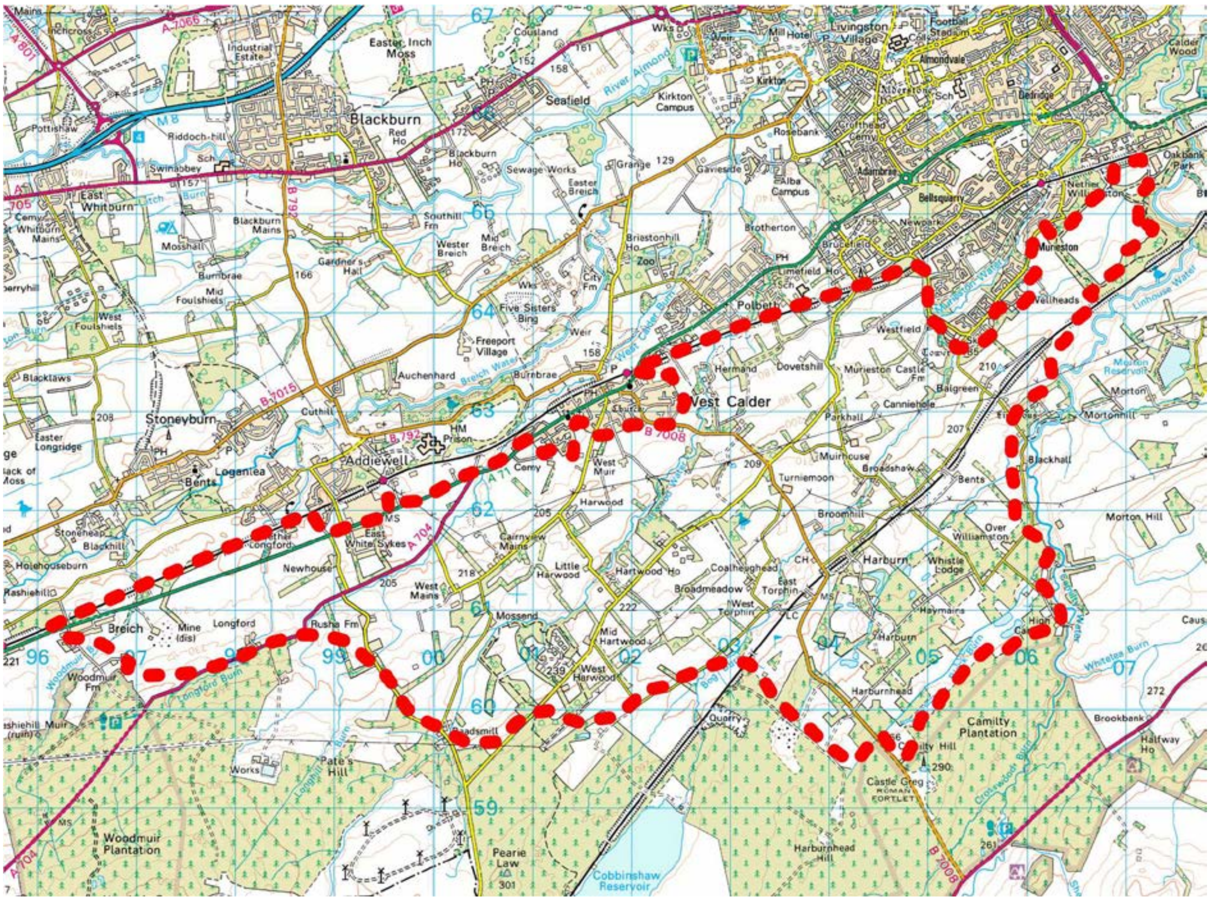


LANDSCAPE AND VISUAL IMPACT ASSESSMENT	
Landscape sensitivity assessment	Medium sensitivity
Landscape objective	Accommodation
Landscape capacity assessment	MEDIUM (where cumulative impacts; LVIA, separation distances accord with policy position)
Landmark landscape features & Settings of Landmark Landscape Features	Impact on views from: Settings of Landmark Landscape Features – Pentland Hills Uplands
Principal sensitive routes (tourist and amenity)	Impact on views from: A704 A706 junction with A704 A70 east
Important viewpoints & Sensitive visual compartments	Impact on views from/to: West Cairn Hill & its Sensitive visual compartments
Other landscape considerations (Cumulative effects, SLA)	Cumulative effects with built and consented WED Pentland Hills SLA (small part)

CONSTRAINTS & NON-LVIA CONSIDERATIONS	
Group 1 - Areas where wind farms will not be acceptable: National constraints	No national parks or national scenic areas.
Group 2a – *Areas of significant protection*: *National and international designations* (World Heritage Sites, European & Ramsar sites, SSSIs, National Nature Reserves, Inventory Gardens and Designed Landscapes, Historic Battlefields)	*Community separation for consideration of visual impacts applies for:* Tarbrax, South Lanarkshire Woolfords, South Lanarkshire

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 NatureScot 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 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.

Landscape Character Unit 4: HARBURN/ HARTWOOD FRINGE



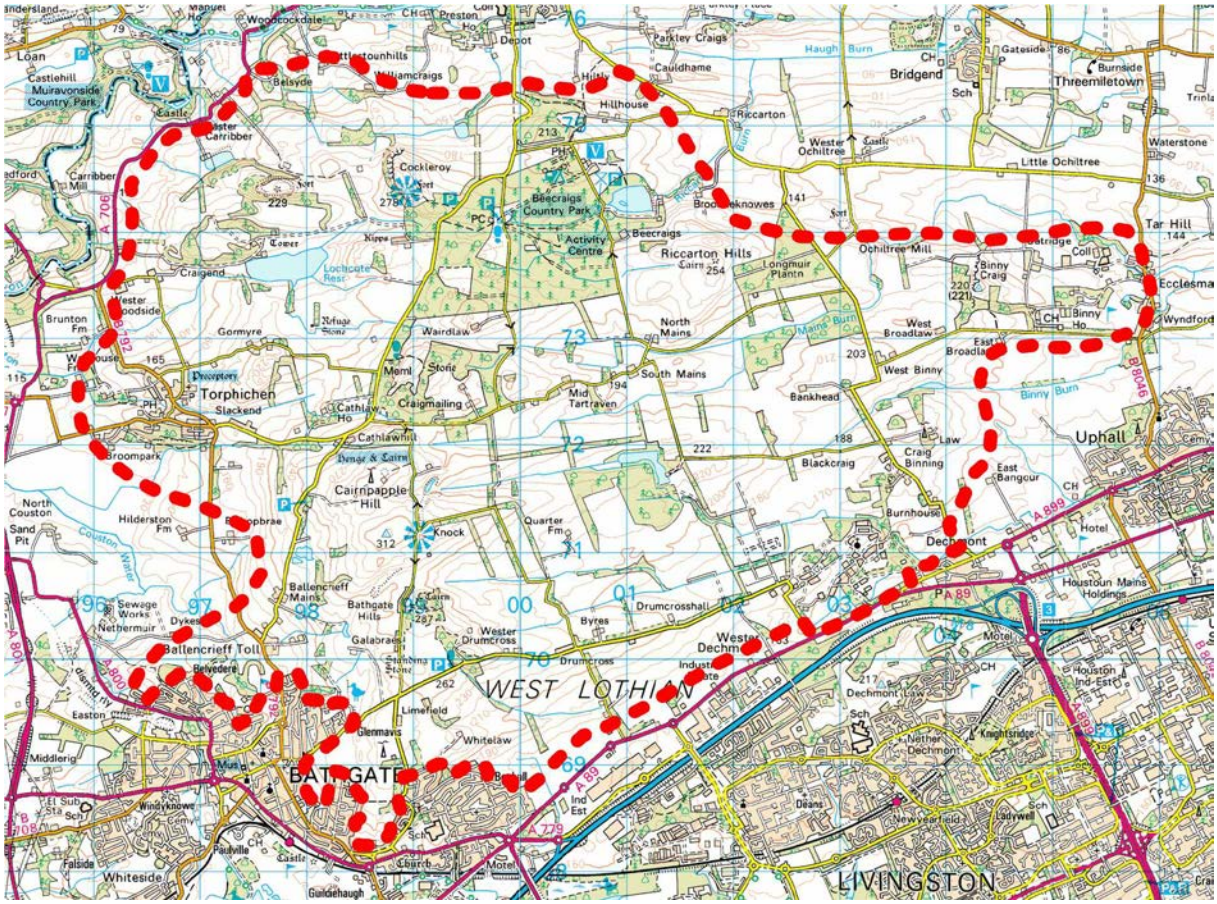
LANDSCAPE AND VISUAL IMPACT ASSESSMENT	
Landscape sensitivity assessment	High Sensitivity
Landscape objective	Protection/ Accommodation
Landscape capacity assessment	LOW
Landmark landscape features & Settings of Landmark Landscape Features	None

Principal sensitive routes (tourist and amenity)	Impact on views from: A706 junction with A704
Important viewpoints & Sensitive visual compartments	West Cairn Hill - its Sensitive visual compartments
Other landscape considerations (SLA)	No SLA Cumulative effects with built and consented WED See HGDL below

CONSTRAINTS & NON-LVIA CONSIDERATIONS	
Group 1 - Areas where wind farms will not be acceptable: National constraints	No national parks or national scenic areas.
Group 2a – *Areas of significant protection*: *National and international designations* (World Heritage Sites, European & Ramsar sites, SSSIs, National Nature Reserves, Inventory Gardens and Designed Landscapes, Historic Battlefields)	*Site of Special Scientific Interest:* Hermand Birchwood, east of West Calder *Site identified in Historic Scotland's Inventory of Gardens and Designed Landscapes:* Harburn House, south-east of West Calder
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 NatureScot in West Lothian Some 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 Livingston (including Mid Calder, Pumpherston & Uphall Station) Longridge Polbeth Stoneyburn & Bents West Calder
Other factors	Assessment of cumulative impacts 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.

Landscape Character Type: LOWLAND HILLS & VALLEYS

Landscape Character Unit 5: BATHGATE HILLS



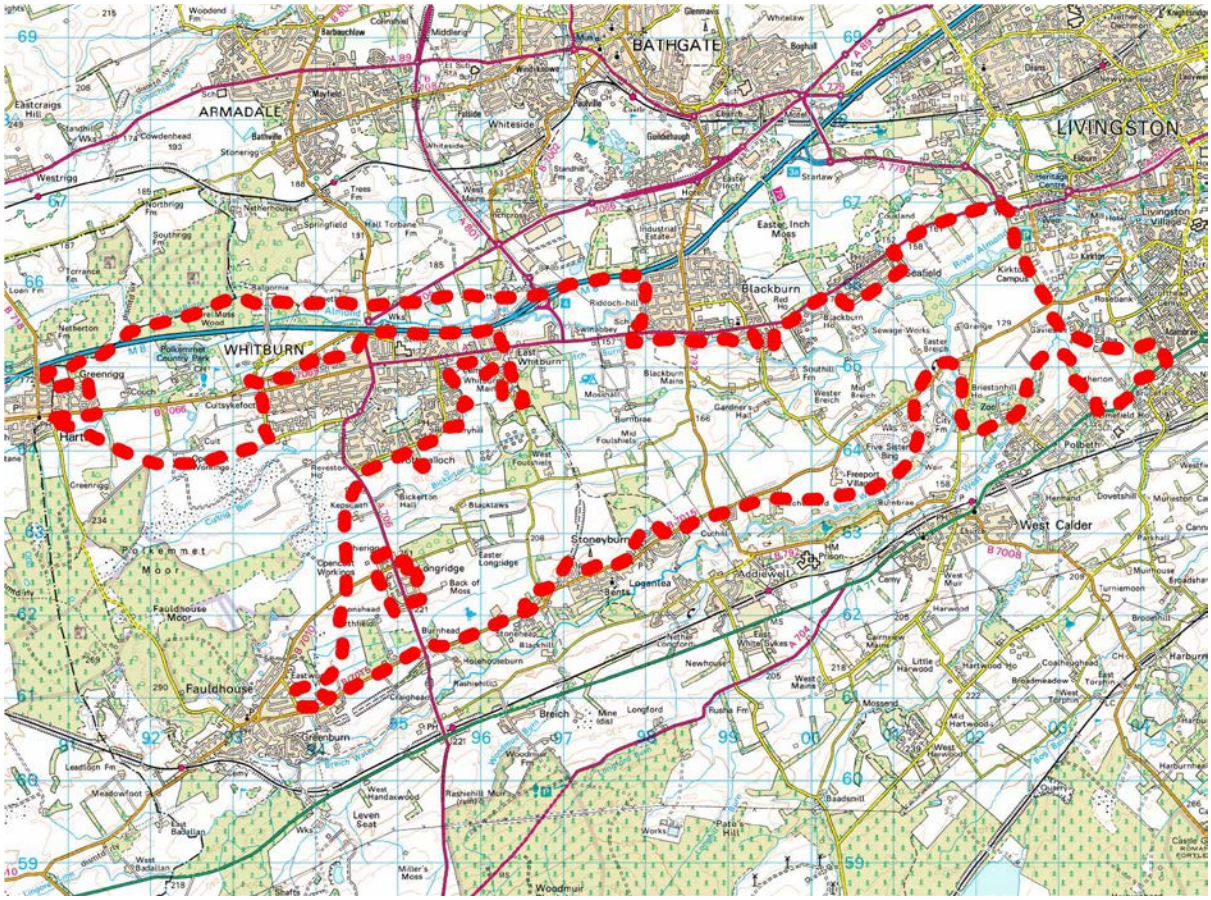
LANDSCAPE AND VISUAL IMPACT ASSESSMENT	
Landscape sensitivity assessment	Area of Highest Sensitivity
Landscape objective	Protection - Wind Energy Development (WED) and any other large scale, uncharacteristic development would be inappropriate
Landscape capacity assessment	NO CAPACITY
Landmark landscape features & Settings of Landmark Landscape Features	None
Principal sensitive routes (tourist and amenity)	Impact on views from: B8046 (and part of Ochiltree road)
Important viewpoints & Sensitive visual compartments	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
Other landscape considerations (SLA)	Bathgate Hills SLA

CONSTRAINTS & NON-LVIA CONSIDERATIONS	
Group 1 - Areas where wind farms will not be acceptable: National constraints	No national parks or national scenic areas.
Group 2a – *Areas of significant protection*: *National and international designations* (World Heritage Sites, European & Ramsar sites, SSSIs, National Nature Reserves, Inventory Gardens and Designed Landscapes, Historic Battlefields)	*Sites of Special Scientific Interest:* Lochcote Marsh, near Torphichen Petershill, near Bathgate East Kirkton Quarry, near Bathgate

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 NatureScot in West Lothian 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:* Bathgate Dechmont Ecclesmachan Linlithgow Livingston (including Mid Calder, Pumpherston & Uphall Station) Torphichen Uphall Whitecross (FC)
Other factors	Beecraigs Country Park Assessment of cumulative impacts 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

Landscape Character Type: BROAD VALLEY LOWLANDS

Landscape Character Unit 6: UPPER ALMOND VALLEY

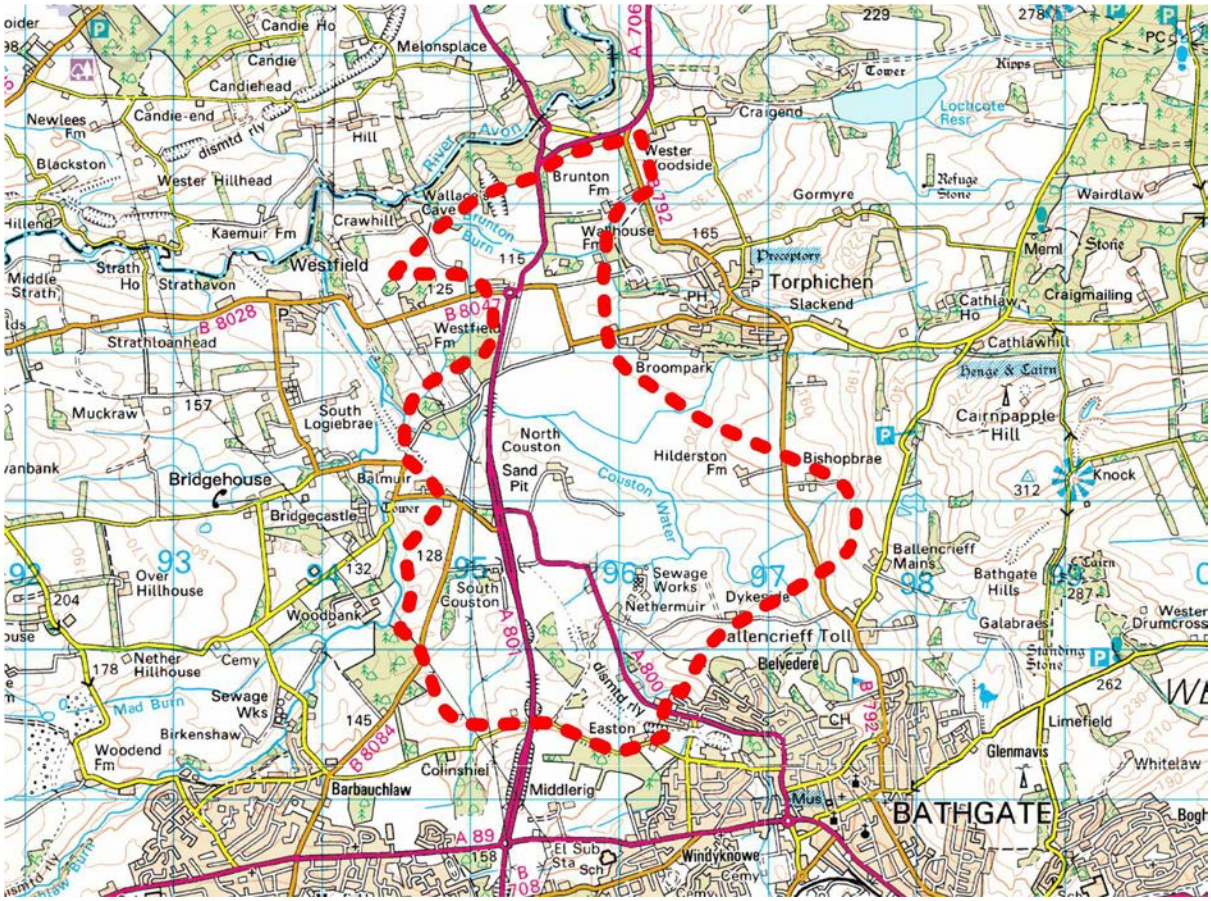


LANDSCAPE AND VISUAL IMPACT ASSESSMENT	
Landscape sensitivity assessment	Medium sensitivity
Landscape objective	Accommodation – where other policy criteria can be met
Landscape capacity assessment	LOW/ MEDIUM
Landmark landscape features	None

& Settings of Landmark Landscape Features	
Principal sensitive routes (tourist and amenity)	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
Important viewpoints & Sensitive visual compartments	Impact on views from/to: Cockleroy & its Sensitive visual compartment
Other landscape considerations (SLA)	No SLA Cumulative effects with built and consented WED

CONSTRAINTS & NON-LVIA CONSIDERATIONS	
Group 1 - Areas where wind farms will not be acceptable: National constraints	No national parks or national scenic areas.
Group 2a – *Areas of significant protection*: *National and international designations* (World Heritage Sites, European & 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 NatureScot 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:* 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
Other factors	Almond Valley Heritage Centre (adjacent, within Livingston) Assessment of cumulative impacts 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

Landscape Character Unit 7: COUSTON VALLEY



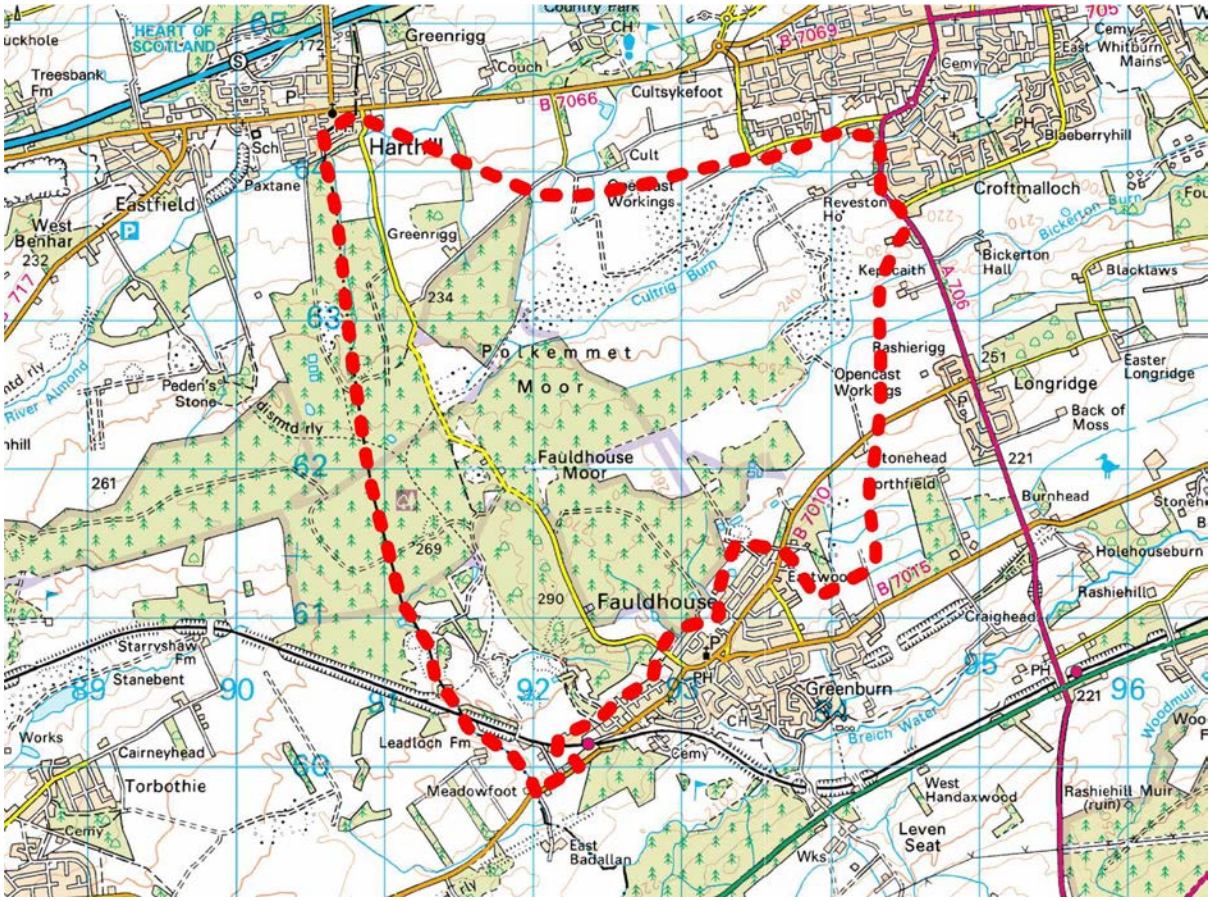
LANDSCAPE AND VISUAL IMPACT ASSESSMENT	
Landscape sensitivity assessment	Medium sensitivity
Landscape objective	Protection - to support landscape sensitivity and visibility analysis
Landscape capacity assessment	NO CAPACITY (due to sensitive visual compartments)
Landmark landscape features & Settings of Landmark Landscape Features	None
Principal sensitive routes (tourist and amenity)	Impact on views from: A800/A801
Important viewpoints & Sensitive visual compartments	Impact on views from/to: The Knock – Cairnpapple Hill & its Sensitive visual compartments Cockleroy & its Sensitive visual compartments
Other landscape considerations (SLA)	No SLA, but important to setting of Bathgate Hills SLA and Avon Valley SLA

CONSTRAINTS & NON-LVIA CONSIDERATIONS	
Group 1 - Areas where wind farms will not be acceptable: National constraints	No national parks or national scenic areas.
Group 2a – *Areas of significant protection*: *National and international designations* (World Heritage Sites, European & 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 NatureScot 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 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.

Landscape Character Type: LOWLAND PLATEAUX

Landscape Character Unit 8: POLKEMMET MOOR

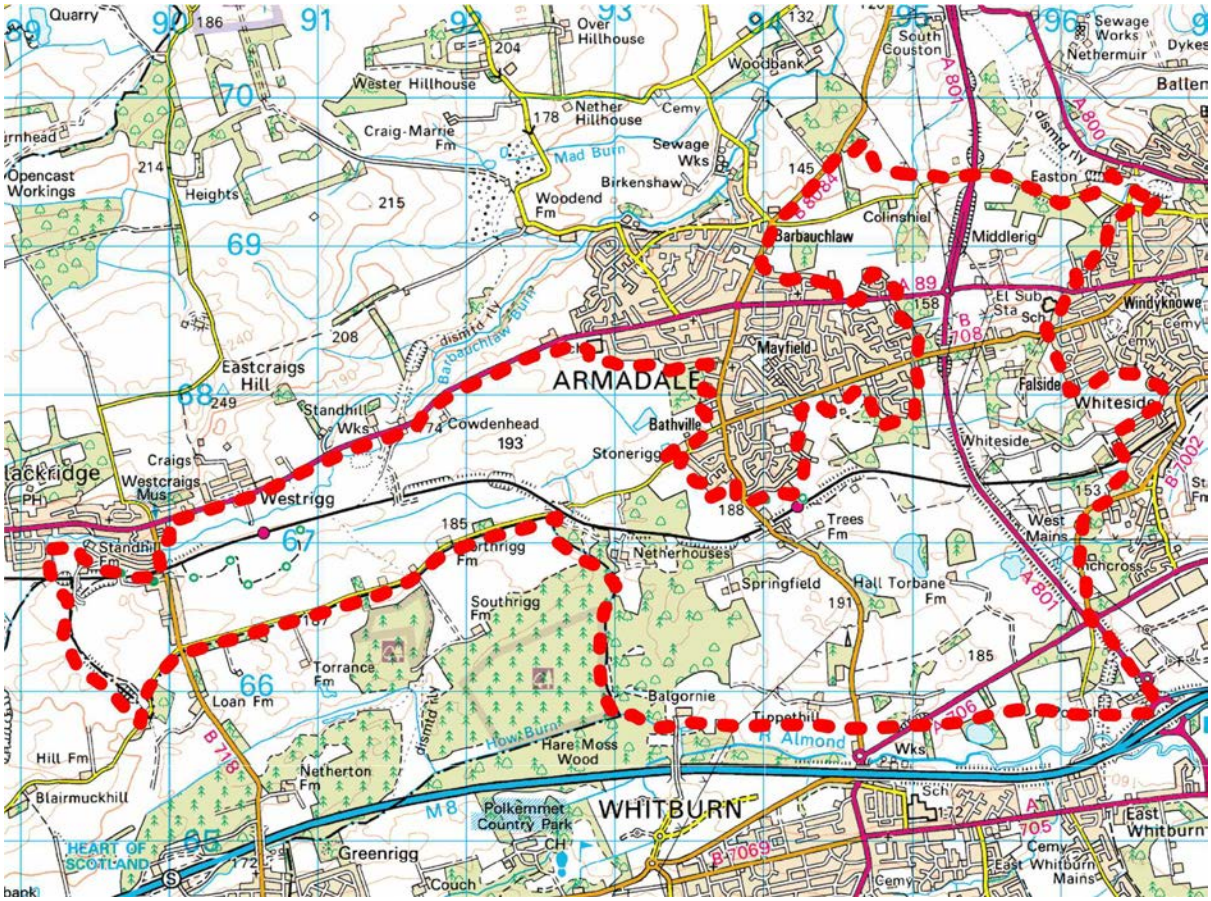


LANDSCAPE AND VISUAL IMPACT ASSESSMENT	
Landscape sensitivity assessment	Medium sensitivity
Landscape objective	Accommodation
Landscape capacity assessment	LOW / MEDIUM (where cumulative impacts in and around Fauldhouse can be mitigated)
Landmark landscape features & Settings of Landmark Landscape Features	None
Principal sensitive routes (tourist and amenity)	Impact on views from: A704 A706 junction with A704 A70 east
Important viewpoints & Sensitive visual compartments	None

Other landscape considerations (SLA)	No SLA Cumulative effects with built and consented WED

CONSTRAINTS & NON-LVIA CONSIDERATIONS	
Group 1 - Areas where wind farms will not be acceptable: National constraints	No national parks or national scenic areas.
Group 2a – *Areas of significant protection*: *National and international designations* (World Heritage Sites, European & 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 NatureScot in West Lothian 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:* East Whitburn Fauldhouse Greenrigg Longridge Whitburn Harthill (NLC)
Other factors	Polkemmet Country Park Assessment of cumulative impacts 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.

Landscape Character Unit 9: ARMADALE / BATHGATE PLATEAU

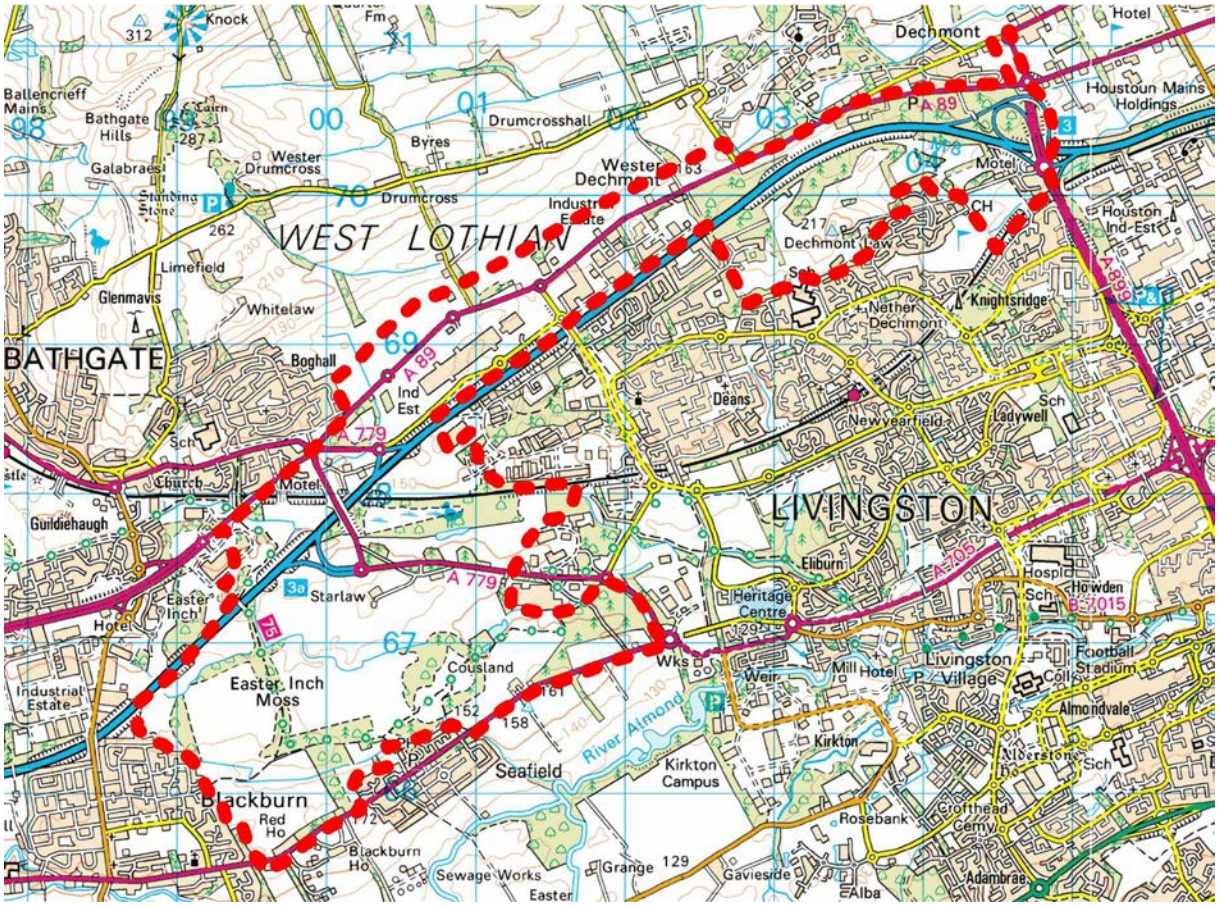


LANDSCAPE AND VISUAL IMPACT ASSESSMENT	
Landscape sensitivity assessment	Medium sensitivity
Landscape objective	Protection - to support landscape sensitivity and visibility analysis
Landscape capacity assessment	LOW / MEDIUM (LVIA to assess existing and potential cumulative impacts for Blackridge)
Landmark 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 (SLA)	West part important in setting of Blackridge Heights SLA

CONSTRAINTS & NON-LVIA CONSIDERATIONS	
Group 1 - Areas where wind farms will not be acceptable: National constraints	No national parks or national scenic areas.
Group 2a – *Areas of significant protection*: *National and international designations* (World Heritage Sites, European & 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 NatureScot in West Lothian Carbon rich soils and peatland habitat known through Phase 1 Habitat Survey: Mire & Bog h

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 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.

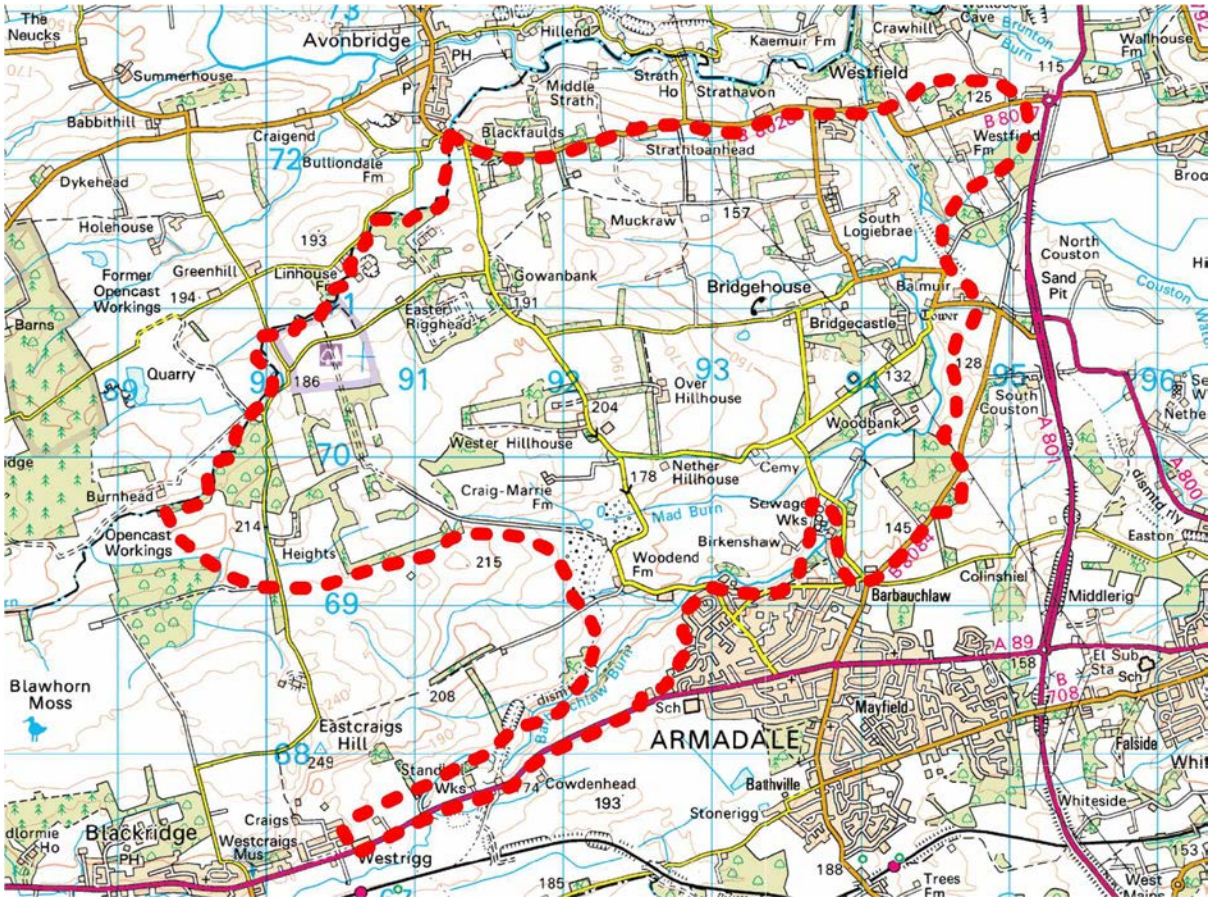
Landscape Character Unit 10: LIVINGSTON/ BLACKBURN PLATEAU



LANDSCAPE AND VISUAL IMPACT ASSESSMENT	
Landscape sensitivity assessment	Medium sensitivity
Landscape objective	Accommodation (community separation factors to be assessed)
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
Important viewpoints & Sensitive visual compartments	None
Other landscape considerations (SLA)	Forms part of setting of Bathgate Hills SLA

CONSTRAINTS & NON-LVIA CONSIDERATIONS	
Group 1 - Areas where wind farms will not be acceptable: National constraints	No national parks or national scenic areas.
Group 2a – *Areas of significant protection*: *National and international designations* (World Heritage Sites, European & Ramsar sites, SSSIs, National Nature Reserves, Inventory Gardens and Designed Landscapes, Historic Battlefields)	*Site of Special Scientific Interest:* Tailend Moss, near Deans, Livingston
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 NatureScot in West Lothian Carbon rich soils and peatland habitat known through Phase 1 Habitat Survey: Mire & Bog h
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:* Bathgate Blackburn Dechmont Livingston (including Mid Calder, Pumpherston & Uphall Station) Seafield Uphall
Other factors	Assessment of cumulative impacts 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.

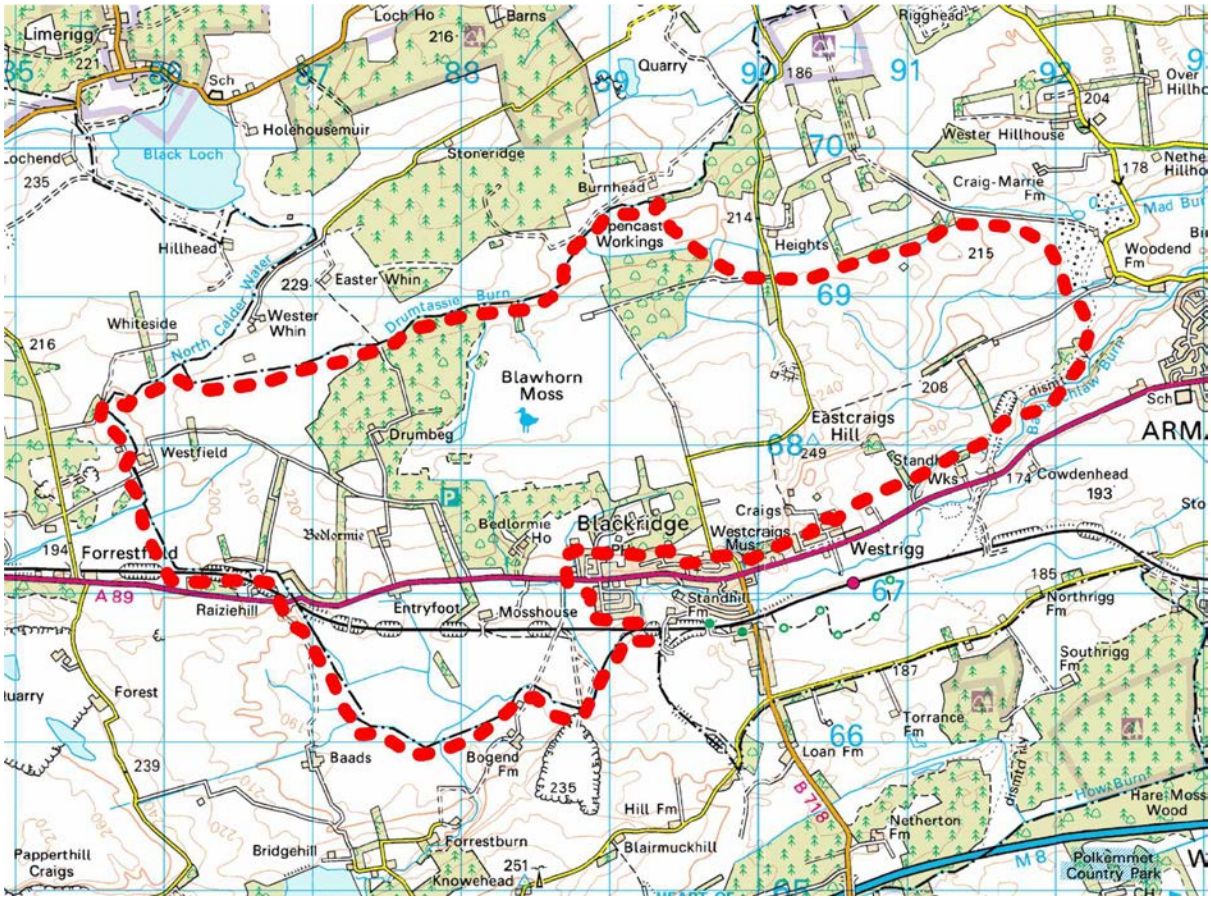
Landscape Character Unit 11: AVONBRIDGE TO ARMADALE PLATEAU EDGE



LANDSCAPE AND VISUAL IMPACT ASSESSMENT	
Landscape sensitivity assessment	High sensitivity
Landscape objective	Protection - to support landscape sensitivity and visibility analysis
Landscape capacity assessment	LOW CAPACITY
Landmark landscape features & Settings of Landmark Landscape Features	None
Principal sensitive routes (tourist and amenity)	Impact on views from: A89 Blackridge to Armadale
Important viewpoints & Sensitive visual compartments	Impact on views from/to: The Knock – Cairnpapple Hill - its Sensitive visual compartments
Other landscape considerations (SLA)	Blackridge Heights SLA and Avon Valley SLA

CONSTRAINTS & NON-LVIA CONSIDERATIONS	
Group 1 - Areas where wind farms will not be acceptable: National constraints	No national parks or national scenic areas.
Group 2a – *Areas of significant protection*: *National and international designations* (World Heritage Sites, Ruropean & 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 NatureScot in West Lothian Some 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:* Armadale Blackridge Westfield Avonbridge (FC)
Other factors	Assessment of cumulative impacts 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.

Landscape Character Unit 12: BLACKRIDGE HEIGHTS



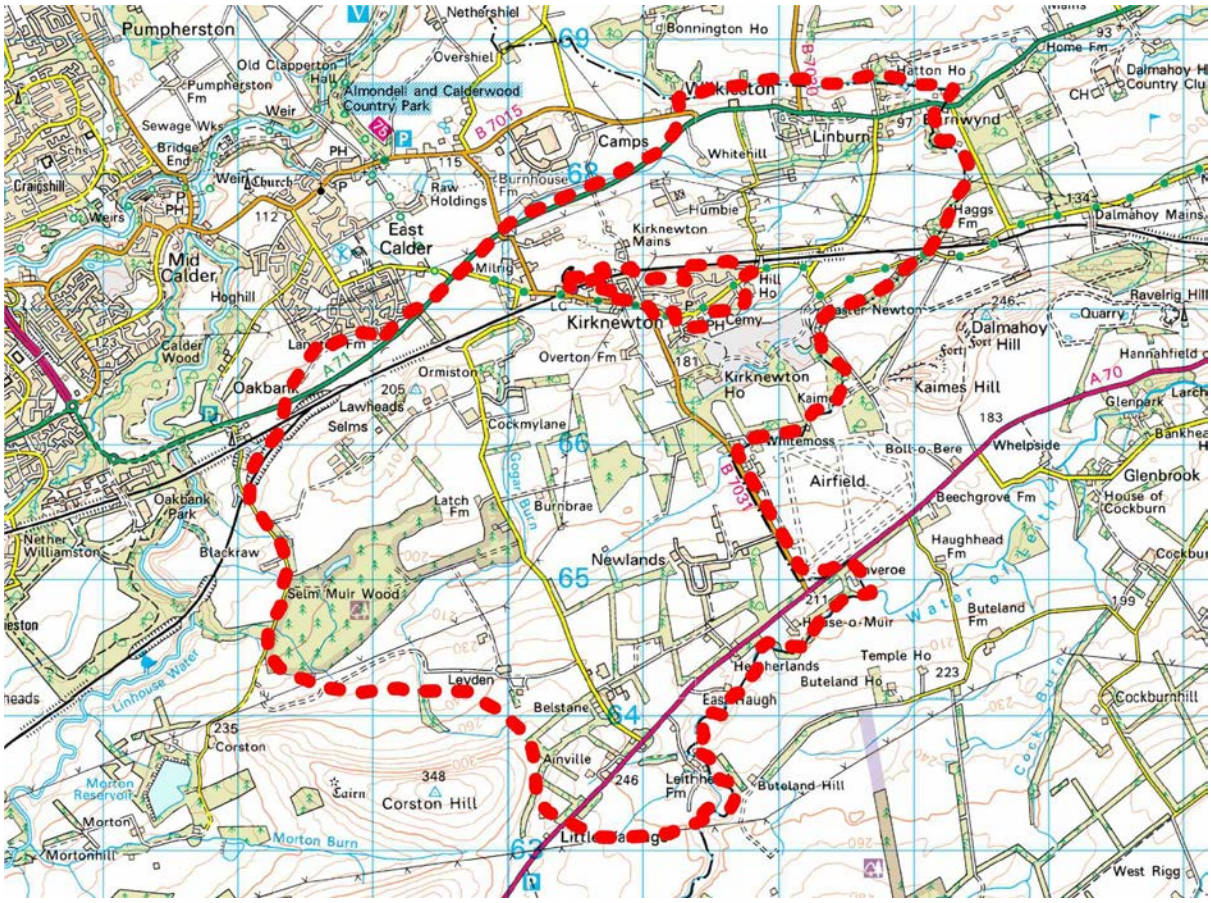
LANDSCAPE AND VISUAL IMPACT ASSESSMENT	
Landscape sensitivity assessment	Area of Highest Sensitivity
Landscape objective	Protection - Wind Energy Development (WED) and any other large scale, uncharacteristic development would be inappropriate
Landscape capacity assessment	LOW / NO CAPACITY
Landmark landscape features & Settings of Landmark Landscape Features	None
Principal sensitive routes (tourist and amenity)	Impact on views from: National Cycle Route 75
Important viewpoints & Sensitive visual compartments	Impact on views from/to: Blawhorn Moss & its Sensitive visual compartment
Other landscape considerations (SLA)	Blackridge Heights SLA Existing and potential cumulative impacts from WED

CONSTRAINTS & NON-LVIA CONSIDERATIONS	
Group 1 - Areas where wind farms will not be acceptable: National constraints	No national parks or national scenic areas.
Group 2a – *Areas of significant protection*: *National and international designations* (World Heritage Sites, European & Ramsar sites, SSSIs, National Nature Reserves, Inventory Gardens and Designed Landscapes, Historic Battlefields)	European sites: *Special Area of Conservation:* Blawhorn Moss, north of Blackridge *National Nature* Reserve: Blawhorn Moss *Sites of Special Scientific Interest:* Blawhorn Moss

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 NatureScot 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:* Armadale Blackridge Harthill (NLC)
Other factors	Assessment of cumulative impacts; existing wind farms / turbines 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.

Landscape Character Type: LOWLAND PLAINS

Landscape Character Unit 13: KIRKNEWTON PLAIN



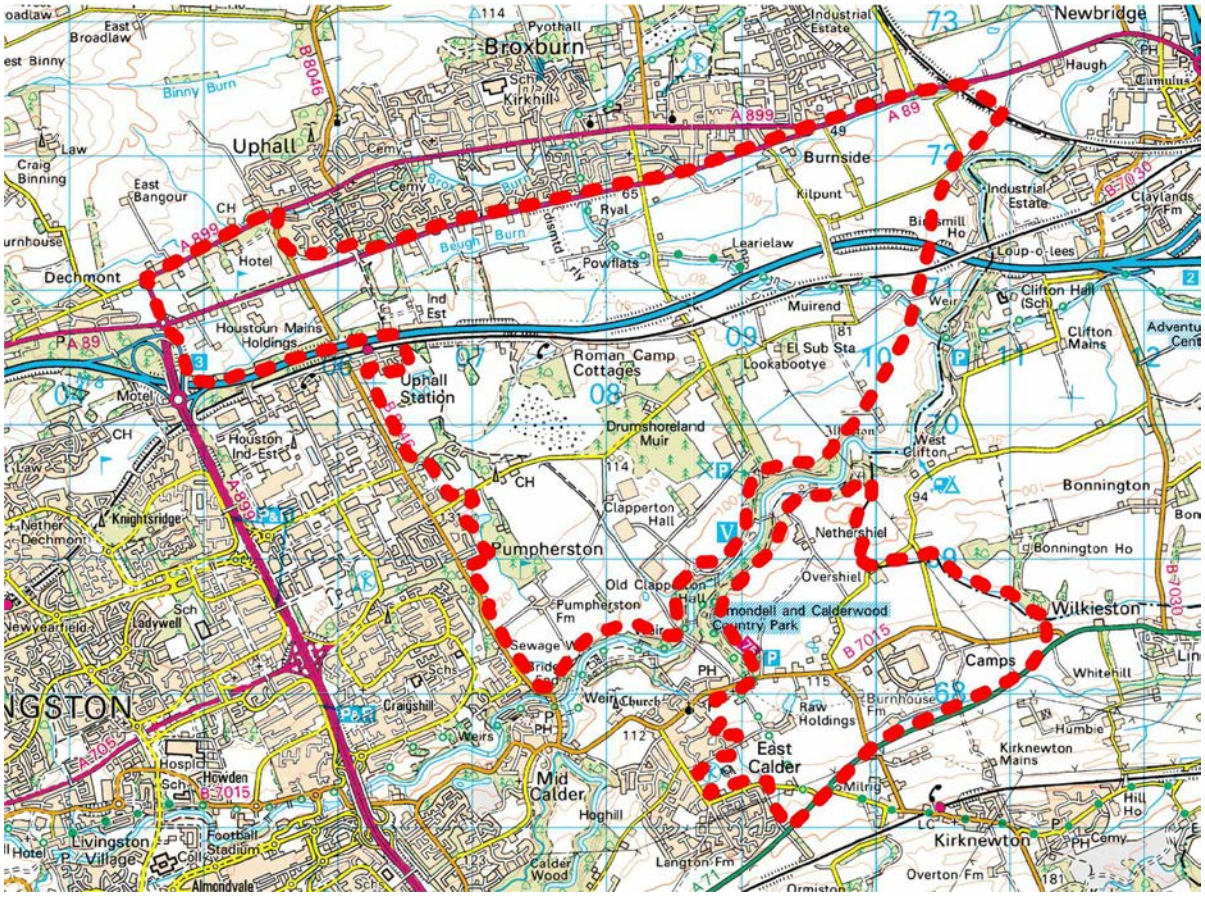
LANDSCAPE AND VISUAL IMPACT ASSESSMENT	
Landscape sensitivity assessment	Medium sensitivity
Landscape objective	Accommodation
Landscape capacity assessment	LOW
Landmark landscape features & Settings of Landmark Landscape Features	None
Principal sensitive routes (tourist and amenity)	Impact on views from: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

Important viewpoints & Sensitive visual compartments	Impact on views from/to: West Cairn Hill & its Sensitive visual compartments
Other landscape considerations (SLA)	Pentland Hills SLA

CONSTRAINTS & NON-LVIA CONSIDERATIONS	
Group 1 - Areas where wind farms will not be acceptable: National constraints	No national parks or national scenic areas.
Group 2a – *Areas of significant protection*: *National and international designations* (World Heritage Sites, European & Ramsar sites, SSSIs, National Nature Reserves, Inventory Gardens and Designed Landscapes, Historic Battlefields)	*Site identified in Historic Scotland's Inventory of Gardens and Designed Landscapes:* Hatton House, east of Wilkieston (southern part only, main part within City of Edinburgh)
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 NatureScot 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 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.

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

(NB: split north and south of *Almond Valley landscape unit*)

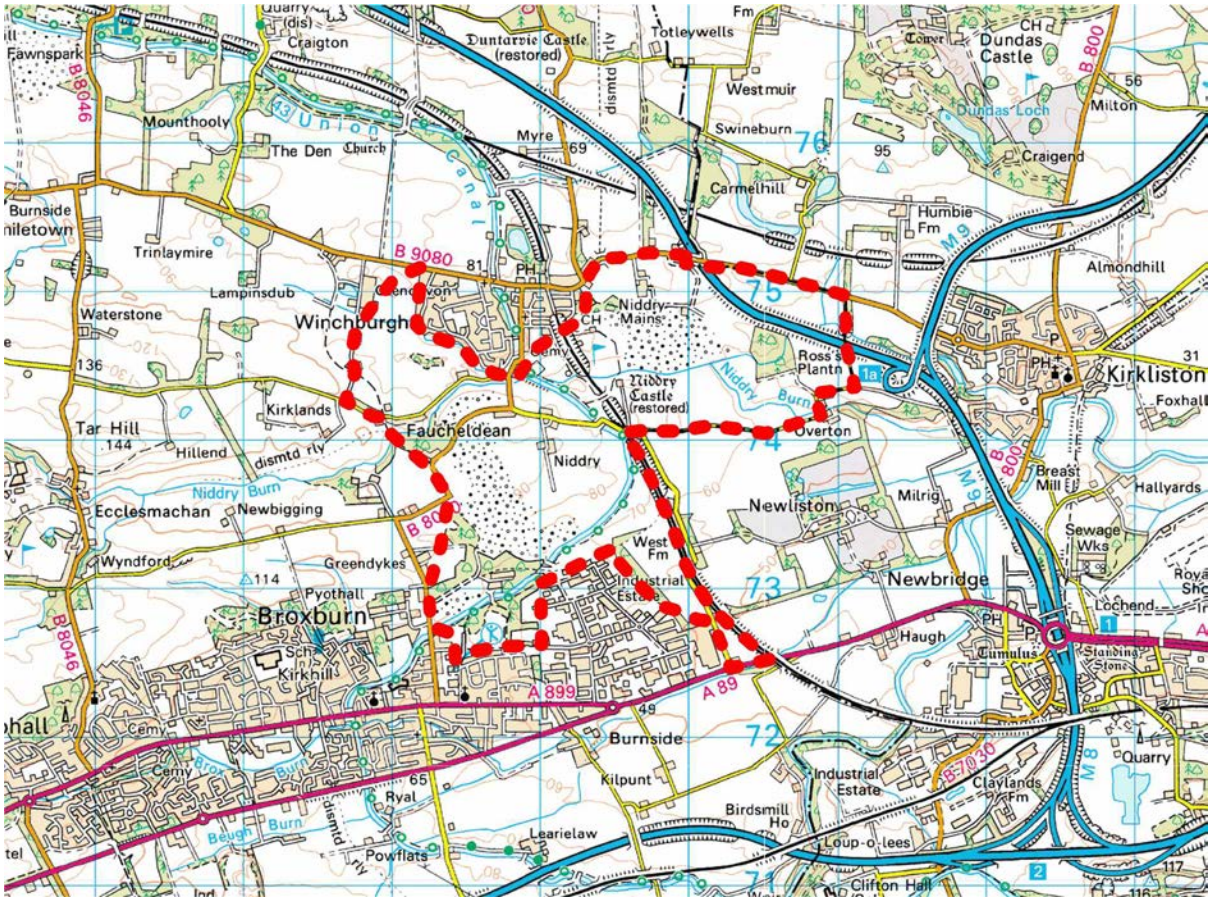


LANDSCAPE AND VISUAL IMPACT ASSESSMENT	
Landscape sensitivity assessment	Medium sensitivity
Landscape objective	Accommodation
Landscape capacity assessment	LOW
Landmark landscape features & Settings of Landmark Landscape Features	None
Principal sensitive routes (tourist and amenity)	Impact on views from: M8 A899 Livingston Spine Road Dechmont to Newbridge Cycle Path Union Canal Tow Path & Feeder Path
Important viewpoints & Sensitive visual compartments	Impact on views from/to: Binny Craig - its Sensitive visual compartment
Other landscape considerations (SLA)	Almond and Linhouse Valleys SLA

CONSTRAINTS & NON-LVIA CONSIDERATIONS	
Group 1 - Areas where wind farms will not be acceptable: National constraints	No national parks or national scenic areas.
Group 2a – *Areas of significant protection*: *National and international designations* (World Heritage Sites, European & 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 NatureScot 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:* Broxburn Dechmont East Calder Ecclesmachan, Kirkliston Livingston (including Mid Calder, Pumpherston & Uphall Station) Uphall Wilkieston Newbridge (CEC)
Other factors	Assessment of cumulative impacts 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

Landscape Character Unit 15: WINCHBURGH/ NIDDRY PLAIN



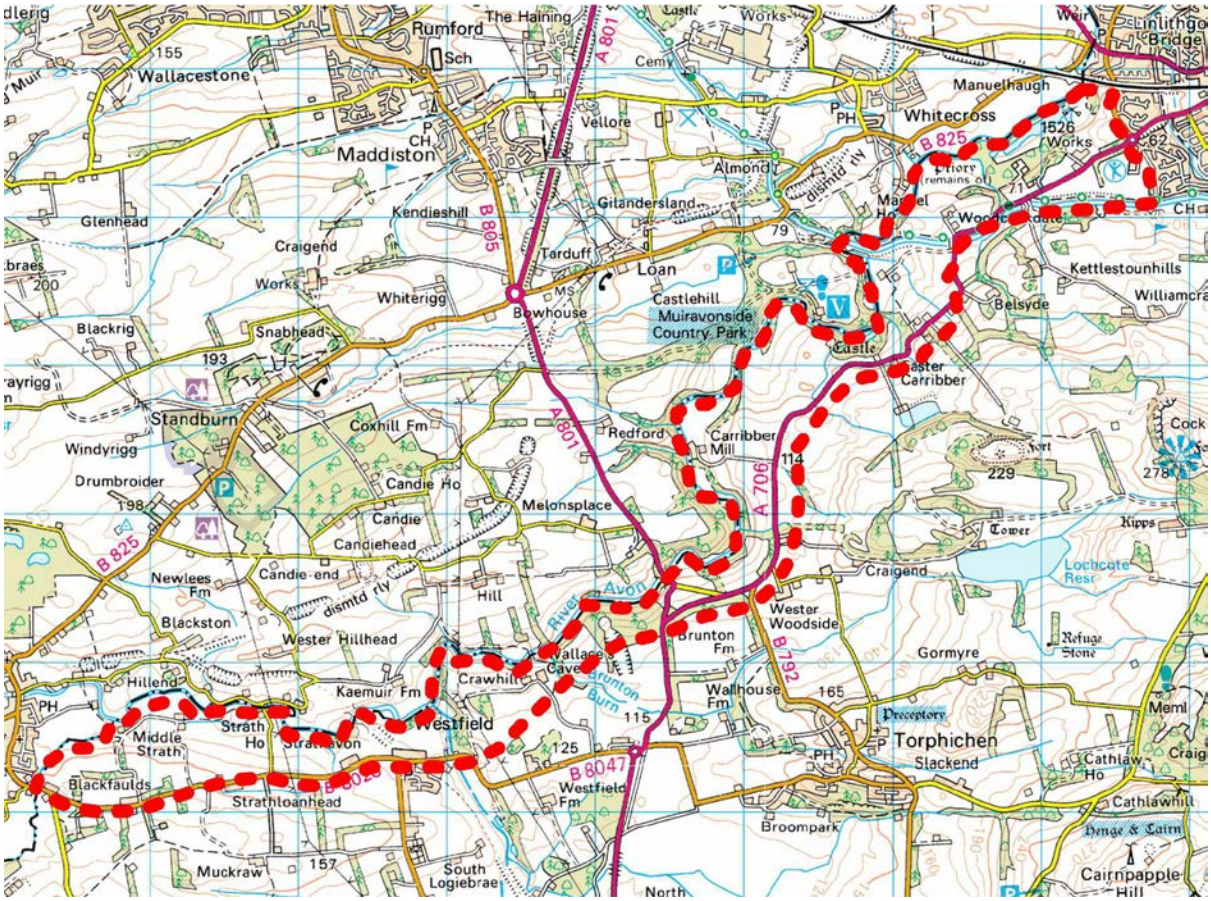
LANDSCAPE AND VISUAL IMPACT ASSESSMENT	
Landscape sensitivity assessment	Medium sensitivity
Landscape objective	Accommodation
Landscape capacity assessment	LOW
Landmark landscape features & Settings of Landmark Landscape Features	None

Principal sensitive routes (tourist and amenity)	Impact on views from: M9 west of Junction 1a Union Canal Tow Path
Important viewpoints & Sensitive visual compartments	None
Other landscape considerations (SLA)	No SLAs 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	
Group 1 - Areas where wind farms will not be acceptable: National constraints	No national parks or national scenic areas.
Group 2a – *Areas of significant protection*: *National and international designations* (World Heritage Sites, European & Ramsar sites, SSSIs, National Nature Reserves, Inventory Gardens and Designed Landscapes, Historic Battlefields)	*Site identified in Historic Scotland's Inventory of Gardens and Designed Landscapes:* Newliston House, immediately east of Broxburn, is predominantly within Edinburgh City
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 NatureScot 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:* Broxburn Winchburgh Kirkliston (CEC) Newbridge (CEC)
Other factors	Assessment of cumulative impacts 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

Landscape Character Type: LOWLAND RIVER CORRIDORS

Landscape Character Unit 16: AVON VALLEY

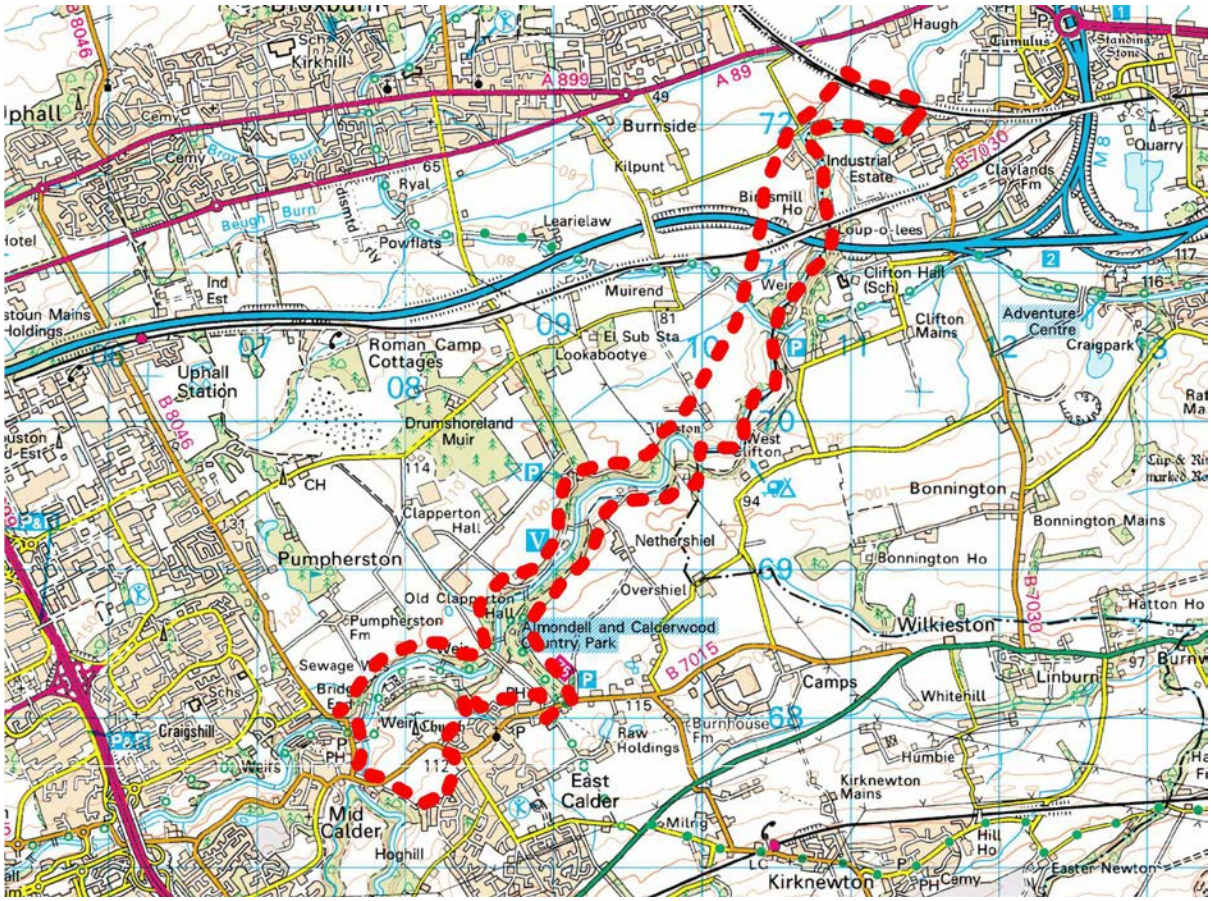


LANDSCAPE AND VISUAL IMPACT ASSESSMENT	
Landscape sensitivity assessment	High sensitivity
Landscape objective	Protection - to support landscape sensitivity and visibility analysis
Landscape capacity assessment	NO CAPACITY
Landmark landscape features & Settings of Landmark Landscape Features	None
Principal sensitive routes (tourist and amenity)	Impact on views from: Union Canal Tow Path
Important viewpoints & Sensitive visual compartments	Impact on views from/to: Cockleroy & its Sensitive visual compartment Avon Aqueduct & its Sensitive visual compartment
Other landscape considerations (SLA)	Bathgate Hills SLA Avon Valley SLA

CONSTRAINTS & NON-LVIA CONSIDERATIONS	
Group 1 - Areas where wind farms will not be acceptable: National constraints	No national parks or national scenic areas.
Group 2a – *Areas of significant protection*: *National and international designations* (World Heritage Sites, European & Ramsar sites, SSSIs, National Nature Reserves, Inventory Gardens and Designed Landscapes, Historic Battlefields)	*Site of Special Scientific Interest:* Carriber Glen, near Torphichen *Sites identified in Historic Scotland's Inventory of Historic Battlefields:* Battle of Linlithgow Bridge site (part in Falkirk Council area)

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 NatureScot 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:* Linlithgow Torphichen Westfield Avonbridge (FC) Whitecross (FC)
Other factors	Assessment of cumulative impacts 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 Broxbu

Landscape Character Unit 17: ALMOND VALLEY

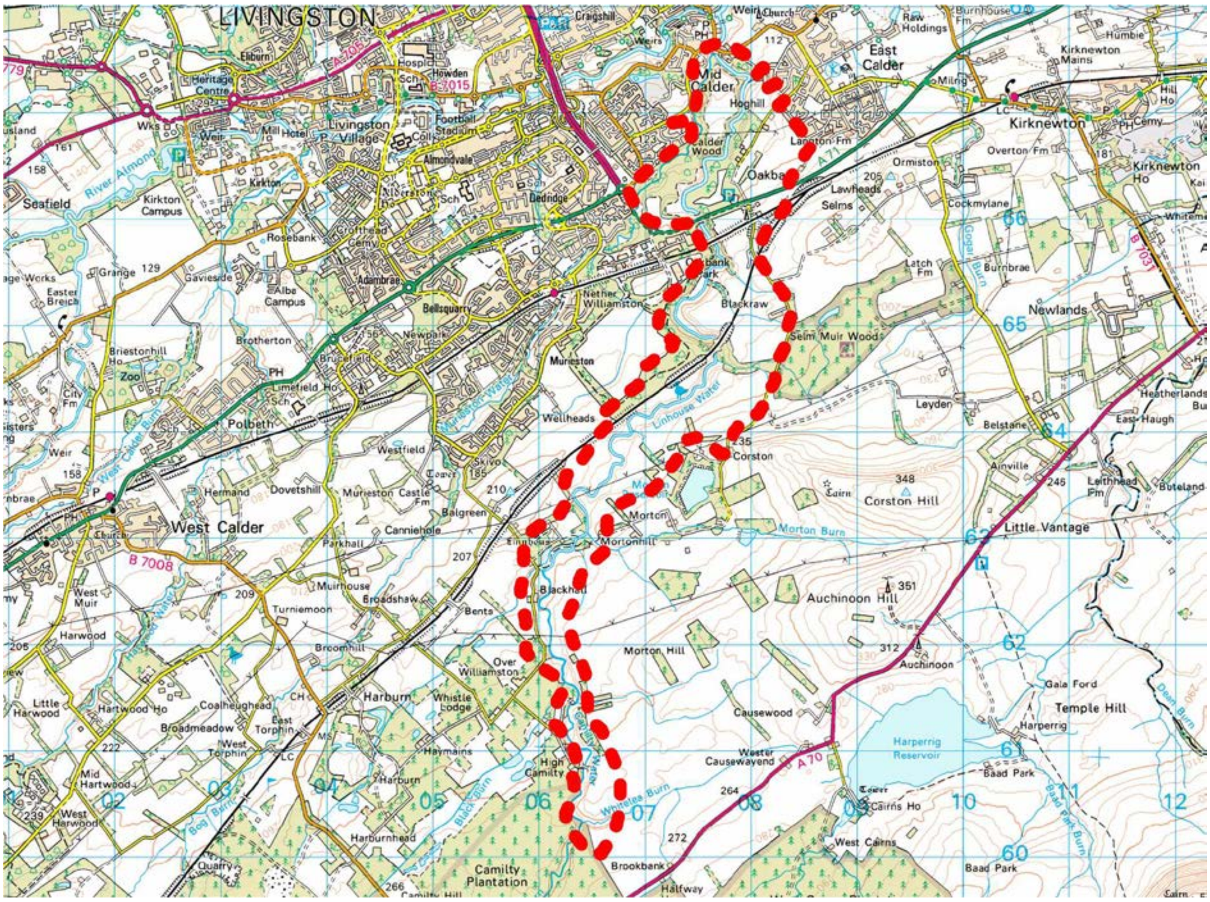


LANDSCAPE AND VISUAL IMPACT ASSESSMENT	
Landscape sensitivity assessment	High sensitivity
Landscape objective	Protection
Landscape capacity assessment	NO CAPACITY
Landmark landscape features & Settings of Landmark Landscape Features	None

Principal sensitive routes (tourist and amenity)	Impact on views from: Feeder Canal Path Union Canal Tow Path National Cycle Route 75
Important viewpoints & Sensitive visual compartments	Impact on views from/to: West Cairn Hill – sensitive visual compartment
Other landscape considerations (SLA)	Almond and Linhouse Valleys SLA

CONSTRAINTS & NON-LVIA CONSIDERATIONS	
Group 1 - Areas where wind farms will not be acceptable: National constraints	No national parks or national scenic areas.
Group 2a – *Areas of significant protection*: *National and international designations* (World Heritage Sites, European 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 NatureScot 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 Edinburgh Airport flight path 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.

Landscape Character Unit 18: MURIESTON/ LINHOUSE/ CAMILTY WATERS

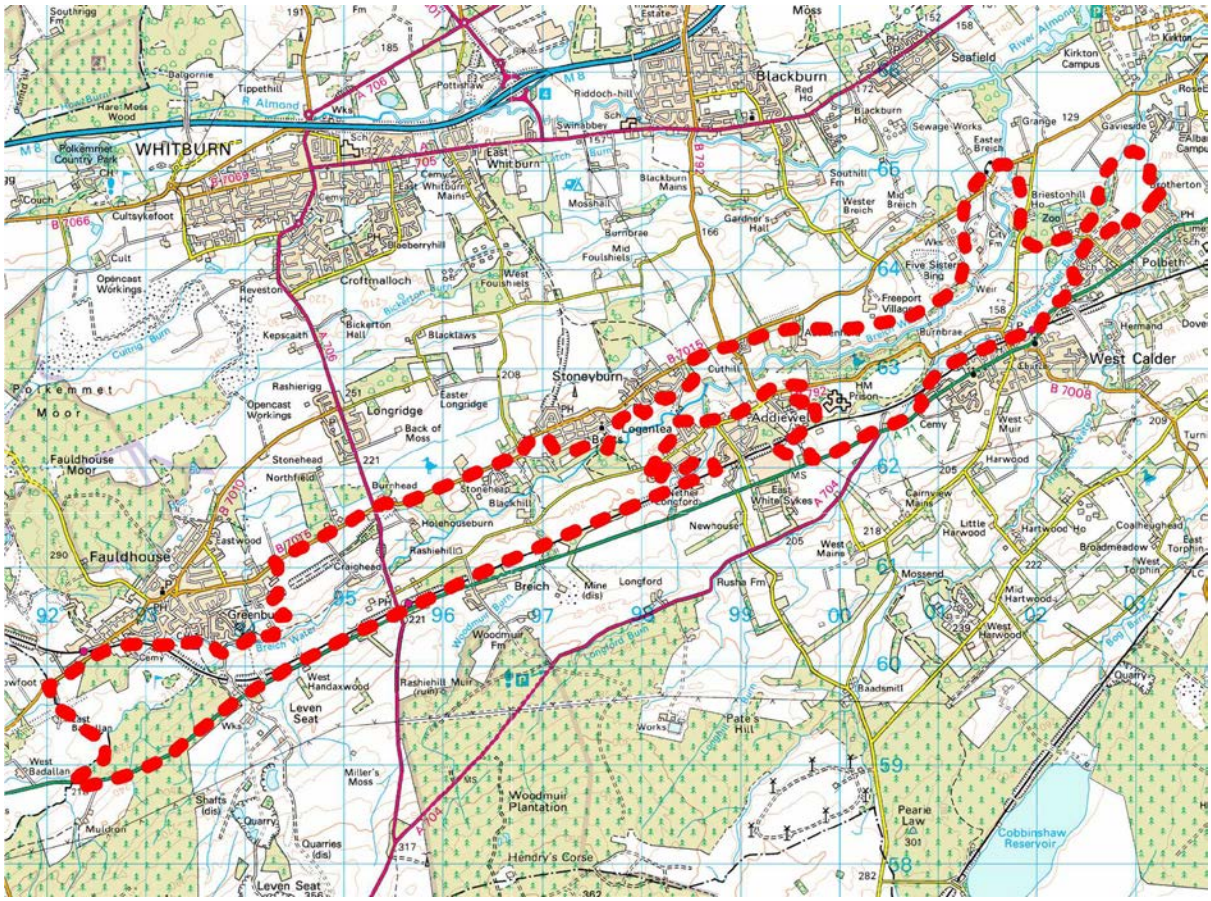


LANDSCAPE AND VISUAL IMPACT ASSESSMENT	
Landscape sensitivity assessment	High sensitivity
Landscape objective	Protection - to support landscape sensitivity and visibility analysis
Landscape capacity assessment	NO CAPACITY
Landmark landscape features & Settings of Landmark Landscape Features	None
Principal sensitive routes (tourist and amenity)	Impact on views from: A704 A706 junction with A704 A70 east
Important viewpoints & Sensitive visual compartments	None
Other landscape considerations (SLA)	Almond and Linhouse Valleys SLA

CONSTRAINTS & NON-LVIA CONSIDERATIONS	
Group 1 - Areas where wind farms will not be acceptable: National constraints	No national parks or national scenic areas.
Group 2a – *Areas of significant protection*: *National and international designations* (World Heritage Sites, European & Ramsar sites, SSSIs, National Nature Reserves, Inventory Gardens and Designed Landscapes, Historic Battlefields)	*Sites of Special Scientific Interest:* Linhouse Valley, Murieston Calder Wood, near Mid Calder

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 NatureScot 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 Livingston (including Mid Calder, Pumpherston & Uphall Station)
Other factors	Assessment of cumulative impacts Edinburgh Airport flight path 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.

Landscape Character Unit 19: WEST CALDER BURN & BREICH WATER



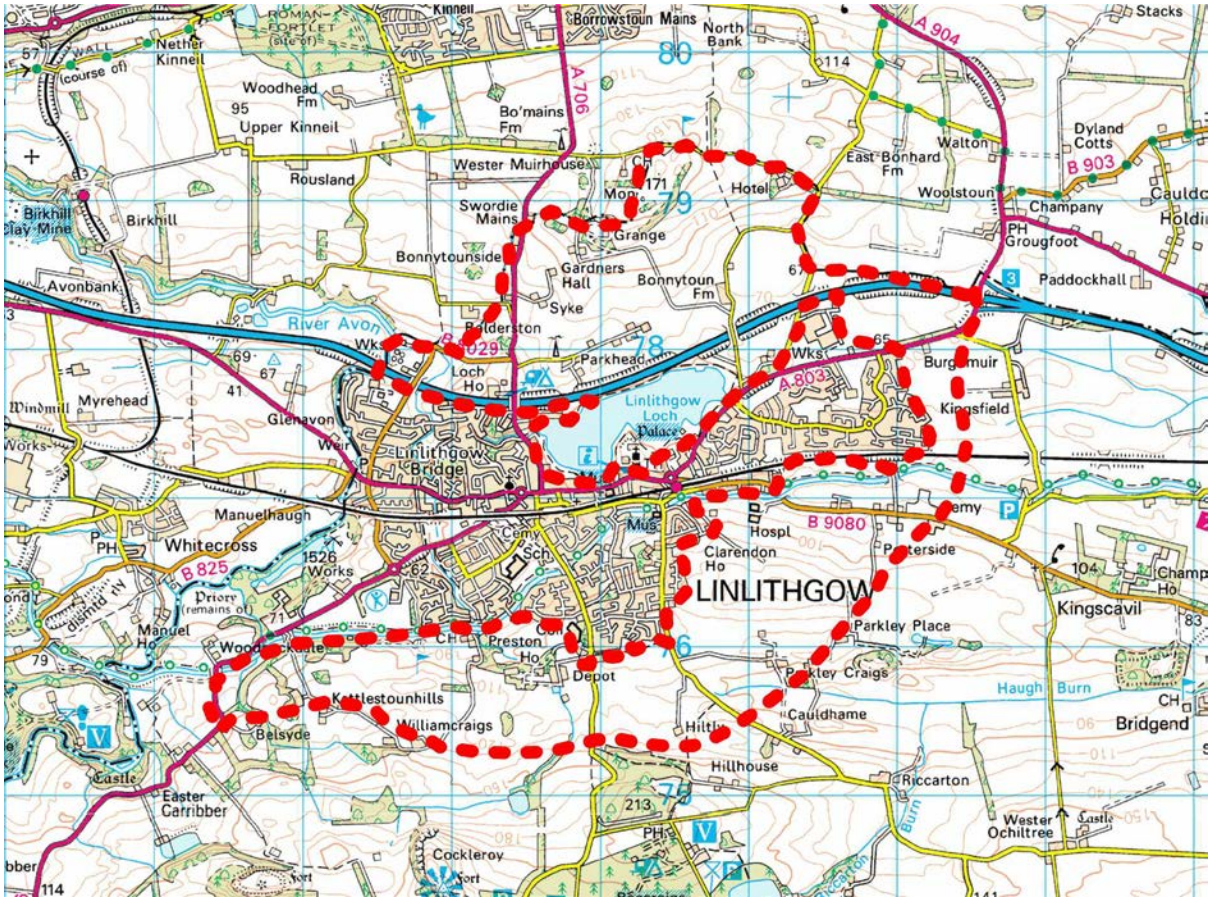
LANDSCAPE AND VISUAL IMPACT ASSESSMENT	
Landscape sensitivity assessment	Medium sensitivity
Landscape objective	Accommodation
Landscape capacity assessment	LOW
Landmark landscape features & Settings of Landmark Landscape Features	None
Principal sensitive routes (tourist and amenity)	Impact on views from: A704, A706, A705 Fauldhouse Rail Path

Important viewpoints & Sensitive visual compartments	None
Other landscape considerations (SLA)	No SLA Cumulative effects with built and consented WED

CONSTRAINTS & NON-LVIA CONSIDERATIONS	
Group 1 - Areas where wind farms will not be acceptable: National constraints	No national parks or national scenic areas.
Group 2a – *Areas of significant protection*: *National and international designations* (World Heritage Sites, European & Ramsar sites, SSSIs, National Nature Reserves, Inventory Gardens and Designed Landscapes, Historic Battlefields)	*Site of Special Scientific Interest:* Skolie Burn, Loganlea, Addiewell
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 NatureScot 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:* Addiewell & Loganlea Breich Fauldhouse Livingston (including Mid Calder, Pumpherston & Uphall Station) Longridge Polbeth Seafield Stoneyburn & Bents West Calder
Other factors	Assessment of cumulative impacts 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.

Landscape Character Type: LOWLAND HILL FRINGES

Landscape Character Unit 20: LINLITHGOW FRINGE

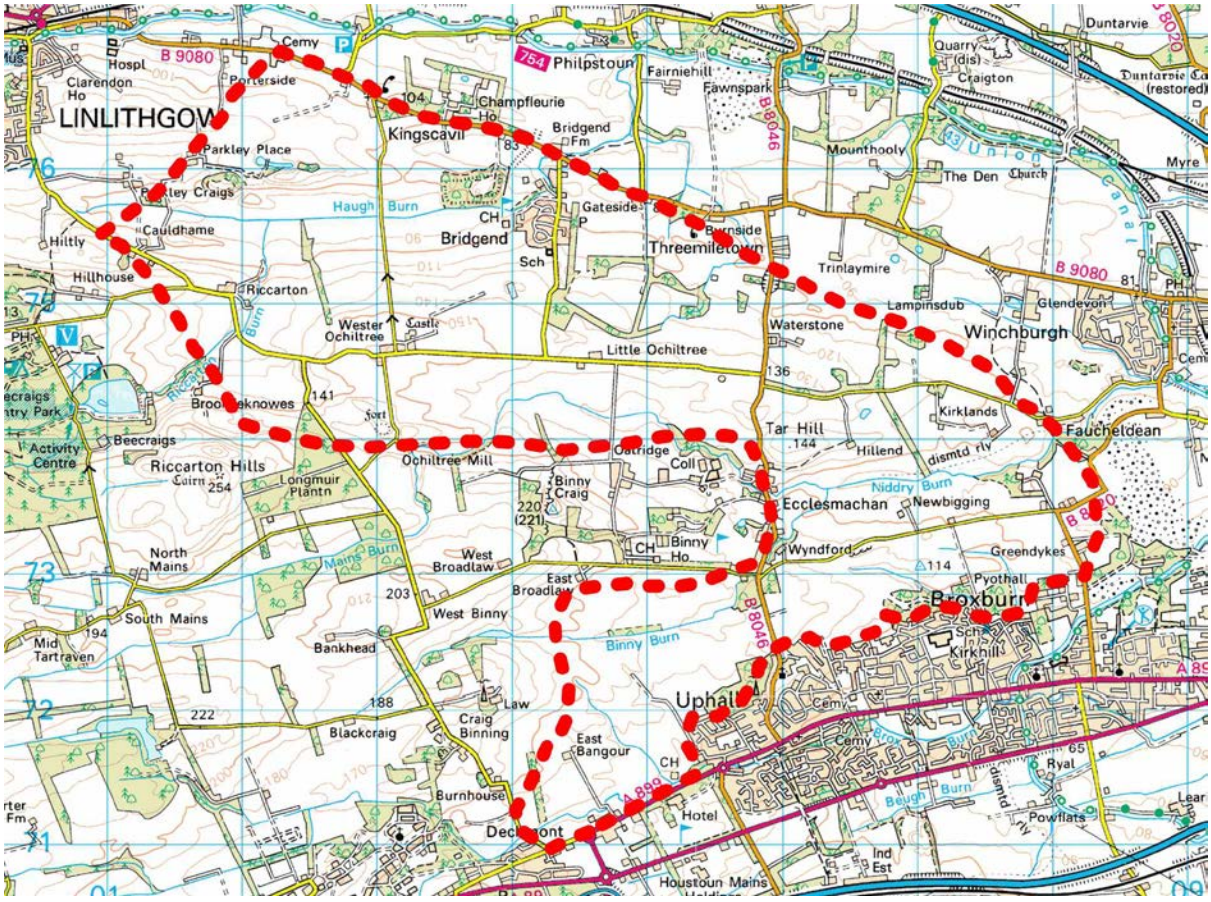


LANDSCAPE AND VISUAL IMPACT ASSESSMENT	
Landscape sensitivity assessment	Area of highest sensitivity
Landscape objective	Protection - to support landscape sensitivity and visibility analysis
Landscape capacity assessment	NO CAPACITY
Landmark landscape features & Settings of Landmark Landscape Features	Linlithgow Loch and Palace Landmark Landscape & Setting of this Landmark Landscape Feature
Principal sensitive routes (tourist and amenity)	Impact on views from: M9 west of Jcn. 2 Union Canal Tow Path
Important viewpoints & Sensitive visual compartments	Impact on views from/to: Cockleroy & its Sensitive visual compartment Avon Aqueduct - its Sensitive visual compartment
Other landscape considerations (SLA)	Airngarth Hill SLA Bathgate Hills SLA

CONSTRAINTS & NON-LVIA CONSIDERATIONS	
Group 1 - Areas where wind farms will not be acceptable: National constraints	No national parks or national scenic areas.
Group 2a – *Areas of significant protection*: *National and international designations* (World Heritage Sites, European& Ramsar sites, SSSIs, National Nature Reserves, Inventory Gardens and Designed Landscapes, Historic Battlefields)	*Sites of Special Scientific Interest:* Linlithgow Loch

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 NatureScot 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 Linlithgow Whitecross (FC) Bo'ness (FC)
Other factors	Assessment of cumulative impacts 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, Philpstoun, Winchburgh and Broxburn

Landscape Character Unit 21: BATHGATE HILLS FRINGE



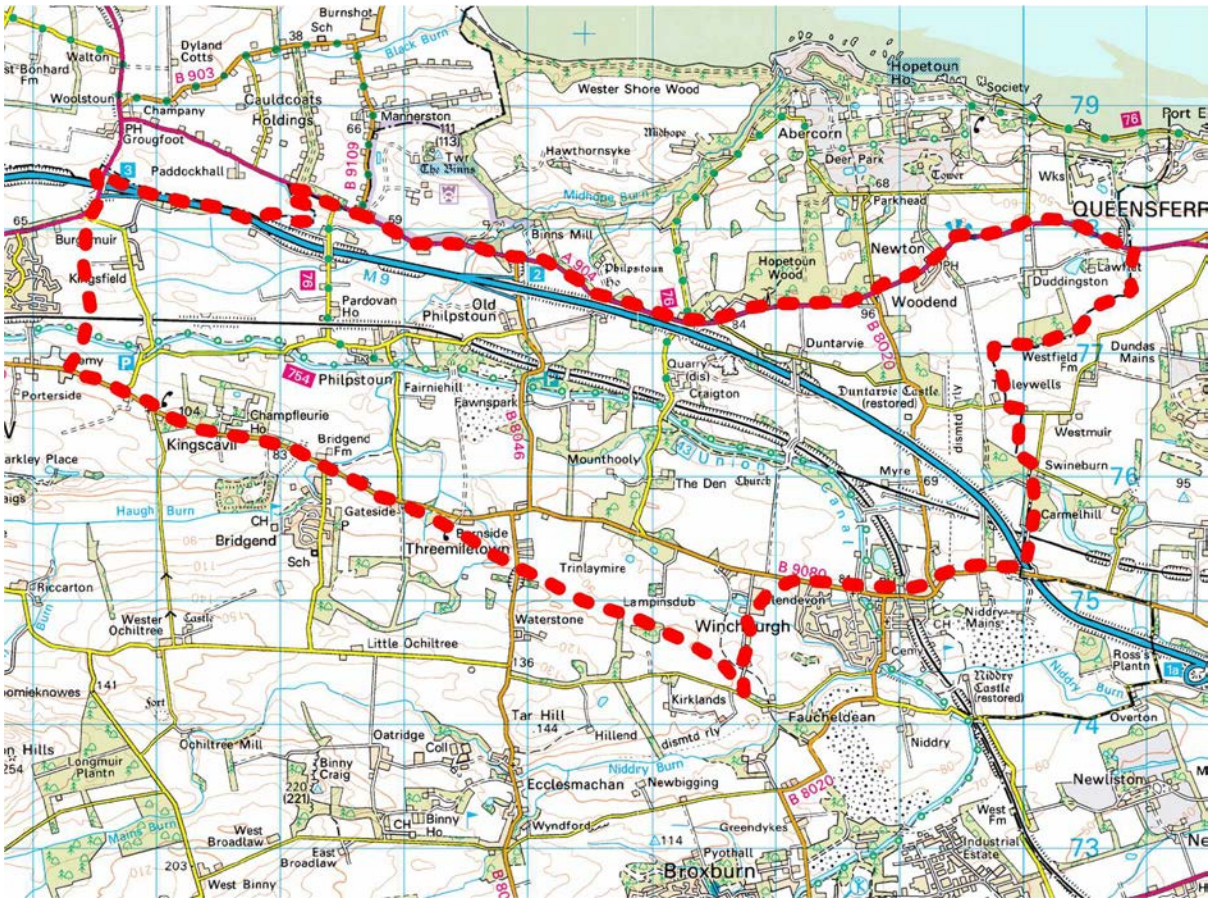
LANDSCAPE AND VISUAL IMPACT ASSESSMENT	
Landscape sensitivity assessment	Medium sensitivity
Landscape objective	Accomodation
Landscape capacity assessment	LOW
Landmark landscape features & Settings of Landmark Landscape Features	None

Principal sensitive routes (tourist and amenity)	Impact on views from: B8046/ Ochiltree Road Union Canal Tow Path
Important viewpoints & Sensitive visual compartments	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
Other landscape considerations (SLA)	Important for setting of Bathgate Hills SLA

CONSTRAINTS & NON-LVIA CONSIDERATIONS	
Group 1 - Areas where wind farms will not be acceptable: National constraints	No national parks or national scenic areas.
Group 2a – *Areas of significant protection*: *National and international designations* (World Heritage Sites, European & 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 NatureScot 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 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

Landscape Character Type: COASTAL MARGINS

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



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: A904 Newton M9 west of Jcn. 2 Union Canal Tow Path
Important viewpoints & Sensitive visual compartments	Impact on views from/to: Cockleroy - its Sensitive visual compartment Tower at House of the Binns - its Sensitive visual compartments
Other landscape considerations (SLA)	Forth Coast SLA Landscape setting protection of Forth Rail Bridge UNESCO World Heritage Site

CONSTRAINTS & NON-LVIA CONSIDERATIONS	
Group 1 - Areas where wind farms will not be acceptable: National constraints	No national parks or national scenic areas.
Group 2a – *Areas of significant protection*: *National and international designations* (World Heritage Sites, European & Ramsar sites, SSSIs, National Nature Reserves, Inventory Gardens and Designed Landscapes, Historic Battlefields)	*Sites of Special Scientific Interest:* Philpstoun Muir, near Linlithgow

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 NatureScot 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 Ecclesmachan Linlithgow Newton & Woodend Philpstoun Winchburgh Queensferry (CEC)
Other factors	Assessment of cumulative impacts 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

Landscape Character Unit 23: WEST LOTHIAN COASTAL HILLS

LANDSCAPE AND VISUAL IMPACT ASSESSMENT	
Landscape sensitivity assessment	Area of Highest Sensitivity
Landscape objective	Protection - Wind Energy Development (WED) and any other large scale, uncharacteristic development would be inappropriate
Landscape capacity assessment	NO CAPACITY

Landmark landscape features & Settings of Landmark Landscape Features	None
Principal sensitive routes (tourist and amenity)	Impact on views from: A904 Newton
Important viewpoints & Sensitive visual compartments	Impact on views from/to: Tower at House of the Binns & its Sensitive visual compartments A904 Viewpoint & its Sensitive visual compartments
Other landscape considerations (AGLV, cSLA)	Forth Coast AGLV Forth Coast SLA Landscape setting protection of Forth Rail Bridge UNESCO World Heritage Site

CONSTRAINTS & NON-LVIA CONSIDERATIONS	
Group 1 - Areas where wind farms will not be acceptable: National constraints	No national parks or national scenic areas.
Group 2a – *Areas of significant protection*: *National and international designations* (World Heritage Sites, European & Ramsar sites, SSSIs, National Nature Reserves, Inventory Gardens and Designed Landscapes, Historic Battlefields)	European: *Special Protection Areas:* Firth of Forth (part in West Lothian) *Sites of Special Scientific Interest:* Firth of Forth *Site identified in Historic Scotland's Inventory of Gardens and Designed Landscapes:* Hopetoun House, near the Firth of Forth House of the Binns, north-east of Linlithgow
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 NatureScot 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:* Newton & Woodend Philpstoun Winchburgh Queensferry (CEC)
Other factors	Assessment of cumulative impacts 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 *World Heritage Site*: Forth Rail Bridge (within Edinburgh)

(SG) Wind Energy Development

Approved by West Lothian Council Executive 20 April 2021
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