



Local Development Plan 2030

Appendix B

Development Pressure Analysis

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**Mid & East
Antrim**
Borough Council

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1.0 Introduction

- 1.1 Development Pressure Analysis is one of the 4 strands of the Countryside Assessment and seeks to identify those areas where significant development pressure has occurred and where landscape, environmental integrity and local rural character may be under threat of significant change. Development pressure analysis typically involves an assessment of the spatial distribution of dwellings in the countryside and the cumulative impacts of such development. Given the high number of applications for wind energy development within the Borough in the recent past and their potential visual impacts, it is considered appropriate to widen this remit to also include an assessment of wind energy development. It is also considered prudent to gain an appreciation of any development pressure from solar energy development which can have a significant visual impact in the countryside.
- 1.2 It is acknowledged that other types of development, such as mineral excavation and agricultural or industrial buildings, can also result in adverse visual impacts on the visual amenity and character of the countryside. However, in regard to such forms of development, it is widely considered that sufficient control is already provided by prevailing regional policy, and Areas of Constraint on Minerals Development (ACMD) have been designated in the extant Larne Area Plan 2010 to manage minerals development in highly sensitive areas of the Antrim Coast and Glens Area of Outstanding Natural Beauty (AONB).
- 1.3 The development pressure analysis will serve primarily to identify areas of the countryside that have experienced significant development pressure from dwellings, wind energy development and solar energy development, and highlight any impacts resulting from this development pressure and analyse the vulnerability of sensitive landscapes, such as the Antrim Coast and Glens AONB and Areas of Scenic Quality (NILCA 2000), to the impacts of such development. Through this spatial analysis, this study will contribute to an evidence base which will inform any decisions to provide additional policy protection through the LDP for areas of the countryside vulnerable to the adverse impacts of development.
- 1.4 The 'open countryside' as referred to in this paper, is defined as lands outside of the designated settlements as defined in the existing Ballymena Area Plan 1986-2001, Carrickfergus Area Plan 2001 and Larne Area Plan 2010. It should be noted that the area defined as the 'open countryside' is likely to change for future Development Pressure Analysis studies, depending on any changes to settlement development limits during the Local Development Plan (LDP) process.

Regional Planning Policy

- 1.5 The Strategic Planning Policy Statement (SPPS) states that furthering sustainable development lies at the heart of the new planning system. Part of this, according to the SPPS, is the need to protect and enhance the historic and natural environment; including safeguarding landscape character and halting the loss of biodiversity.
- 1.6 The SPPS directs that the policy approach to new development in the countryside should reflect differences in the region, be sensitive to local needs and take due account environmental sensitivity and the ability of landscapes to absorb development. This regional policy context therefore provides scope for developing policies in the LDP which are tailored to particular circumstances, for example, through restricting development in areas that are particularly sensitive to change or accommodating sustainable development in rural areas with lower sensitivity to development.
- 1.7 Planning Policy Statement (PPS) 21 "Sustainable Development in the Countryside" sets out the need for a Development Pressure Analysis and it is listed as one of four strands of a Countryside Assessment (para 4.2, page 8).

- 1.8 Prior to PPS 21, proposals for residential development in the open countryside were considered under the policy provisions of the former Department of the Environment's Planning Strategy for Rural Northern Ireland (1993) (PSRNI), draft Planning Policy Statement (PPS) 14: Sustainable Development in the Countryside and draft PPS21.
- 1.9 Under the PSRNI stricter planning policy criteria applied within Green Belts and Countryside Policy Areas compared to the 'rural remainder', within which, planning policy was more relaxed in regard to, for example, accommodating single dwellings in the countryside. This approach facilitated significant growth in rural single dwellings which adversely impacted the environment and rural character of some areas of the open countryside.
- 1.10 The adoption of draft PPS 14 in 2007 by the Department of Regional Development introduced more stringent policy criteria for development in the countryside and, in contrast to the PSRNI, applied to all areas of the open countryside. However, the policy provisions of this PPS were considered to be unduly restrictive.
- 1.11 PPS 21 was published on 1st June 2010 and sets out planning policies for development in the countryside. PPS 21 aims to balance the need to protect the environment with facilitating development that can help sustain a strong and vibrant rural community. The policies and provisions contained within PPS 21 take precedence over the policy provisions of all green belts and Countryside (or Rural) Policy Areas (CPAs) in existing statutory and published draft Plans, with a limited number of exceptions. The Undeveloped Coast CPA (renamed Special Countryside Area) was designated in the Larne Area Plan 2010 and this designation and its' associated policy remains applicable.
- 1.12 Planning Policy Statement (PPS) 18 "Renewable Energy" was published in 2009, which superseded Policy PSU 12 'Renewable Energy' of the Planning Strategy for Rural Northern Ireland. The aim of PPS 18 is to facilitate the siting of renewable energy generating facilities in appropriate locations within the historic and natural environment in order to achieve Northern Ireland's renewable targets (see Technical Supplement 12 – Public Utilities [Renewable Energy section]) and to realise the benefits of renewable energy, whilst ensuring adequate protection of historic, natural and cultural heritage features and that issues concerning impacts on amenity are adequately addressed.

Landscape Character Areas

- 1.13 The 18 Landscape Character Areas (LCAs) used as a basis to assess the various landscapes within Mid and East Antrim were previously identified through a Northern Ireland Landscape Character Assessment 2000 (NILCA 2000) published by the Department of the Environment (now DAERA). This study was carried out at a relatively detailed scale and defined 130 separate landscape character areas across Northern Ireland, each with a distinctive character, based upon local patterns of geology, land form, land use, cultural and ecological features. These LCAs provide a strategic overview of the landscape and have been reviewed through the Council's own Landscape Character Assessment. The following paragraphs are a brief summary of the location and extent of the LCAs found, wholly or partially, within Mid and East Antrim.

LCA 52: Lower Bann Valley

- 1.14 Only a small part of this LCA is located within MEA. This area is located in the western part of MEA and is adjacent to Lough Beg and the Lower Bann River corridor.

LCA 58: Long Mountain Ridge

- 1.15 The central part of this LCA is located within MEA and this area includes the area of Long Mountain ridge between the Lower Bann River and River Maine corridors.

LCA 59: Cullybackey and Cloghmills Drumlins

- 1.16 The southern section of this LCA is located within MEA. This area runs north of, and includes, Cullybackey and contains parts of the River Maine and Clogh River corridors and Crankill Road.

LCA 60: River Main Valley

- 1.17 The northern section of this LCA is within MEA. This area is located to the south/south-west of Ballymena and between Long Mountain ridge and Lisnevenagh Road and includes parts of the River Maine and Kells Water corridors.

LCA 98: Carrickfergus Upland Pastures

- 1.18 The majority of this LCA is located within MEA, with a smaller section to the west of Woodburn Forest being located within Antrim and Newtownabbey Borough. The MEA part of the LCA is an upland area to the west and north-west of Carrickfergus.

LCA 115: Tardree and Six Mile Water Slopes

- 1.19 The majority of this LCA is located within Antrim and Newtownabbey Borough. There are two discrete areas of this LCA located within MEA. One area is located west of Collin Road and includes areas to the north and south of Kilgad Road (hereafter referred to as the 'western section'). This western section includes part of the Kells Water river corridor. The other area is located in the Braepark Road area to the east of Ballynashee Road (hereafter referred to as the 'eastern section'). This eastern section is located to the north and north-west of Ballynure.

LCA 116: Ballymena Farmland

- 1.20 The majority of this LCA is located within MEA, with a relatively small southern section located within Antrim and Newtownabbey Borough Council area. The MEA part of this LCA includes much of Ballymena, the settlement of Kells and Connor and parts of the Braid River and Kells Water river corridors.

LCA 117: Central Ballymena Glens

- 1.21 This LCA is wholly located within MEA and contains two sweeping glens which, together, wrap around the Garron Plateau. This document will refer to the glen which runs from Clough to Cargan as the 'northern glen' and the glen which runs from Broughshane to Glenarm as the 'southern glen'.

LCA 118: Moyle Moorlands and Forests

- 1.22 Only a small part of this LCA is located within MEA. This area is an upland area located to the north and north-west of Cargan and does not include any settlements.

LCA 122: Garron Plateau

- 1.23 The majority of this LCA is located within MEA and includes the Garron Plateau with its' upland moorland, extensive areas of peat and Cleggan Forest, and there are no settlements within this area. A relatively small northern part of this LCA is located within Causeway Coast and Glens Borough.

LCA 123: Larne Glens

- 1.24 This coastal LCA is located within MEA and includes the glens of Glenarm and Glencloy.

LCA 124: Larne Basalt Moorland

- 1.25 This LCA is wholly within MEA and is generally located between the Larne coast and Ballymena farmland. This LCA is predominantly upland moorland and includes Slemish, the significant coniferous forests of Ballyboley, Capanagh and Capanagh-Shillanavogy and the prominent ridge between Sallagh Braes and Glenarm. This LCA is sparsely populated and has a low level of built development.

LCA 125: Tardree Upland Pastures

- 1.26 The northern section of this LCA is within MEA and includes tracts of land adjacent to Church Road, Collin Road, Moorfields Road and Rathkeel Road. The MEA part of this LCA is part of an extensive upland plateau of marginal pastures, rising to 353m at Big Collin, and includes the Glenwhirry River corridor. Slemish is adjacent to the north of this LCA.

LCA 126: Larne Coast

- 1.27 This coastal LCA is wholly within MEA and is located between Larne and Glenarm. The landscape within this LCA is an undulating lowland which forms a narrow strip between the steep slopes of the basalt uplands to the west and the coast.

LCA 127: Larne Ridgeland

- 1.28 This LCA is wholly within MEA and includes tracts of land west of Larne and Glynn, south of Glynn and north-east of Ballynure. This landscape is dominated by long ridges running south-west to north-east and includes the Six Mile Water fault which combines with the ridges to form a valley running south-west from Larne. This LCA abuts the north-western shore of Larne Lough.

LCA 128: Island Magee

- 1.29 This LCA includes the Islandmagee peninsula to the east of Larne Lough and farmed valley slopes to the west of Larne Lough between Magheramourne and Whitehead. Magheramorne Quarry and associated quarry spoil (which forms a basalt peninsula) are also included within this LCA.

LCA 129: Carrickfergus Shoreline

- 1.30 This LCA is located within MEA with the exception of a relatively small south-western section. The LCA is a narrow relatively flat coastal plain situated between the Carrickfergus Escarpment and Belfast Lough and it has a significant area of urban development due to the presence of the settlements of Carrickfergus and Greenisland. Along the shoreline there is an almost continuous belt of coastal development.

LCA 130: Carrickfergus Farmed Escarpment

- 1.31 This LCA is located within MEA with the exception of a relatively small south-western section. The LCA is a fairly narrow strip of undulating land on the margins of the basalt plateau (LCA 98) that leads from the pasture on the elevated slopes to the coastal plain of the Carrickfergus Shoreline (LCA 129).

2.0 Analysis of Development Pressure from Applications for Residential Development in the Countryside of Mid & East Antrim

Residential Development in the Countryside: Applications 2003 - 2018

- 2.1 Data on all planning applications received by Mid and East Antrim Borough Council between 2003 and 2018 (inclusive) was provided by the Department of Infrastructure (DfI). This data was processed by the Local Development Plan Team to obtain detailed information on all residential applications falling within the open countryside.
- 2.2 Using the processed data, information was obtained on the number of applications received and determined by the Council between 2003 and 2018 (inclusive). Table 1 below shows the number of applications received, approved, refused and withdrawn for applications relating to new residential development within the open countryside. Table 2 in the 'Methodology' section shows the same statistics as Table 1 however, the figures in Table 2 are amended to reflect the removal of the majority of 'duplicate' applications (see 'Methodology' section for details).
- 2.3 The year 2007 is highlighted in orange as it is the year Planning Policy Statement (PPS) 14 "Sustainable Development in the Countryside" was published. The year 2010 is highlighted in blue as it is the year PPS 21 "Sustainable Development in the Countryside" was published, which marked a significant change in the regional policy approach in regard to development in the open countryside.

Table 1: Number of planning applications and determinations relating to new residential development in the open countryside in Mid and East Antrim between 2003 and 2018 (inclusive).

Year	Received	Approval	Refusal	Withdrawn
2003	1076	557	55	83
2004	1111	734	159	167
2005	881	627	298	129
2006	611	562	225	57
2007	618	485	90	50
2008	379	428	9	18
2009	530	442	4	23
2010	407	399	56	52
2011	325	324	33	22
2012	274	250	21	16
2013	205	232	10	10
2014	240	200	28	7
2015	209	208	16	8
2016	235	209	23	9
2017	235	197	24	8
2018	365	307	25	10

Methodology

Evidence Base: Data

- 2.4 This study has been informed by data received from DfI and processed by Mid and East Antrim LDP Team. The result of the data processing was a dataset which contained information on the number of planning applications for residential development in the open countryside of Mid and East Antrim.
- 2.5 The submission of a *planning application* has been used by this study to indicate a *tangible* interest in developing land and, thereby taken as indicating a ‘point of development pressure’. Approved, refused and withdrawn planning applications are included within the analysis. Withdrawn applications are included because it is considered that they represent a ‘point of development pressure’ where there was a tangible interest in developing the land. However, pre-application enquiries and pre-application notifications are excluded from the analysis, as in these cases an actual planning application has not been submitted.
- 2.6 For the development pressure analysis, applications received between 1 January 2003 and 31 December 2018 and relating to dwellings in the countryside were extracted from the dataset. These applications included ‘outline’ and ‘full’ applications relating to the following:
- New dwellings
 - Replacement dwellings
 - Conversion to apartment(s)/dwellings(s)
- 2.7 Applications for a ‘replacement dwelling’ seek to replace one dwelling (abandoned or inhabited) with one residential unit and therefore, these applications do not add to the housing stock within the open countryside. However, replacement dwellings can have a significant visual impact on the character of a rural area, particularly in cases where the proposed replacement dwelling is larger than the dwelling to be replaced, where the proposed replacement dwelling is an off-site replacement or where new access arrangements are needed or existing access arrangements adapted to meet modern access requirements. In some circumstances the dwelling to be replaced will exert a minimal visual impact in the rural area as it may be relatively small, screened behind vegetation or may not have an existing viable vehicular access. Further, proposed replacement dwellings may need to be connected or re-connected to the National Grid and in these cases new cables will intensify the existing wirescape in the countryside. It is also worth noting that replacement dwellings which are unable to connect to the public sewerage infrastructure require onsite waste water treatment systems (OSWWTS), such as septic tanks or treatment systems with soakaways. It is generally accepted that an OSWWTS that is well constructed, sited and maintained to approved standards poses a ‘relatively small’ pollution risk. However, a high density of OSWWTSs, particularly those that are poorly maintained, has been shown to increase the risk of pollution (*McKibben, 2015 for NI Assembly – “The use of onsite wastewater treatment systems in Northern Ireland”*). Therefore, taking into account the potential visual and environmental impacts of replacement dwellings, it is considered prudent to include this type of residential development in the development pressure analysis for dwellings in the open countryside.
- 2.8 The following types of development are excluded from this development pressure analysis:
- Mobile Homes – excluded as these are normally used as temporary accommodation when a new dwelling is being built.
 - Self-catering units – excluded as not considered to be used for domestic accommodation.
 - Residential units related to tourism – excluded as not considered to be used for domestic accommodation.
- 2.9 In this study, a ‘duplicate’ point of development pressure occurs when there is a planning application on a site that has previously received planning permission relating to the same development proposal.

The following types of applications were removed from the dataset used for the dwelling pressure analysis as they are considered to represent cases that lead to duplicate points of development pressure:

- Reserved Matters
- Renewal of planning permission
- Changes of house type
- Variation/Removal of a condition(s)
- Proposed relocation and substitution of an approved residential unit(s)
- Application to replace a previously approved residential unit(s)

2.10 Due to the size of the dataset, it was not considered practicable to attempt to remove all duplicate points of development pressure from the residential pressure analysis. However, the removal of the aforementioned types of residential application has gone some way to removing the majority of duplicate applications.

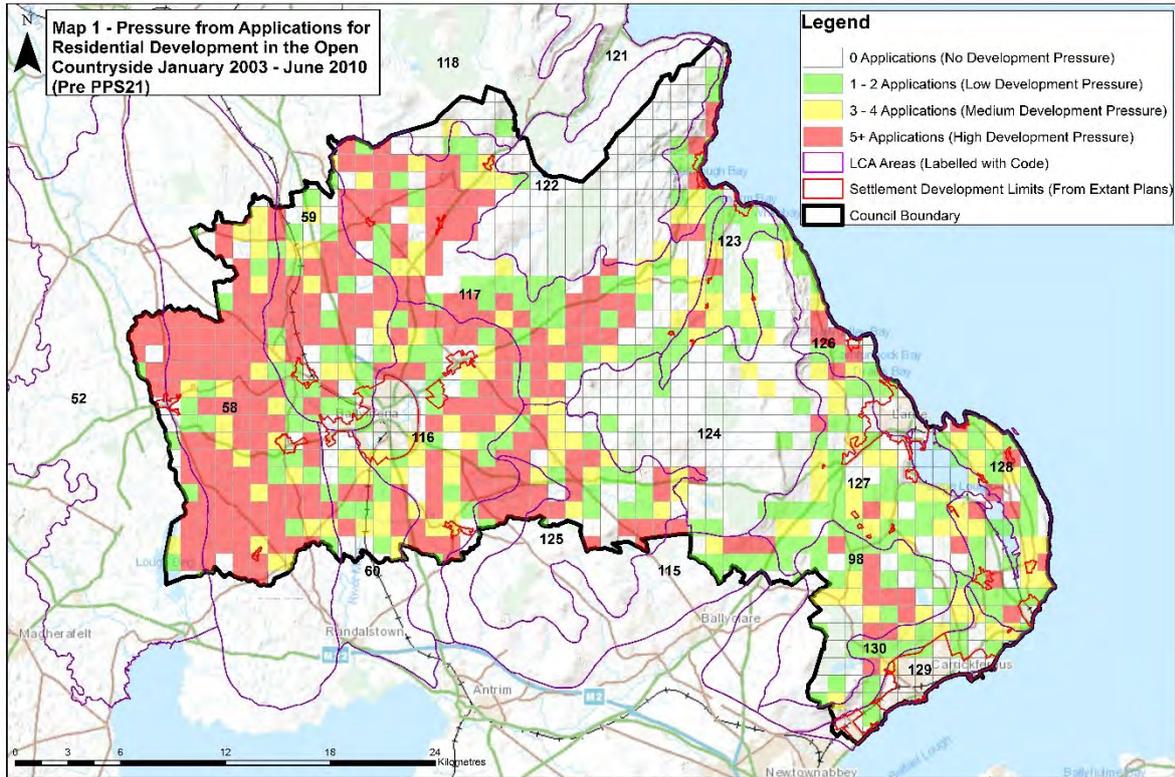
2.11 On a site where an application was refused planning permission for residential development, a subsequent application for residential development was taken to represent an additional point of development pressure because the principle for development had not been set at the time of the subsequent application. Time constraints have not allow for in-depth consideration of any similarities between the previous and subsequent applications.

Table 2: Number of planning applications and determinations relating to new residential development (excluding duplicate application types) in the open countryside in Mid and East Antrim between 2003 and 2018 (inclusive).

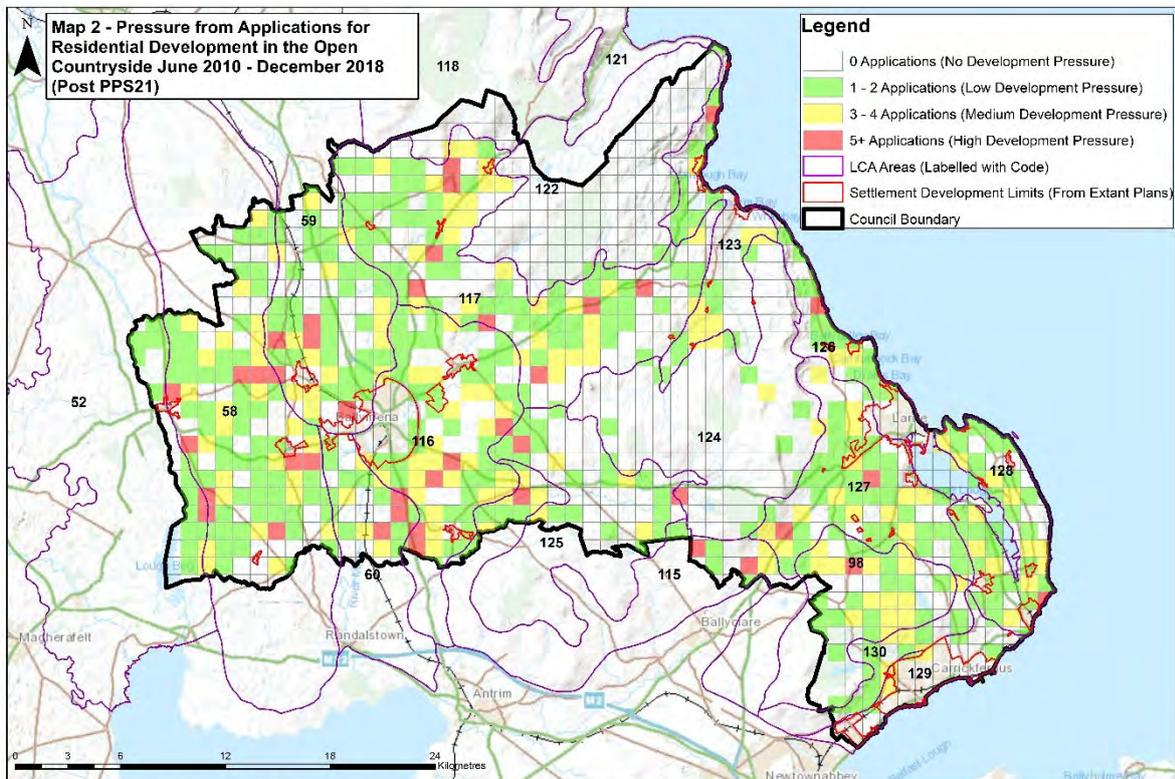
Year	Received	Approval	Refusal	Withdrawn
2003	934	456	55	80
2004	966	597	160	163
2005	722	481	299	125
2006	297	293	225	58
2007	207	118	89	47
2008	132	142	8	16
2009	376	227	6	20
2010	263	249	52	49
2011	211	207	31	20
2012	141	145	18	17
2013	120	115	9	10
2014	149	114	26	6
2015	127	117	16	8
2016	146	124	21	7
2017	137	105	21	7
2018	142	124	24	6

Heat Map Analysis

- 2.12 The following categories of development pressure were used to assess the spatial pattern of development pressure for dwellings in the open countryside within Mid and East Antrim:
0 residential applications: No Development Pressure (White)
1 – 2 residential applications: Low Development Pressure (Green)
3 – 4 residential applications: Medium Development Pressure (Yellow)
5+ residential applications: High Development Pressure (Red)
- 2.13 *NB: It should be noted that the category-values used to indicate the level of residential development pressure in the open countryside are considered appropriate for Mid and East Antrim, however, these values may not be appropriate for other council areas. Accordingly, what is considered as 'low', 'medium' or 'high' pressure within this study is relative to Mid and East Antrim.*
- 2.14 Using the processed data, 'heat maps' showing points of development pressure for dwellings in the open countryside were produced for the periods 1 January 2003 – 31 May 2010 and 1 June 2010 – 31 December 2018, which are respectively the periods preceding and subsequent to the adoption of PPS 21 (see Map 1 and Map 2).
- 2.15 In order to identify spatial trends in relation to development pressure for dwellings in the open countryside, a 'fishnet' grid consisting of 1km-squared squares was overlaid on the heat maps. For example, these maps were used to identify 'hot-spots' where the number of applications for dwellings in the open countryside was considered to be high i.e. 5 or more residential planning applications within an area measuring 1km-squared (see Map 1 and Map 2).
- 2.16 In order to ensure the development pressure exhibited in areas identified as experiencing 'high' development pressure was a true reflection of the 'actual' development pressure, *all* duplicate points of development pressure were removed from these 'high' pressure areas (or hotspots).
- 2.17 An in depth analysis of the spatial trends displayed by the 'post-PPS 21 heat map' was undertaken as it was considered necessary to have an appreciation of the types of applications contributing to any residential development pressure after the introduction of PPS 21 which introduced new policy for assessing development in the open countryside. Before mapping development pressure for dwellings in the open countryside in the post-PPS21 heat map, all duplicate points of development pressure (see para 2.9) were excluded from hot-spots (see para 2.15). By removing 'duplicate' points of development pressure within hot spot areas, each planning application site with more than one planning application related to the same development proposal, was then represented by only one point of development pressure. By representing application sites that contain duplicates with only one pressure point, a more accurate representation of the 'true' development pressure was achieved, for example, some high development pressure areas could be downgraded to a lower pressure level and vice versa.
- 2.18 *NB: Areas of low to medium pressure were not investigated for duplicate points of development pressure, because if any 'duplicates' were identified, this would lower the development pressure further. This study seeks to identify trends in development pressure and give an insight into the factors contributing to areas of 'high' pressure. Therefore, it is considered that identification of 'duplicates' in low to medium pressure areas would not be advantageous in regard to the aims of this analysis.*



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Residential Development Pressure in the Open Countryside: Spatial Analysis

- 2.19 A spatial analysis of the pressure for dwellings in the open countryside was undertaken for each LCA. Within each LCA, hot-spots of pressure for dwellings in the open countryside were identified and analysed in order to understand what types of applications were contributing to the 'high' pressure. Through this analysis, any impacts and potential impacts on rural character and the landscape were considered for each LCA.

LCA 52: Lower Bann Valley

- 2.20 Ribbon development was identified as an issue within this LCA in the NILCA 2000 study and ribboning along public roads is evident in some areas of the MEA part of this LCA. **Between 2003 and June 2010 (introduction of PPS 21)** this LCA experienced relatively high pressure for residential development in the open countryside. Permission has been granted for dwellings close to the river corridor and the shores of Lough Beg and, although the number of approvals is relatively low, the river corridor and Lough Beg fringes are areas highly sensitive to change. The high amenity value along this river corridor and the undeveloped character of some areas could be adversely impacted by the addition of new dwellings, particularly if poorly sited.
- 2.21 **Since the introduction of PPS 21 in June 2010** there has generally been low pressure for dwellings in the open countryside within the MEA part of this LCA. Map 2 indicates a pocket of relatively high residential development pressure in the area around the Kilcurry Road/Largy Road junction. Ribbon development has occurred along the Kilcurry Road and, along with other residential development, has adversely impacted on the rural character of this area. Since the introduction of PPS 21, applications for residential development in this area of 'high' pressure have largely related to farm dwellings and 'infill' dwellings.

LCA 58: Long Mountain Ridge

- 2.22 **Between 2003 and June 2010** (introduction of PPS 21) the MEA part of this LCA experienced relatively high pressure for residential development in the open countryside.
- 2.23 **Since June 2010**, the pressure for residential development in the open countryside has been low to medium with pockets of high pressure. There has been relatively high residential pressure around the Kilcurry Road/Largy Road junction, the Kilcurry Road/Loughbeg Road junction, the Ballybollen Road, an area to the south/south-east of Ahoghill, the Largy Road, and areas to the north of Portglenone and to the west of Cullybackey.
- 2.24 Some ribbon development has occurred along the Kilcurry Road which has adversely impacted on the rural character; since June 2010 the high residential pressure is primarily related to applications for farm dwellings and 'infill' dwellings. Around the Kilcurry Road/ Largy Road junction the high residential pressure has been from a mix application types for new dwellings including 'new dwelling in an existing cluster' applications. High pressure in the Ballybollen Road area is predominantly from applications for 'infill' dwellings. In the area south of Ahoghill, applications contributing to high development pressure are predominantly for replacement dwellings with the remainder for dwellings on farms, 'infill' dwellings and a 'new dwelling in an existing cluster'. In the Largy Road area the high pressure for dwellings is predominantly from applications for dwellings on farms and 'infill' dwellings. North of Portglenone the high development pressure is from applications for replacement dwellings apart from one application which is for a dwelling on a farm. West of Cullybackey replacement dwelling, 'infill' dwelling and dwelling on a farm applications types have contributed to the high pressure for dwellings.

- 2.25 The MEA part of this LCA has a strong landscape structure and relatively 'lower' landscape sensitivity compared to some other LCAs within the Borough. However, the cumulative impacts of new dwellings in the open countryside needs consideration as such impacts may lead to the erosion of rural character.

LCA 59: Cullybackey and Cloghmills Drumlins

- 2.26 **Between 2003 and June 2010** (introduction of PPS 21) much of the MEA part of this LCA experienced relatively high pressure for residential development in the open countryside, particularly to the north of Cullybackey and south of Springmount Road.
- 2.27 **Since June 2010**, the pressure for residential development in the countryside has been low to medium with pockets of high pressure. These pockets of relatively high pressure are located in areas close to the Carclinty Road/Dunminning Road junction, in the Tullygrawley Road/Redford Road area and in the Cullybackey Road/Woodtown Road/Old Park Road area.
- 2.28 In the Cullybackey Road/Woodtown Road/Old Park Road area, the high pressure for residential development has been predominantly from applications for a 'new dwelling in an existing cluster'. North of Cullybackey, the two pockets of high pressure are predominantly due to applications for 'infill' dwellings, replacement dwellings and farm dwellings.

LCA 60: River Main Valley

- 2.29 **Between 2003 and June 2010** (introduction of PPS 21) the MEA part of this LCA experienced varying levels of pressure for residential development in the open countryside. For example, the northern area adjacent to Ballymena experienced relatively low pressure whereas, areas further to the south and adjacent main roads experienced relatively high pressure.
- 2.30 **Since June 2010**, residential pressure has been low to medium with some areas experiencing no pressure, although there were still pockets of high pressure adjacent to the west and east of the Lisnevenagh Road and in the Kellswater Road area.
- 2.31 In the area east of the Lisnevenagh Road (Kildrum Road/Woodgreen Road/Ballymacvear Road area), of which a significant part lies outside of LCA 60, pressure for dwellings has been predominantly the result of applications for infill dwellings and replacement dwellings with some applications for a 'new dwelling in an existing cluster'. Ribbon development along Woodgreen Road has had an adverse impact on the rural character of this area. The cluster of development at the Kildrum Road/Woodgreen Road junction may be included within a proposed new settlement 'Woodgreen' if this proposed new settlement is brought forward in the adopted Plan Strategy and depending on the outworking of the demarcation of settlement development limits at Local Policies Plan stage.
- 2.32 In the area west of, and adjacent to, the Lisnevenagh Road (Cockhill Road/Valley Road area), pressure for dwellings was a mixture of applications for replacement dwellings, infill dwellings and farm dwellings with one application for a 'new dwelling in an existing cluster'. In the Kellswater Road area, replacement dwelling applications were the main source of dwelling pressure; other application types included applications for a farm dwelling, 'conversion and reuse' of an existing building and a 'dwelling for a non-agricultural business enterprise'.

LCA 98: Carrickfergus Upland Pastures

- 2.33 **Between 2003 and June 2010** (introduction of PPS 21) the MEA part of this LCA experienced varying levels of pressure for residential development in the open countryside. For example, central areas to

the north/north-west of Carrickfergus experienced relatively high pressure whereas other areas, not including Woodburn forest, generally experienced low to medium pressure.

- 2.34 **Since June 2010**, residential pressure has generally been low to medium with some areas experiencing no pressure such as around Woodburn Forest and east of Lough Mourne Reservoir. However, there was one pocket of relatively high pressure in the area around the Ballyvallyagh Road/Watch Hill Road junction.
- 2.35 In the area around the Ballyvallyagh Road/Watch Hill Road junction, pressure for dwellings was predominantly the result of applications for farm dwellings with one application for a replacement dwelling. A linear pattern of development is becoming more evident along the Ballyvallyagh Road between the junctions where the Ballyvallyagh Road meets the Watch Hill Road and Lough Mourne Road.

LCA 115: Tardree and Six Mile Water Slopes

- 2.36 **Between 2003 and June 2010** (introduction of PPS 21), the western section of the MEA part of this LCA generally experienced relatively high pressure for residential development in the open countryside, whereas in the eastern section of the MEA part of this LCA this pressure was generally low with higher pressure restricted to some areas along the Braepark Road.
- 2.37 **Since June 2010**, residential pressure in the western section has decreased to a low to medium level with only one area located close to the Kilgad Road/Moorfields junction having experienced relatively high pressure. Since June 2010, the eastern section has experienced no or low development pressure with some pockets of medium pressure, although two areas have experienced relatively high pressure – an area to the south of the Braepark Road/Sawmill Road junction and an area around the Lower Ballyboley Road/Lismenary Road.
- 2.38 In the area close to the Kilgad Road/Moorfields Road junction, pressure for dwellings was the predominantly the result of applications for infill dwellings and the linear pattern of development that has evolved in this area has had an adverse impact on rural character. It is noted that development at the Kildrum Road/Woodgreen Road junction may be included within a proposed new settlement ‘Moorfields’ if this proposed new settlement is brought forward in the adopted Plan Strategy and depending on the outworking of the demarcation of settlement development limits at Local Policies Plan stage.
- 2.39 In the area to the south of the Braepark Road/Sawmill Road junction, pressure for dwellings has been the result of applications for farm dwellings and replacement dwellings, and in the area around the Lower Ballyboley Road/Lismenary Road the relatively high pressure has been mainly due to replacement dwellings.

LCA 116: Ballymena Farmland

- 2.40 **Between 2003 and June 2010** (introduction of PPS 21) the MEA part of this LCA generally experienced medium to high pressure for residential development in the open countryside, although some areas did not experience any pressure or only low pressure during this period.
- 2.41 **Since June 2010**, residential pressure in the open countryside has generally been low to medium with some pockets of relatively high pressure, particularly in the following general areas: an area between Kells/Connor and Lisnevenagh Road, an area around the Liminary Road and Moorfields Road to the south-east of Ballymena, an area off the Lisnahilt Road to the east of Ballymena and along the Clonetrace Road to the north-east of Broughshane.

- 2.42 In the area between Kells/Connor and the Lisnevenagh Road (Kildrum Road/Woodgreen Road/Ballymacvear Road area), pressure for dwellings has been predominantly the result of applications for infill dwellings and replacement dwellings with some applications for 'a new dwelling in an existing cluster'. Ribbon development along Woodgreen Road has had an adverse impact on the rural character of this area. The cluster of development at the Kildrum Road/Woodgreen Road junction (at boundary of this LCA) may be included within a proposed new settlement 'Woodgreen' if this proposed new settlement is brought forward in the adopted Plan Strategy and depending on the outworking of the demarcation of settlement development limits at Local Policies Plan stage.
- 2.43 The pressure for residential development in the open countryside in the areas around the Limentary Road and Moorfields Road has been predominantly the result of applications for farm dwellings, infill dwellings and replacement dwellings, with some applications for 'conversion and reuse of existing buildings' as dwellings in the Limentary Road area. Linear development is becoming more pronounced along the Limentary Road. In the Lisnahilt Road area, residential pressure has been concentrated in an area north of Lisnahilt Road and is due largely due to applications for replacement dwellings with two other applications for farm dwellings and one for 'conversion and reuse of an existing building' as a dwelling. Clonetrace Road has experienced relatively high pressure from residential development due to a mix of applications for infill, replacement and farm dwellings.
- 2.44 Cloughwater Road has been adversely impacted by ribbon development, largely as a result of 'pre-PPS21 approved' single dwellings. However, this area of linear development may be included within a proposed new settlement 'Craigwarren' if this proposed new settlement is brought forward in the adopted Plan Strategy and depending on the outworking of the demarcation of settlement development limits at Local Policies Plan stage.

LCA 117: Central Ballymena Glens

- 2.45 **Between 2003 and June 2010** (introduction of PPS 21) this LCA generally experienced medium to high pressure for residential development in the open countryside, with the exception of areas furthest to the east which did not experience any pressure or only low pressure during this period.
- 2.46 **Since June 2010**, residential pressure in the open countryside has generally been low to medium with some pockets of relatively high pressure. In the northern glen, relatively high pressure has been experienced around Newtowncrommelin, the Killygore Road/Islandstown Road area and the area around the Knockan Road/Carncoagh Road junction. In the southern glen relatively high pressure was experienced at points along the Lisnamurrikin Road and Munie Road and close to the Carnlough Road/Killycarn Road junction and Lisleshill Road/Carnlough Road junction. There is also a pocket of relatively high pressure along the Clonetrace Road (see LCA 116 for pressure analysis).
- 2.47 On the northern edge of Newtowncrommelin and to the north of Newtowncrommelin, the relatively high pressure has been the result of applications for farm dwellings. To the south of Newtowncrommelin, the relatively high pressure is due to a mix of applications types including infill dwellings and replacement dwellings. The rural character of this area has been impacted by the cumulative build-up of residential properties in this area. It is noted some of these properties may be included within a proposed new settlement 'Newtowncrommelin' if this proposed new settlement is brought forward in the adopted Plan Strategy and depending on the outworking of the demarcation settlement development limits at Local Policies Plan stage. In the area of the Killygore Road/Islandstown Road junction, the relatively high residential pressure has been mainly the result of farm dwelling and infill dwelling applications, whilst high pressure around the Knockan Road/Carncoagh Road junction has been due to applications for infill dwellings and replacement

dwelling. In the northern glen, the build-up of dwellings has, in some parts, resulted in a 'visually cluttered' appearance when viewed from the upper valley slopes.

- 2.48 In the southern glen, the relatively high residential development pressure experienced at Munie Road and at the Carnlough Road/Killycarn Road and Lisleshill Road/Carnlough Road junctions was due to applications for farm dwellings and replacement dwellings with the exception of one application for a 'new dwelling in an existing cluster' at the Lisleshill Road/Carnlough Road junction. Along the Lisnamurrikin Road, the relatively high pressure has been mainly due to farm dwelling applications. Lisnamurrikin Road is close to Slemish and further encroachment of development onto the slopes of this landmark feature would adversely impact on its' setting. It should be noted that a build-up of development at, or close to, the Buckna Road/The Cuttings junction may be included within a proposed new settlement 'Buckna' if this proposed new settlement is brought forward in the adopted Plan Strategy and depending on the outworking of the demarcation of settlement development limits at Local Policies Plan stage.

LCA 118: Moyle Moorlands and Forests

- 2.49 **Between 2003 and June 2010** (introduction of PPS 21) there were two applications for residential development within the MEA part of this LCA and **since June 2010** there has been no pressure for residential development.

LCA 122: Garron Plateau

- 2.50 **Between 2003 and June 2010** (introduction of PPS 21), the MEA part of this LCA did not experience pressure for residential development apart from a few applications for dwellings at the southern and eastern edge of the LCA.
- 2.51 **Since June 2010**, there has been no residential pressure in the MEA part of this LCA apart from a few applications for dwellings at the southern edge of the LCA.
- 2.52 The lack of pressure for residential development in the MEA part of this LCA is indicative of the remote and wild character of this area, where upland moorland and plantation forest predominate and accessibility is limited as public roads do not penetrate beyond the edge of the plateau.

LCA 123: Larne Glens

- 2.53 **Between 2003 and June 2010** (introduction of PPS 21) the northern section of this LCA experienced a mix of pressure levels for residential development in the open countryside, with pockets of high pressure around the edges of Carnlough and along the Largy Road and a pocket of medium pressure in the Glenclay glen. In the southern section of this LCA, pressure for residential development in the open countryside was generally lower, with no pressure in the central part of Glenarm glen where Glenarm Forest is located. However, there was a pocket of high pressure on Munie Road and between Carnalbanagh Road and Deerpark Road.
- 2.54 **Since June 2010**, the northern section of this LCA has generally experienced low pressure for residential development in the open countryside. However, there was a pocket of high pressure between Largy Road and Black Burn and pockets of medium pressure along the Coast Road to the south-east of Carnlough, west of Carnlough and along Ballyvaddy Road to the south of Carnlough. High residential pressure between Largy Road and Black Burn has been the result of applications for farm dwellings with the exception of one application which was for a replacement dwelling.

2.55 Since June 2010, the southern section of this LCA has generally experienced low pressure or no pressure for residential development in the open countryside, although there has been medium pressure in areas close to the Dickeystown Road and Feystown Road and in the southern part of Glenarm glen (wider Deerpark Road/Drumcrow Road junction area).

2.56 The visual impact of single dwellings in the countryside needs careful consideration in this LCA as the cumulative impact of such dwellings is starting to create a visually cluttered appearance in some localised areas, for example the Largy Road. The cumulative impact of single dwellings and/or the erection poorly sited or badly designed dwellings in this highly sensitive landscape could have significant adverse impacts on the high scenic quality and landscape character of this LCA.

LCA 124: Larne Basalt Moorland

2.57 **Between 2003 and June 2010** (introduction of PPS 21), much of this LCA experienced no pressure for residential development in the open countryside. There were a few pockets of low pressure, a pocket of medium pressure along the Mullaghsandall Road and a pocket of high pressure on the eastern edge of the LCA to the south of Mullaghsandall Road.

2.58 **Since June 2010**, the pattern of residential pressure within the open countryside has reflected that experienced between 2003 and June 2010 with the exception that the only pocket of high pressure in this period was on the southern edge of the LCA along the Ardymagh Road. This pocket of high pressure was due to a mix of application types – an application for a farm dwelling, a replacement dwelling, an infill dwelling and two applications for ‘the conversion and reuse of an existing building’.

LCA 125: Tardree Upland Pastures

2.59 **Between 2003 and June 2010** (introduction of PPS 21), the MEA part of this LCA experienced a mix of pressure levels for residential development in the open countryside, ranging between no pressure through to high pressure. Pockets of no development pressure were associated with the area around Big Collin and the quarry on the Glenhead Road.

2.60 **Since June 2010**, the MEA part of this LCA has generally experienced low or no pressure for residential development in the open countryside, although three areas have experienced medium pressure and an area on the Ardymagh Road (see LCA 124 for analysis) and an area along the Deerfin Road have experienced high pressure. The high pressure along the Deerfin Road was a result of applications for farm dwellings, infill dwellings and replacement dwellings.

LCA 126: Larne Coast

2.61 **Between 2003 and June 2010** (introduction of PPS 21) the northern section of this LCA generally experienced low to medium pressure for residential development in the open countryside. In the main, the upper slopes did not experience pressure for residential development in this period. Larne is located in the southern section of this LCA and pressure for residential development was low in countryside areas adjacent to the north/north-west of this town. In this period, central areas of this LCA to the north-west and south/south-west of Ballygalley experienced high pressure for residential development.

2.62 **Since June 2010**, the MEA part of this LCA has generally experienced low pressure for residential development in the open countryside, with many upper slopes not experiencing any pressure for residential development. There was a pocket of medium pressure south/south-west of Ballygalley and a pocket of high pressure at a point along the Drumnagreagh Road. This pocket of high pressure was largely due to applications for farm dwellings and replacement dwellings.

- 2.63 The visual impact of single dwellings in the countryside needs careful consideration in this LCA. The cumulative impact of single dwellings and/or the erection poorly sited or badly designed dwellings in this highly sensitive landscape could have significant adverse impacts on the high scenic quality and landscape character of this LCA.

LCA 127: Larne Ridgeland

- 2.64 **Between 2003 and June 2010** (introduction of PPS 21), this LCA generally experienced low to medium pressure for residential development in the countryside. Some pockets of high pressure were experienced on the edges of this LCA and in an area close to the Browndod Road/Uppertown Road junction.
- 2.65 **Since June 2010**, the pressure for residential development in the open countryside is reflective of that between 2003 and June 2010. However, in this period pockets of high pressure were located in two areas – an area close to the Ballysnod Road/Browndod Road junction and an area close to where the Moss Road meets the Larne Road.
- 2.66 The high pressure experienced close to the Ballysnod Road/Browndod Road junction was largely due to applications for infill dwellings. The high pressure close to where the Moss Road meets the Larne Road was predominantly due to applications for farm dwellings and infill dwellings.
- 2.67 Within this LCA, linear development has impacted the rural character along parts of the Ballygowan Road and Lower Ballyboley Road.

LCA 128: Island Magee

- 2.68 **Between 2003 and June 2010** (introduction of PPS 21), this LCA generally experienced a mix of pressure for residential development in the open countryside ranging between pockets of no development pressure through to areas experiencing high development pressure.
- 2.69 **Since June 2010**, the pressure for residential development in the open countryside has generally been low to medium with some areas experiencing no development pressure, for example some eastern parts of the Islandmagee peninsula. Only one area to the north-east of Whitehead in the McCrae's Brae area has experienced high pressure which was due to applications for farm dwellings and replacement dwellings.

LCA 129: Carrickfergus Shoreline

- 2.70 **Between 2003 and June 2010** (introduction of PPS 21), the MEA part of this LCA generally experienced low pressure for residential development in the open countryside with a pocket of medium pressure along the Belfast Road between Carrickfergus and Whitehead.
- 2.71 **Since June 2010**, there has been no or low pressure for residential development in the open countryside within the MEA part of this LCA.
- 2.72 It should be noted that there are two Rural Landscape Wedges designated within draft BMAP between Greenisland and Newtownabbey and between Carrickfergus and Greenisland. These designations seek to protect the setting of these settlements and prevent their coalescence and consequently constrain residential development in these areas (*NB: although not extant designations, these rural landscape wedges are material considerations in any planning application within their extent*).

LCA 130: Carrickfergus Farmed Escarpment

- 2.73 **Between 2003 and June 2010** (introduction of PPS 21), the MEA part of this LCA generally experienced low to medium pressure for residential development in the open countryside, with a pockets of high pressure in an area between New Line and Woodburn Road and along the western section of Liberty Road.
- 2.74 **Since June 2010**, the residential pressure in the open countryside within the MEA part of this LCA has generally been low with pockets of medium pressure along a stretch of Liberty Road and in an area east of Red Brae Road.
- 2.75 It is noted that there is likely to be high pressure for urban expansion around Carrickfergus and Greenisland, particularly around the Rural Landscape Wedges (proposed within draft BMAP) and along the B90. Further encroachment of development into the Carrickfergus Escarpment Area of Scenic Quality (ASQ) to the north of the B90 should be avoided so as to protect the rural character and scenic quality of this special landscape, which is highly significant for the setting of Knockagh monument and the coastal settlements.

Summary of the Pressure for Residential Development in the Open Countryside within Mid and East Antrim (between 2003 and 2018).

- 2.76 Table 1 shows the number of planning applications and determinations relating to new residential development in the open countryside in Mid and East Antrim between 2003 and 2018 (inclusive) and Table 2 shows the equivalent statistics after 'duplicate applications types' were excluded. These tables indicate that with the introduction of draft PPS 14 in 2007, the number of applications received for new residential development in the open countryside fell significantly. Despite the impact of the global financial crisis in 2008, the following year, 2009, saw an increase in the number of such applications received by the Council. After the publication of PPS 21 in 2010, the number of applications received for residential development in the open countryside fell significantly and has remained at a similar level to up to 2018. It is of note, that in the three years preceding the introduction of draft PPS 14 the number of 'refused' applications for residential development in the open countryside was markedly high in comparison to other years and this is possibly due to an increase in number of speculative applications before the introduction of this more stringent policy. After the introduction of PPS 21 in 2010 Table 1 and 2 indicate a significant and sustained reduction in the number of 'approved' applications for residential development in the open countryside indicating that the policy is accommodating residential development in the open countryside in a regulated pattern that is inherently more sustainable than was previously the case.
- 2.77 Map 1 presents the level of residential development pressure in the open countryside across Mid and East Antrim for the period 1st January 2003 to 31st May 2010 (pre-PPS 21 period). This map illustrates that the western part of the Borough generally experienced medium to high pressure in this period with the areas closer to Ballymena town generally experiencing lower levels of pressure. In contrast, eastern areas of the Borough generally experienced low levels of development pressure with some pockets of high development pressure, and large areas that did not experience any development pressure. The overall difference in pressure levels between the eastern and western parts of the Borough can largely be explained by the following factors:
- The open countryside included within the extent of the Carrickfergus Area Plan 2001 and Larne Area Plan 2010 was included within either Green Belt or Countryside Policy Areas in the period pre-PPS 21, apart from a small area between Greenisland and Newtownabbey which was designated as 'white land'. In order to obtain planning permission for a new residential unit within the Green Belt or Countryside Policy Area, a justifiable need had to be

demonstrated. Within the Undeveloped Coast Countryside Policy Area there was a presumption against any new development. In contrast, the area within the extent of the Ballymena Area Plan 1986-2001 and outside of the Ballymena Green Belt and Rural Policy Areas was classified as the 'rural remainder' and had a more relaxed policy approach towards permitting single dwellings in the countryside.

- In the east of the Borough, two large areas within the Antrim Coast and Glens Area of Outstanding Natural Beauty (AONB) generally did not experience any pressure for residential development in the open countryside. Aside from the Countryside Policy Area designations, these are wild upland moorland areas that are sparsely populated and contain significant natural heritage assets of national and international importance, all of which combine to restrict development pressure.

2.78 Map 2 presents the level of residential development pressure in the open countryside across Mid and East Antrim for the period 1st June 2010 to 31st December 2018 (post-PPS 21 period). This map illustrates that the pressure for residential development in the open countryside has dropped significantly in this period from the pre-PPS 21 period. Overall, for the post-PPS 21 period, the pressure across the Borough is low to medium with some pockets of high pressure which are mainly located within the western part of the Borough. This significant and sustained drop in pressure from applications for residential development in the open countryside is attributed to the introduction of PPS 21, the impacts of the global financial crisis and associated downturn in the housing market, a potential decrease in number of speculative applications for dwellings in the countryside and the decreasing number of opportunities for farm dwellings (*NB: 1 farm dwelling in principle every 10 years*) and infill dwellings as such opportunities have diminished over time.

Residential Development Pressure in the Open Countryside in the Context of Significant Natural Heritage Assets and Quality Landscapes

2.79 Between 2003 and 2018, two large upland moorland areas within the AONB generally experienced no development pressure. These areas are remote and sparsely populated and much of these upland areas are protected by strict environmental policies. The **northernmost** area, for the most part, corresponds with the MEA part of LCA 122 (Garron Plateau). This area contains the most extensive area of intact upland blanket bog (*NI Priority Habitat*) in Northern Ireland and is an internationally important Ramsar site, Special Area of Conservation (SAC) and nationally important Area of Special Scientific Interest (ASSI). This area is also an important habitat for wild birds and is, therefore, included within an internationally significant Special Protection Area (SPA). Cleggan Forest also takes up a significant area of land in this area. The **southernmost** area largely corresponds with LCA 124. This area is a broad upland area of moorland with exposed rounded summits and it extends into a narrower ridge in the north-east which contributes to the setting of the Larne coast. This area is a wild landscape and sparsely populated area a large part of this area to the east and south-east of Slemish is within the Antrim Hills SPA which is an internationally significant habitat for wild birds. Ballyboley Forest, Capanagh Forest and Capanagh-Shillanavogy Forest cumulatively take up a significant area of land in this area.

2.80 Between 2003 and June 2010, a number of areas that are of high scenic quality experienced high pressure from applications for residential development in the open countryside. These included the fringes of Lough Beg and the Lower Bann River, some areas flanking the Braid River corridor and within the AONB, areas to and north and south of Carnlough, areas close to Ballygalley, some small pockets of high pressure on the Islandmagee peninsula and a pocket of high pressure on the northern-eastern edge of the Carrickfergus Escarpment Area of Scenic Quality (ASQ). Many of these areas have significant natural heritage assets in addition to their high landscape quality. For example, Lough Beg and its' fringes are included within the Lough Neagh Fringe ASQ, Lough Neagh and Lough Beg Ramsar,

Lough Neagh and Lough Beg SPA and Lough Beg ASSI. It is notable, that since the introduction of PPS 21 (June 2010), the pressure for residential development in these special areas of the open countryside has decreased, in some cases significantly, which would seem to underline the effectiveness of PPS 21 in reducing pressure for residential development in these areas to more sustainable levels. That being said, other factors such as general economic conditions between 2010 and 2018 may also have had a dampening effect on the number of applications for dwellings in these areas. Despite these recent trends, these are landscapes that are highly sensitive to change, have limited capacity to absorb new residential development and have experienced some high pressure for such development in the past. There is therefore a strong case in some of these areas for providing additional protection to restrict development pressure from single dwellings.

Areas of the Open Countryside with Concentrated Patterns of Built Development

- 2.81 Some areas of high pressure were associated with areas that exhibited concentrated patterns of built development close to a road junction or extensive linear development along a main road. Examples of these areas include development at the Kilgad Road/Moorfields Road (LCA 115) junction and a cluster of development at the Skerry East Road/Omerbane Road junction (LCA 117). Some of these 'high' pressure areas may be included within the settlement development limits of proposed new small settlements, dependant on the outworking of the next stage of the Local Development Plan process.

3.0 Analysis of Pressure from Wind Energy Development in the Countryside of Mid & East Antrim

Wind Energy Development: Applications 2000 - 2018

- 3.1 Data on all planning applications received by Mid and East Antrim Borough Council between 2000 and 2018 (inclusive) was provided by the Department of Infrastructure (Dfi). This data was processed by the Local Development Plan Team to obtain detailed information on all wind energy applications.
- 3.2 Using the processed data, information was obtained on the number of applications received and determined by the Council between 2000 and 2018 (inclusive). Table 3 below shows the number of applications received, approved, refused and withdrawn for applications relating to wind energy development within the open countryside.
- 3.3 The year 2009 is highlighted in orange as it is the year Planning Policy Statement (PPS) 18 “Renewable Energy” was published, which superseded Policy PSU 12 ‘Renewable Energy’ of the Planning Strategy for Rural Northern Ireland. The aim of this PPS is to facilitate the siting of renewable energy generating facilities in appropriate locations within the historic and natural environment in order to achieve Northern Ireland’s renewable targets (see Technical Supplement 12 – Public Utilities [Renewable Energy section]) and to realise the benefits of renewable energy, whilst ensuring adequate protection of historic, natural and cultural heritage features and that issues concerning impacts on amenity are adequately addressed.

Table 3: Number of ‘Single Wind Turbine Related’ Applications Received and Determined By Mid and East Antrim Borough Council

Year	Received	Approved	Refused	Withdrawn
2000	2			0
2001	2	1		0
2002	9	6		0
2003	4	4		0
2004	4	3	1	0
2005	4	2	0	0
2006	10	8	1	1
2007	12	12	2	0
2008	21	18	0	5
2009	21	5	1	1
2010	59	11	0	5
2011	68	28	6	13
2012	42	42	4	17
2013	57	32	3	20
2014	41	40	12	2
2015	30	22	8	9
2016	6	28	9	3
2017	5	3	1	2
2018	4	5	0	0

NB: ‘Single Turbine Related’ applications include: proposed single wind turbines, any alterations or extensions to approved or existing single wind turbines and any associated access proposals to proposed, approved or existing single turbine developments.

Table 4: Number of ‘Wind Farm Related’ Applications (Comprising More Than Two Turbines) Received and Determined By Mid and East Antrim Borough Council

Year	Received	Approved	Refused	Withdrawn
2000				
2001				
2002				
2003				
2004	1			
2005		1		
2006	4	2		
2007	1			
2008		1		
2009				
2010	1			
2011	6		1	2
2012				
2013	3		1	
2014	1	1	3	
2015	1	3		
2016		1	2	
2017	1			
2018	1	1		

NB: ‘Wind Farm Related’ statistics within this table include applications for proposed wind farms, any associated plant, buildings and infrastructure ancillary to proposed, approved or existing wind farms and any proposed alterations/extensions/relocation of turbines within approved or existing wind farms.

Methodology

Evidence Base: Data

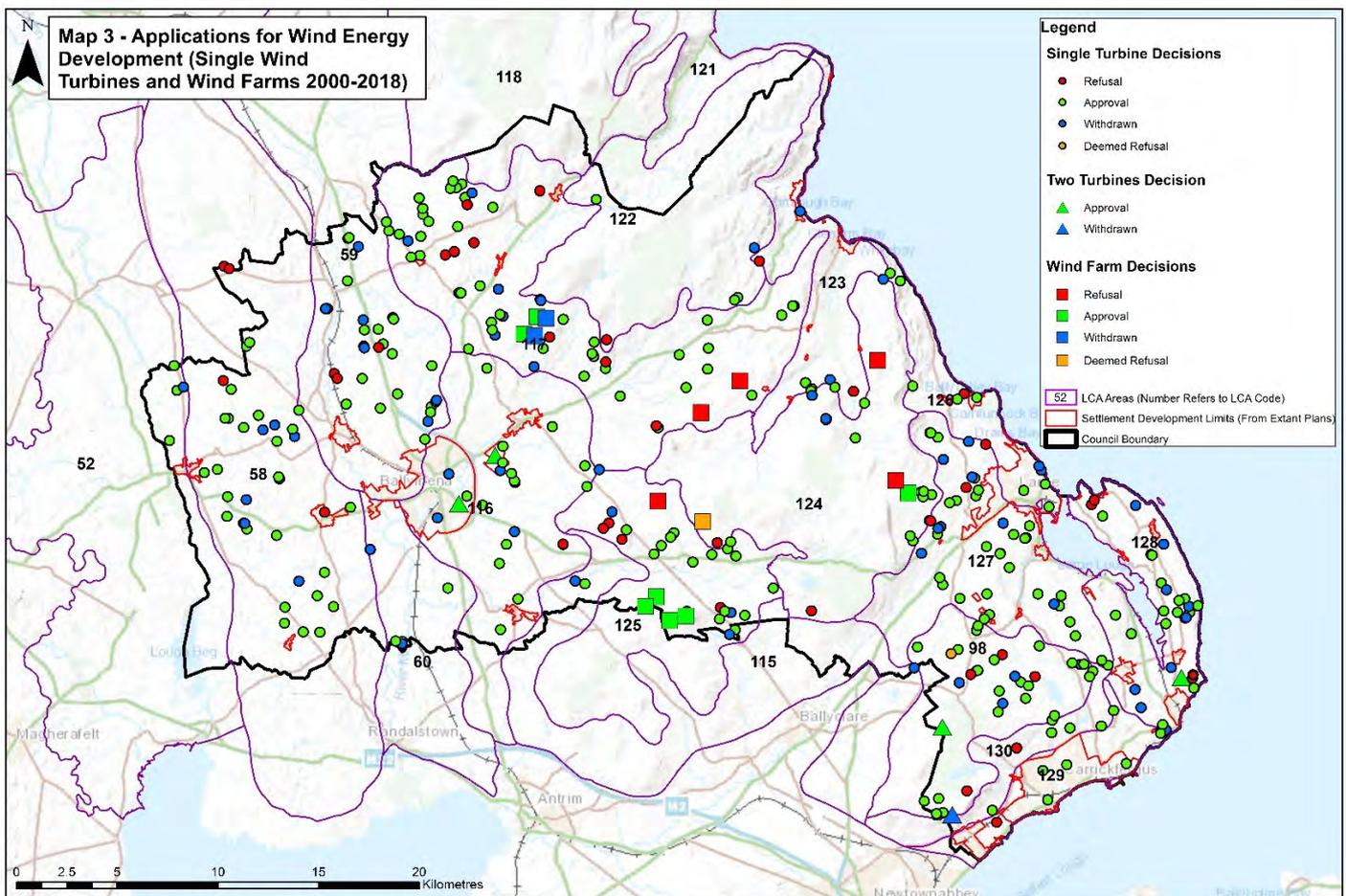
- 3.4 This study has been informed by data received from DfI and processed by Mid and East Antrim LDP Team. The result of the data processing was a dataset which contained detailed information on planning applications for wind energy development in the open countryside area of Mid and East Antrim.
- 3.5 The submission of a *planning application* has been used by this study to indicate a *tangible* interest in developing land and, thereby taken as indicating a ‘point of development pressure’. Approved, refused and withdrawn planning applications are included within the analysis. Withdrawn applications are included because it is considered that they represent a ‘point of development pressure’ where there was a tangible interest in developing the land. However, pre-application enquiries and pre-application notifications are excluded from the analysis, as in these cases an actual planning application has not been submitted.
- 3.6 The next stage of the pressure analysis was to refine this dataset to ensure that each point of development pressure was **unique** so that a true reflection of the development pressure could be inferred from the dataset. In order to do this, **duplicate** points of development pressure were ‘grouped’ so that in the case where multiple applications within the same site related to an ‘initial approved’ planning application for wind energy, these applications were interpreted to only represent a single point of pressure for wind energy development. Therefore, applications on the same site were considered ‘duplicate’ applications if they were linked to a previous ‘approved’ application for wind energy development, for example where the application relates to:

- a renewal of planning permission;
- an amendment to turbine type/height;
- a change/removal of a condition(s); or
- amended access arrangements.

3.7 *NB: On a site where an application was refused planning permission for wind energy development and was not linked to an initial 'approved' application on that site, this application is taken to represent an additional point of development pressure unless the scale and siting of this subsequent proposal is so similar that a 'new' pressure point would lead to an inaccurate representation of the 'true' development pressure.*

3.8 Applications relating to wind farms were checked to ensure that any amendment to the number of wind turbines approved for a wind farm development was reflected in the total number of 'recorded' turbines for that wind farm.

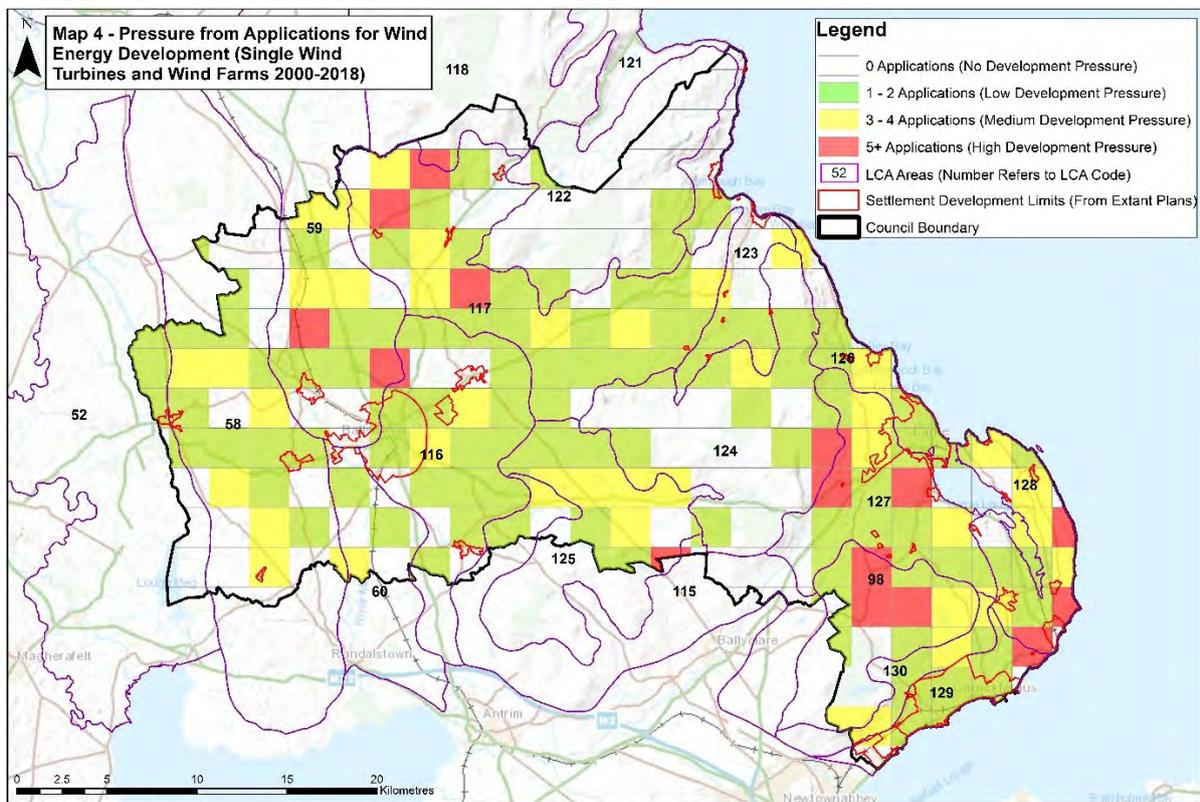
3.9 Using the collated and processed data, Map 3 was produced showing the location of applications for wind energy development (excluding 'duplicate' applications) and this map indicates the determination in relation to the wind energy proposal at each site.

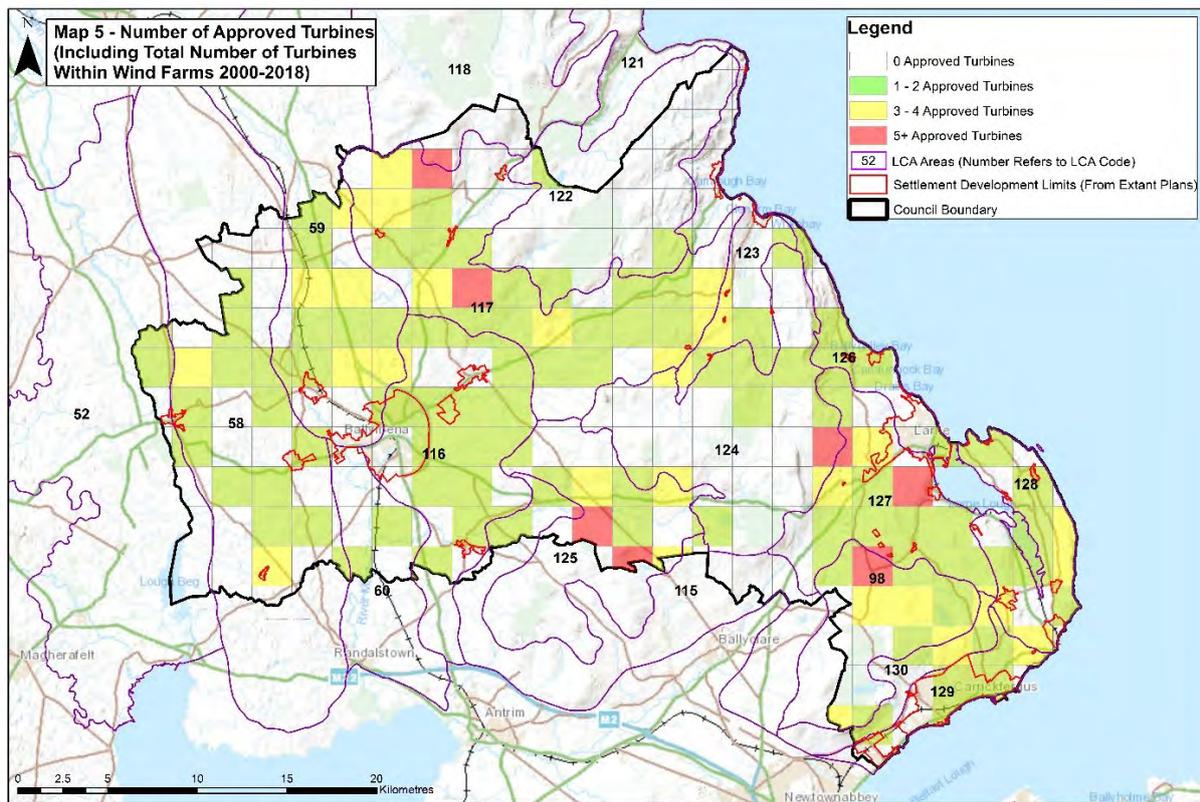


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Heat Map Analysis

- 3.10 The following categories of development pressure were used to assess the spatial pattern of development pressure for wind energy development in the open countryside within Mid and East Antrim:
- 0 wind energy applications / 0 wind turbines: No Development Pressure (White)
 - 1 – 2 wind energy applications / 1 – 2 wind turbines: Low Development Pressure (Green)
 - 3 – 4 wind energy applications / 3 – 4 wind turbines: Medium Development Pressure (Yellow)
 - 5+ wind energy applications / 5+ wind turbines: High Development Pressure (Red)
- 3.11 *It should be noted that the category-values used to indicate the level of pressure for wind energy development in the open countryside are considered appropriate for Mid and East Antrim, however, these values may not be appropriate for other council areas. Accordingly, what is considered as ‘low’, ‘medium’ or ‘high’ pressure within this study is relative to Mid and East Antrim.*
- 3.12 Using the processed data, ‘heat maps’ were produced for the period 1 January 2000 – 31 December 2018 showing points of development pressure from applications for wind energy development in the open countryside (Map 4) and the spatial distribution of the number of approved wind turbines (Map 5).
- 3.13 In order to identify spatial trends in relation to pressure for wind energy development in the open countryside and in relation to the number of approved wind turbines, a ‘fishnet’ grid consisting of 5km-squared squares was overlaid on the heat maps. These maps were used to identify ‘hot-spots’ where the pressure from applications for wind energy development in the open countryside, or the number of approved turbines, was considered to be high i.e. 5 or more applications / turbines within an area measuring 5km-squared.





The following factors were considered when conducting an assessment of the pressure from wind energy development in the open countryside:

- **Small-scale hub/mast height:** classified as 15 metres or under in height (turbine classification is based on the most recent application).
- **'Increase in Height' Application:** an application that proposes to increase the hub height or blade length of an existing or 'approved' wind turbine.

Pressure from Applications for Wind Energy Development in the Open Countryside: Spatial Analysis

- 3.14 A spatial analysis of the pressure from applications for wind energy development was undertaken for each LCA. Within each LCA, hot-spots of pressure were identified and any impacts and potential impacts on rural character and the landscape were considered.

LCA 52: Lower Bann Valley

- 3.15 Since 2000, the southern section of the MEA part of this LCA has experienced no pressure for wind energy development. In this period, the northern section of the MEA part of this LCA has experienced low pressure with four sites having applications for single wind turbines. Only one of these four sites relates to a proposal for a large-scale (over 15 metres) wind turbine and only one application did not receive planning permission. Since 2000, there has been no proposals for wind farm development.
- 3.16 South of Portglenone and within the MEA part of this LCA there are key constraints to wind energy development; much of this area has been identified as an Area of Scenic Quality in the NILCA 2000

study, there are important nature conservation sites associated with Lough Beg and this area provides a setting for the largely undeveloped floodplain area of Lough Beg and the Lower Bann River. Further, this area is relatively flat and open to views from Newferry Water Sports Centre and medium-long critical views from public roads. There is a single wind turbine at Newferry within the Mid Ulster District Council area which is particularly prominent in long range views, for example, in views from Largy Road. This wind turbine highlights the significant adverse impact that such prominent vertical structures could have on the unspoilt landscape character around Lough Beg and the Lower Bann River.

LCA 58: Long Mountain Ridge

- 3.17 The Wind Turbine Pressure Map shows that this LCA has generally experienced low to medium pressure for wind energy development. The areas of medium pressure are generally found in areas between Craigs Road and Hiltonstown Road/Ballyconnelly Road; and between Ballynafie Road, Largy Road and Portglenone Road. There has been no or low development pressure for wind energy development in the northern section of the MEA part of this LCA where the landscape has a relative sense of remoteness; and in this part of the LCA some proposals for wind energy development have been resisted.
- 3.18 Within the Mid and East Antrim part of the LCA the majority of proposals have been for large-scale wind turbines (over 15 metres) with approximately 10% of proposals for turbines of a domestic scale (15 metres and under). There has been applications to increase the height of 'approved' turbines at two sites however, hitherto no 'height increases' have been approved. There has been no pressure for wind farm development within the Mid and East Antrim part of this LCA.
- 3.19 The gentle convex shape of Long Mountain ridge, its relative simplicity of character and existing vegetation in the form of robust hedgerows and numerous trees have helped this landscape absorb current wind energy development. Although this landscape is not of exceptional landscape or scenic quality, the cumulative visual impacts of wind energy development should be a key consideration, along with any visual impact on the settings of key settlements and the Lough Beg and the Lower Bann River Corridor.

LCA 59: Cullybackey and Cloghmills Drumlins

- 3.20 The MEA part of this LCA has generally experienced low to medium pressure for wind energy development with pockets of high pressure in an area between the Cullybackey – Ballymoney railway line and the Crankill Road and in an area north of the M2 at Ballymena.
- 3.21 All proposals within the MEA part of this LCA have been for large-scale wind turbines (over 15 metres). There has been applications to increase the height of 'approved' turbines at three sites; these 3 applications have received approval. There has been no pressure for wind farm development within the MEA part of this LCA.
- 3.22 Within the MEA part of this LCA, some applications for wind energy development have either been resisted or withdrawn. Some parts of this landscape are particularly sensitive, for example the Clogh River and River Maine corridors are particularly sensitive to change. It is noted that in some areas of this landscape, the topography and vegetation can help mitigate the visual impact of single wind turbines. However, the complex landform has created a landscape that could easily be overwhelmed by poorly sited or inappropriately scaled wind turbines and the cumulative impacts of such development.

LCA 60: River Main Valley

- 3.23 The MEA part of this LCA has generally experienced no to low pressure for wind energy development with one pocket of medium pressure in an area west of the railway line and adjacent to the Council boundary with Antrim and Newtownabbey Borough Council.
- 3.24 Within the MEA part of this LCA, all of the proposals were for large-scale (over 15 metres) single wind turbines and there were no applications to increase the height of 'approved' turbines.
- 3.25 Planning permission was refused for wind energy development at a site in the northern part of this LCA. This part of the landscape is highly sensitive to wind energy development due to its small-scale character and the relatively open riverside landscape which provides a distinctive setting for Ballymena, Gracehill and Galgorm Castle and golf course.

LCA 98: Carrickfergus Upland Pastures

- 3.26 The MEA part of this LCA has experienced a mix of pressure for wind energy development. The area of Woodburn Forest has not experienced any pressure, whereas other areas have experienced some pressure and the northern section around Watch Hill Road has experienced high pressure.
- 3.27 Since 2000, there has been applications for wind energy development at 33 sites within the MEA part of this LCA. The applications at 28 of these sites related to proposals for large-scale (over 15 metres) wind turbines and there has been one application to increase the length of turbine blades. There has been no proposals for wind farm development.
- 3.28 Proposals for wind energy development at eight out of 33 sites did not receive planning permission. One of the proposals which did not receive planning permission was in the vicinity of Knockagh Monument which is a prominent landmark whose setting is visually highly sensitive. Other proposals which did not receive planning permission were close to Lough Mourne or prominent hills. The southern and eastern parts of this LCA are highly sensitive to wind energy development due to their extreme visual prominence and their location adjacent to the Carrickfergus Escarpment ASQ and the ridge north/north-west of Carrickfergus.
- 3.29 The majority of the MEA part of this LCA is over 190m AOD and is predominantly an upland area (over 200m). Given this elevation, it is probable that pressure for wind energy development in the southern area would have been greater were it not for Woodburn Forest and associated reservoirs which act as key constraints on wind energy development.

LCA 115: Tardree and Six Mile Water Slopes

- 3.30 The eastern section of the MEA part of this LCA has only had one application for a single wind turbine which was withdrawn. The western section of the MEA part of this LCA has experienced low pressure for wind energy development. It is noted that between these eastern and western sections, there has been higher development pressure for wind farms (Elliot's Hill and Big Collin) and single turbines within MEA (LCA 125).

- 3.31 Since 2000, all of the applications within the MEA part of this LCA related to large-scale (over 15 metres) single wind turbines and none of the applications proposed to increase the height of an 'approved' wind turbine.
- 3.32 In the western section, the Kells Water valley can be open to expansive views from Moorfields Road and there are critical views from the Doagh Road and Kilgad Road. The character of the river valley in these areas could be adversely impacted by inappropriate wind energy development.
- 3.33 The eastern section is overlooked by higher ground to the north and these critical open views and the setting of the Six Mile Water valley increase the sensitivity of this area to wind energy development.

LCA 116: Ballymena Farmland

- 3.34 Generally, the MEA part of this LCA has experienced low pressure for wind energy development with areas of medium pressure south/south-west of Broughshane and on the eastern edge of Ballymena. Pressure for wind energy development within the MEA part of this LCA relates largely to single wind turbines. There has been one application related to an 'increase in height' application. There has been no applications for wind farm development.
- 3.35 The most sensitive areas in the MEA part of this LCA are the visually prominent upper slopes which are important for the setting of Ballymena and Broughshane and the small-scale Kells Water valley which has an intimate character. Other areas may be less sensitive to wind energy development, for example where hedgerow trees and shelterbelts may be able to mitigate the visual impact of such development or at sites which are closely associated with industrial areas east of Ballymena.

LCA 117: Central Ballymena Glens

- 3.36 The southern glen has experienced low pressure for wind energy development with some pockets of medium pressure relatively close to the Carnlough Road. In comparison with the southern glen, the northern glen has experienced higher pressure for wind energy development with pockets of high pressure relatively close to Glenleslie Road and Skerry East Road and pockets of medium pressure in the north-western section and in areas relatively close to the Knockan Road / Cushendall Road junction. High pressure has also been experienced at Carncoagh Hill and Elginny Hill where Rathsherry wind farm has been erected and, in this area, there has been also pressure for single wind turbines. There has also been pressure for wind farm development to the north east of Slemish which is a highly sensitive area of the AONB. Generally, this LCA has experienced the highest pressure for wind energy development in areas with the highest altitude.
- 3.37 Within this LCA, most applications for wind energy development relate to proposals for large-scale (over 15 metres) wind turbines and there has been applications to increase the height of single wind turbines at five sites.
- 3.38 These glens are extremely sensitive to wind energy development due to their distinctive character, areas of relative wildness and tranquillity, high scenic quality and key role in framing views from surrounding ridges and major tourist routes. The southern glen and north-eastern part of the northern glen are within the AONB. Gently undulating ridges which extend towards the Garron Plateau frame these glens and the glen landscape associated with the Braid River is an important setting for Slemish. Therefore, this LCA is visually highly sensitive to wind energy development.

LCA 118: Moyle Moorlands and Forests

- 3.39 There has not been any applications for wind energy development within the MEA part of this LCA. However, it is notable that there has been concentrated pressure for wind energy development in an area to the south-west (relatively close to Glenleslie Road and Skerry East Road) and Gruig Wind Farm is located to the north-west, indicating that there is pressure for wind energy development in the surrounding area.
- 3.40 Generally, the summits in this area are widely visible, have a wild character and provide an important setting for settlements in lower-lying areas. Therefore, this area is considered to be highly visually sensitive to wind energy development. Further, the Antrim Hills SPA includes much of the eastern and central areas of the MEA part of this LCA and this designated area supports nationally important populations of hen harrier (*NI Priority Species*) and merlin.

LCA 122: Garron Plateau

- 3.41 Much of the MEA part of this LCA has not experienced pressure for wind energy development. However, there has been some low pressure in the peripheral areas, predominantly along the southern edge. Proposals at all application sites related to the erection of a large-scale (over 15 metres) single wind turbine and there were no applications to increase the height of 'approved' turbines.
- 3.42 Much of the MEA part of this LCA is visually highly sensitive to wind energy development due to the areas' high scenic quality and the high visual exposure of the plateau ridgelines which contribute significantly to the setting of the coastal glens of Glenariff and Glencloy, the Braid River valley and the northern glen of LCA 117. This area is also environmentally highly sensitive due to its exceptional intact peatland habitats. In the south-west of this LCA some areas may have lesser sensitivity to wind energy development, where Cleggan Forest might mitigate the visual impact of wind energy development. However, any impact on the visually exposed plateau edge would be considered inappropriate.

LCA 123: Larne Glens

- 3.43 Within this LCA, the upper slopes of the glens (south-western areas) have experienced low pressure for wind energy development and many areas have not experienced any pressure, for example Glenarm Forest and areas north and west of Carnlough. All but one of the applications relate to a proposal for a large-scale (over 15 metres) single wind turbine and there have been no applications to increase the height of any 'approved' wind turbine.
- 3.44 The majority of the wind energy applications within this LCA did not receive planning permission which is indicative of the high sensitivity of this landscape. This LCA has a distinctive landscape setting which has high amenity value, provides a setting to the coast and Coast Road and is visually highly sensitive. Within this LCA, features which are extremely vulnerable to adverse impacts from inappropriate development include the glens, open and exposed slopes, undeveloped ridgelines, the coastal shoreline, prominent headlands, important nature conservation sites and the setting of settlements and cultural heritage assets. Overall, this LCA exhibits exceptional scenic quality, has high landscape and visual sensitivity and as a result, there are significant constraints to wind energy development within this LCA.

LCA 124: Larne Basalt Moorland

- 3.45 The central and western sections of this LCA have generally not had pressure for wind energy development, apart from some areas along the western edge of this LCA which have experienced low pressure. The eastern and central-eastern areas have generally experienced low pressure for wind energy with a pocket of medium pressure in an area associated with the south-western edge of the Glenarm glen and a pocket of high pressure east of Agnews Hill.
- 3.46 There has been pressure for wind farm development at Douglas Top (western edge of LCA), in an area east of Agnews Hill and on the ridge of land that runs north from Knockdhu and parallel to the Feystown Road. The pressure for wind farm development has generally been resisted in this LCA, although a wind farm east of Agnews Hill received planning approval.
- 3.47 Within this LCA, the majority of applications for wind energy development related to proposals for large-scale (over 15 metres) wind turbines, and there has been applications to increase the height of turbines at two sites.
- 3.48 Within this LCA, the upland plateau has a large-scale and horizontal form which may make some areas suited to wind energy development, in particular the central plateau areas of the LCA that are away from steep hillsides, distinctive summits and rocky cliffs, and where commercial forestry reduces landscape and visual sensitivity. However, there are some significant constraints to wind energy development in this LCA. The settings of Slemish, Sallagh Braes, Knockdhu (an Area of Significant Archaeological Interest), Scawt Hill, Glenarm headland and areas open to key views from the glens and coast are of the utmost sensitivity. The majority of the southern, western and central areas of this LCA are within the Antrim Hills Special Protection Area (SPA) and there is a designated Area of Special Scientific Interest (ASSI) at Sallagh Braes and Knock Dhu. These important natural heritage conservation sites should be protected from any adverse impacts of development, including wind energy development.

LCA 125: Tardree Upland Pastures

- 3.49 The MEA part of this LCA has experienced medium pressure for wind energy development in areas parallel to the main transport corridors – Church Road/Moorfields Road and Collin Road/Rathkeel Road. Other areas have experienced low pressure, apart from east of Collin Road where high pressure has been experienced in an area adjacent to the border with Antrim and Newtownabbey Borough Council. In this area, there has been no applications for wind energy development in the areas adjacent to the Glenwhirry River.
- 3.50 The majority of applications related to large-scale (over 15 metres) wind turbines and three of these applications related to increasing the height of ‘approved’ turbines.
- 3.51 This area has experienced pressure for wind farm development in the areas with the highest altitude. Five applications relate to wind farm proposals, four of which are located at Big Collin/Elliots Hill (planning permission granted) and one located to the east of Black Top (in the north of the LCA) for which planning permission was refused. There was an application for a wind farm at Douglas Top (LCA 124) which abuts the north-eastern boundary of this LCA and this proposal did not receive planning permission.

- 3.52 Slemish is a highly sensitive landmark feature within the AONB which is an area of high scenic quality. There are long critical views of Slemish and the surrounding area from Ballynulto Road, Deerfin Road, Rathkeel Road and Collin Road. At Big Colin, the skyline has been interrupted by an existing wind farm.

LCA 126: Larne Coast

- 3.53 Much of this LCA has either experienced no pressure for wind energy development or low pressure. However, there are pockets of medium pressure adjacent to Ballygalley and close to the Dickeystown Road on the Glenarm headland. There has also been pressure for single wind turbines within Larne town and a wind turbine has been approved within Ballygalley settlement development limits. Approximately two-thirds of the proposed turbines are for large-scale (over 15 metres) wind turbines and there has been an application to increase the height of a turbine at a site located on the Glenarm headland. There has been no applications for wind farm development within the LCA.
- 3.54 This LCA has limited potential to accommodate wind energy development as it is a narrow-elongated area which is spatially constrained. Additionally, this LCA is highly sensitive to wind energy development as it is of exceptional scenic quality, has dramatic coastal views and is highly visible from the A2 Coast Road and from elevated land to the west. The landscape quality and amenity value in this area is important for tourism and recreation such as hill walking and cycling. Key features in this landscape include exposed slopes and ridges, the shoreline, key views and significant natural and historic environment features. Adverse impacts on these key features should be avoided.

LCA 127: Larne Ridgeland

- 3.55 This LCA has experienced a mix of pressure for wind energy development ranging from low to high pressure. The areas of medium pressure are located west / north-west of Larne town and on the ridgeline between Ballycarry and Glynn. The areas of high pressure are located between Agnews Hill and Larne town and between Glynn and Larne town. Applications predominantly relate to proposals for large-scale (over 15 metres) single wind turbines and only one site has an application for an increase in turbine height. In this LCA, there have been no applications for wind farm development.
- 3.56 The majority of sites on which proposals for single wind turbines did not receive planning permission are located in the northern part of the LCA and west of Larne town. The northern slopes of this LCA are sensitive to wind energy development as they are within the Antrim Coast and Glens AONB, valued for their high scenic quality and highly significant for the setting of Larne town and Agnews Hill. It should be noted that planning permission has been granted for numerous single wind turbines in this sensitive area and there is an increasing risk that the cumulative impacts of wind turbines could have a significant adverse impact on the high scenic quality of this area and the setting of Agnew's Hill and Larne town.
- 3.57 There is pressure for wind energy development around the ridges in the south-east of this LCA. These ridges are highly visible from Islandmagee and Larne Lough and its shoreline, and these ridges are highly significant for the settings of Ballycarry and Glynn. In this area, the valleys of the Glynn River and Dunisland Water exhibit scenic quality and are important for the wider settings of Glenoe and Glynn. The cumulative impacts of wind energy development in these areas has the potential to result in adverse visual impacts on these important ridges and valleys.
- 3.58 Other areas within this LCA may be less sensitive to wind energy development than the aforementioned 'sensitive areas', for example transport corridors and areas impacted by existing commercial/industrial development.

LCA 128: Island Magee

- 3.59 The Islandmagee peninsula has generally experienced medium pressure for wind energy development with pockets of high pressure around the Gobbins Road close to the area of the Gobbins Coastal Path and at Muldersleigh Hill north of Whitehead. At the edge of this LCA, there has also been a pocket of high pressure to the south-west of Whitehead inland of Cloghan Point (LCA 129) and White Head headland. The farmed valley slopes to the west of Larne Lough have generally experienced low pressure for wind energy development with a pocket of medium pressure adjacent to Ballycarry.
- 3.60 The majority of applications for wind energy development within this LCA have related to proposals for large-scale (over 15 metres) wind turbines and none of these applications have proposed an increase in the height of an ‘approved’ wind turbine. There has been no proposals for wind farm development within this LCA.
- 3.61 On the Islandmagee peninsula the areas with the highest altitude have experienced concentrated pressure for wind energy development, namely areas around Middle Road/Gobbins Road and at Muldersleigh Hill; other areas of the peninsula have experienced medium pressure. The general openness and small-scale of the Islandmagee peninsula landscape and its high scenic quality make this part of the LCA very sensitive to wind energy development. In other parts of the LCA, key landscape features such as the ridges west of Larne Lough, Muldersleigh Hill and the headlands flanking Whitehead are visually highly sensitive to wind energy development, particularly as they contribute significantly to the settings of nearby settlements and Larne Lough.

LCA 129: Carrickfergus Shoreline

- 3.62 This LCA has generally experienced low pressure for wind energy development with a pocket of high pressure between the settlements of Carrickfergus and Whitehead and inland of Cloghan Point and White Head headland (LCA 128). Four sites within Carrickfergus settlement development limits have received applications for wind energy development and only one of these proposals, located at Kilroot Business Park, was for a large-scale (over 15 meters) wind turbine. Outside of settlement development limits, the majority of applications relate to large-scale (over 15 metres) single wind turbines. None of the applications propose to increase the height of an ‘approved’ turbine and there has been no proposals for wind farm development.
- 3.63 Generally this LCA is not sensitive in landscape terms. However, the landscape features associated with Castle Dobbs registered Historic Park, Garden and Demesne are considered to be highly sensitive and many parts of the LCA are considered to be visually sensitive as they contribute significantly to the foreground setting of Carrickfergus Escarpment and to the setting of Belfast Lough.

LCA 130: Carrickfergus Farmed Escarpment

- 3.64 This LCA has experienced a mix of low and medium pressure for wind energy development. The medium pressure areas are located adjacent to Greenisland and between Beltoy Road and Red Brae Road. There was a mix of proposals for large-scale (over 15 metres) and small-scale (below 15 metres) wind turbines and there were no applications to increase the height of an ‘approved’ wind turbine. There has been no proposals for wind farm development within this LCA.

3.65 Generally, this LCA is highly sensitive to wind energy development. It is a distinctive landscape which provides an attractive setting for the settlements of Carrickfergus and Greenisland and contributes significantly to the setting of the Carrickfergus escarpment. Further, this landscape is visually exposed to views from key receptors such as residential areas and public roads. In this LCA, wind turbines have the potential to be obtrusive in the landscape which, depending on their location, is likely to have an adverse impact on the setting of Knockagh monument, the Carrickfergus Escarpment ASQ and/or the coastal settlements.

Summary of the Pressure for Wind Energy Development within Mid and East Antrim (between 2000 and 2018).

3.66 Table 3 shows that the number of applications for single wind turbines was relatively low until 2010, albeit there was a gradual increase in the number of applications up until this 2010 after the introduction of the Northern Ireland Renewables Obligation (NIRO) in 2005. The Northern Ireland Renewables Obligation (NIRO) has been the main support mechanism for encouraging increased renewable electricity generation in Northern Ireland. During the years that this scheme was open and after the introduction of PPS 18 'Renewable Energy' in 2009, applications for single wind turbines remained relatively high up until 2015. The introduction of PPS 18 aimed to facilitate the siting of renewable energy generating facilities in appropriate locations in order to achieve Northern Ireland's renewable targets and to realise the benefits of renewable energy, whilst having due regard to natural heritage, the historic environment and residential amenity. The number of applications dropped significantly in the years after 2015 and this coincided with the closure of the NIRO to new large scale onshore wind on 31 March 2016 and to new small scale onshore wind on 30 June 2016, with exceptions to those projects that met the criteria for grace periods.

3.67 Table 4 shows that there was a significant jump in the number of applications for wind farms (comprising more than two turbines) in the years 2006 and 2011, with subsequent years showing a significant drop in the number of applications. These 'step increases' in application numbers come shortly after the introduction of the Northern Ireland Renewables Obligation (NIRO) in 2005 and the introduction of PPS 18 'Renewable Energy' in 2009. It should be noted that the low absolute number of applications for wind farm development within MEA is expected as there are a limited number of areas that can accommodate such proposals without unacceptable adverse impacts on key landscape and heritage assets and landscape character. In this regard, a significant part of the Borough is included within the Antrim Coast and Glens AONB and within extensive nature conservation designations. The number of applications has remained low since 2013 and this is not expected to increase significantly as the NIRO closed to new large scale onshore wind on 31 March 2016, with exceptions to those projects that met the criteria for grace periods.

3.68 Map 4 shows the level of combined development pressure for single wind turbines and wind farms across Mid and East Antrim for the period 1st January 2000 to 31st December 2018. This map illustrates that the pressure for wind energy development is linked to elevation levels and also varies depending on the characteristics of the landscape and associated features. There has generally been low to medium pressure across the Borough with pockets of high pressure. The areas of medium and high pressure are generally associated with the most elevated areas, although some lower lying areas experienced medium or high pressure presumably due to the open nature of the landscape. It is notable that there has been pressure for wind farm development in areas close to Slemish, the Agnews Hill / Sallagh Braes area and the ridge between Knockdhu Glenarm. These key landmarks are extremely vulnerable to this scale of wind energy development.

3.69 In general terms, Map 3 indicates that the areas which have experienced the highest pressure for wind energy development include an area west and north-west of the Garron Plateau, elevated land around

Larne town, the Carrickfergus Upland Pastures, the Islandmagee peninsula and the elevated land flanking Whitehead. There are also pockets of high pressure at Carncoagh Hill / Elginny Hill to the north / north-east of Ballymena and within the River Maine corridor north of Cullybackey.

- 3.70 Map 5 shows the varying numbers of 'approved' wind turbines within areas measuring 5km squared for the period 1st January 2000 to 31st December 2018. The areas with 5 or more wind turbines are found at Carncoagh Hill / Elginny Hill, Big Colin and east of Agnews Hill. Other '5km-squared' areas with 5 or more wind turbines are where a relatively high number of single wind turbines have received planning permission include an area north of Glenleslie Road, Carnduff Hill between Larne town and Glynn, and an area close to the Ballyrickard Road / Waterfall Road junction between Ballynure and Glenoe. It should be noted that these areas are identified using a crude method of counting the number of 'approved' wind turbines within a '5km-squared' area. However, generally these identified hotspots are adjacent to areas with 3 – 4 'approved' wind turbines within the 5km-squared area and, therefore, these areas with relatively high numbers of 'approved' turbines extends over a wider area than the immediate identified hotspot. Areas not adjacent to the identified hotspots and which have multiple '5km-squared' areas with 3 – 4 'approved' wind turbines include the A26 Crankill Road, the upper part of Glenarm glen around Munie Road / Lises Hill Road / Deerpark Road and an area off the Gobbins Road close to the Gobbins coastal path.

Wind Energy Development Pressure in the Open Countryside in the Context of Significant Natural Heritage Assets and Quality Landscapes

- 3.71 Map 4 indicates that there are some areas that have not experienced any pressure for wind energy development or have experienced very little pressure for such development. Generally, these areas are so environmentally sensitive or the landscape and associated assets of such quality and amenity value, that any wind energy development in these areas would have a significant adverse impact. These areas include the Garron Plateau, a relatively large part of the Larne Basalt Moorland (LCA 124) to the south-east of, and including, Slemish, Glenarm Forest, areas of the Antrim Coast, the area of peatland west of Glarryford and the River Maine, the Lough Beg and Lower Bann River corridor south of Portglenone, and Woodburn Forest.
- 3.72 The Garron Plateau has significant constraints to wind energy development. This landscape contains the most extensive area of intact upland blanket bog (*NI Priority Habitat*) in Northern Ireland and is an internationally important Ramsar site, Special Area of Conservation (SAC) and nationally important Area of Special Scientific Interest (ASSI). This area is also an important habitat for wild birds and is, therefore, included within an internationally significant Special Protection Area (SPA). Cleggan Forest also takes up a significant area of land in this area which is a significant constraint to wind energy development.
- 3.73 The central area of the Larne Basalt Moorland is a wild upland area that also has significant constraints to wind energy development. Much of this areas is included within the Antrim Hills SPA which is an internationally significant habitat for wild birds, it includes significant areas of peatland and Slemish is a landmark attraction within an extensive setting that is visually highly sensitive. This area also includes Ballyboley Forest, Capanagh Forest and Capanagh-Shillanavogy Forest which cumulatively take up a significant area of land in this area and are all included within the Antrim Hills SPA.
- 3.74 Other smaller areas that which have experienced little or no pressure for wind energy development tend to have considerable constraints to such development. Along the Antrim Coast, Glenarm Forest is an iconic landscape feature which includes a registered historic park, garden and demesne, and the Antrim Coast Road (A2) is part of the Causeway Coastal Route and an area of exceptional scenic quality. South of Portglenone, the fringes of Lough Beg and the Lower Bann River corridor are included within an identified Area of Scenic Quality (ASQ) which is a highly sensitive landscape visually and

environmentally, therefore representing a strong constraint to wind energy development. The peatland (*NI Priority Habitat*) west of Glarryford and the River Maine, and the plantation forest at Woodburn Forest, generally make these areas unfavourable for wind energy development.

- 3.75 Map 4 does show that some highly sensitive areas have come under medium to high pressure for wind energy development and have been adversely impacted by the cumulative impacts of such development. The wind farm at Carncoagh Hill / Elginny Hill has adversely impacted on the wild character and distinctive smooth summits of these hills which are located on the edge of the Antrim Coast and Glens AONB. The setting of Agnews Hill has been adversely impacted by the erection of multiple single wind turbines and there is permission for a wind farm to the east of this distinctive landscape feature of the AONB. To the north / north-east of Agnews Hill, the areas of Sallagh Braes, Knockdhu and Scawt Hill have experienced low pressure for wind energy development. Although this pressure is low, these areas are key landscape features on the Antrim Coast which would be easily adversely impacted by obtrusive development. An Area of Special Archaeological Interest (ASAI) at Knockdhu would also be sensitive to such development. The smooth ridges of the Islandmagee peninsula have also been compromised by numerous wind turbines which has adversely impacted this small to medium scale landscape which is identified as an ASQ. The Antrim Coast with its distinctive headlands and slopes leading to the edges of the Antrim Plateau is an exceptional landscape and provides high quality scenery along the Antrim Coast Road. This landscape is highly sensitive to any form of wind energy development as has been demonstrated on the previously undeveloped headland south-east of Glenarm. Here, a single wind turbine is highly prominent in views from the A2 Coast Road and has impacted adversely on this landscape along the Causeway Coastal Route, the main tourism artery of MEA.
- 3.76 Given the high environmental and/or visual sensitivity of some areas of the Borough, it may be considered reasonable to provide these quality landscapes with 'additional' policy protection whether or not these areas have experienced pressure for wind energy development. Such a 'proactive' policy approach may be considered necessary as such landscapes have limited capacity to absorb high (or obtrusive) structures and it can take only one wind turbine to compromise the quality of such landscapes.

4.0 Analysis of Pressure from Solar Energy Development in the Countryside of Mid & East Antrim

Solar Energy Development: Applications 2000 - 2018

- 4.1 Data on all planning applications received by Mid and East Antrim Borough Council between 2000 and 2018 (inclusive) was provided by the Department of Infrastructure (DfI). This data was processed by the Local Development Plan Team to obtain detailed information on all solar energy applications falling within the open countryside.
- 4.2 Using the processed data, information was obtained on the number of applications received and determined by the Council between 2000 and 2018 (inclusive). Table 5 below shows the number of applications received, approved, refused and withdrawn for applications relating to non-domestic solar energy related development proposals. Table 6 shows the same aforementioned statistics for applications relating to solar farm related development proposals.
- 4.3 The year 2009 is highlighted in orange as it is the year Planning Policy Statement (PPS) 18 “Renewable Energy” was published, which superseded Policy PSU 12 ‘Renewable Energy’ of the Planning Strategy for Rural Northern Ireland. The aim of this PPS is to facilitate the siting of renewable energy generating facilities in appropriate locations within the historic and natural environment in order to achieve Northern Ireland’s renewable targets (see Technical Supplement 12 – Public Utilities[Renewable Energy section]) and to realise the benefits of renewable energy, whilst ensuring adequate protection of historic, natural and cultural heritage features and that issues concerning impacts on amenity are adequately addressed.

Table 5: The Number of ‘Non-Domestic Solar Energy Related’ Applications (excluding Solar Farms) Received and Decided Within Mid and East Antrim Borough Council

Year	Received	Approved	Refused	Withdrawn
2000	-	-	-	-
2001	-	-	-	-
2002	-	-	-	-
2003	-	-	-	-
2004	-	-	-	-
2005	-	-	-	-
2006	-	-	-	-
2007	-	-	-	-
2008	-	-	-	-
2009	-	-	-	-
2010	-	-	-	-
2011	-	-	-	-
2012	2	-	-	-
2013	5	7	-	-
2014	3	2	-	-
2015	1	1	-	-
2016	-	1	-	-
2017	-	-	-	-
2018	-	-	-	-

Table 6: The Number of ‘Solar Farm Related’ Applications Received and Decided Within Mid and East Antrim Borough Council

Year	Received	Approved	Refused	Withdrawn
2000	-	-	-	-
2001	-	-	-	-
2002	-	-	-	-
2003	-	-	-	-
2004	-	-	-	-
2005	-	-	-	-
2006	-	-	-	-
2007	-	-	-	-
2008	-	-	-	-
2009	-	-	-	-
2010	-	-	-	-
2011	-	-	-	-
2012	-	-	-	-
2013	-	-	-	-
2014	-	-	-	-
2015	3	1	-	-
2016	-	2	-	-
2017	-	-	-	-
2018	-	-	-	-

NB: ‘Solar Farms’ are considered here to include proposals for ground mounted solar PV projects over 50KW and 1 acre.

NB: ‘Solar Farm Related’ statistics within this table include applications for proposed solar farms, any associated plant, buildings and infrastructure ancillary to proposed, approved or existing solar farms and any proposed alterations/extensions/relocation of panels within approved or existing solar farms.

Pressure from Applications for Solar Energy Development in the Open Countryside: Spatial Analysis

4.4 A spatial analysis of the pressure from applications for solar energy development was undertaken for each LCA.

LCA 52: Lower Bann Valley

4.5 There have not been any applications for solar farm development in the Mid and East Antrim part of this LCA. The relatively flat terrain and openness of much of this low-lying landscape make this area highly visually sensitive to solar farm development, particularly as this area contributes to the setting of Lough Beg and the Lower Bann River and is open to views from public roads and Newferry.

LCA 58: Long Mountain Ridge

4.6 There have been no applications for solar farm development in this LCA. Long Mountain Ridge is visible over a wide area and has a strong horizontal form when viewed from the east and west making it a distinctive skyline feature. However, this LCA is not of high scenic quality, and parts of this LCA may be suitable for solar energy development, particularly where screening is provided by undulations in topography, trees and strong hedgerows. Proposals for solar farms are not likely to be acceptable on the slopes that are widely visible from surrounding areas.

LCA 59: Cullybackey and Cloghmills Drumlins

- 4.7 Outside of settlement development limits, there has been one application for solar energy development in this LCA. The Clough River and River Maine valleys and areas around the Glarryford esker ridge and Frosses Bog are highly sensitive to change. The ability of this LCA to accommodate solar farm development is reduced by the variations in topography and complex landform. However, there may be potential to accommodate solar farm development along the A26 transport corridor if any adverse environmental and visual impacts can be adequately mitigated.

LCA 60: River Main Valley

- 4.8 There have been no applications for solar farm development within the MEA part of this LCA. The northern part of this LCA is a small-scale, relatively open riverside landscape which contributes to the setting of Ballymena, particularly the Gracehill and Galgorm areas, and as such, it would be difficult to accommodate solar farm development in this part of the LCA. In other areas, scenic river corridors and small-scale field patterns are likely to be key constraints to solar farm development within this LCA.

LCA 98: Carrickfergus Upland Pastures

- 4.9 There have been no applications for solar farm development in the MEA part of this LCA. The southern and eastern areas of the MEA part of this LCA are visually prominent in views and would be highly visually sensitive to solar farm development. Areas away from the eastern parts of this LCA may be able to accommodate solar farm development in locations where the topography, woodland, and/or hedgerows can mitigate any adverse visual impacts on the landscape.

LCA 115: Tardree and Six Mile Water Slopes

- 4.10 There has been no applications for solar farm development within the MEA part of this LCA. The upper slopes in the eastern and western sections form an important setting for lower lying areas and are widely visible and therefore, it would be difficult to accommodate solar farm development on these upper slopes. In the western section, the Kells Water valley is small in scale and open to views from Moorfields Road and Doagh Road and would be vulnerable to the impacts of solar farm development.

LCA 116: Ballymena Farmland

- 4.11 There has been two applications for solar energy development in this LCA, both of which received planning permission. Although there may be potential to accommodate solar farm development in this LCA, key constraints may include a distinctive small to medium scale field pattern and areas which are particularly sensitive to change such as river corridors and prominent upper slopes.

LCA 117: Central Ballymena Glens

- 4.12 There has been one application for solar energy development in this LCA. This proposal was for a relatively small-scale solar energy scheme and received planning permission. The distinctive character and high scenic quality of the glens and associated ridges, and views across the glens from surrounding ridges and tourist routes, make many areas of this LCA visually highly sensitive to solar farm development.

LCA 118: Moyle Moorlands and Forests

- 4.13 Within the MEA part of this LCA, there has been no applications for solar energy development. There is very little scope to accommodate solar energy development in the MEA part of this LCA as the landscape is highly sensitive to change due to its exposed and wild character, distinctive summits and the inclusion of the eastern and central areas within the Antrim Hills SPA.

LCA 122: Garron Plateau

- 4.14 There has not been any applications for solar energy development in the MEA part of this LCA. This area is environmentally highly sensitive due to the intact peatland habitats and is visually highly sensitive due to the area's high scenic quality and undeveloped character. These factors are key constraints to solar farm development.

LCA 123: Larne Glens

- 4.15 There have been no applications for solar energy development in this LCA. The distinctive character and exceptional scenic quality of this LCA, the numerous nature conservation sites, and the importance of this landscape as a draw for tourists and visitors make much of this LCA visually highly sensitive to solar farm development.

LCA 124: Larne Basalt Moorland

- 4.16 There has been no applications for solar energy development in this LCA. The high scenic quality of this LCA, its distinctive landscape features, the important nature conservation sites, the wild and open character of many areas, and the significance of parts of this landscape for the settings of Glenarm, Slemish, Knockdhu, Sallagh Braes and Scawt Hill make much of this LCA visually highly sensitive to solar energy development.

LCA 125: Tardree Upland Pastures

- 4.17 Within the MEA part of this LCA, there has been no applications for solar farm development and it may be difficult to accommodate solar farm development due to the exposed character of the landscape and the long open views across it. The upland ridges are widely visible, express relative wildness and are important for the setting of the Glenwhirry Valley. The upland area to the north is important for the setting of Slemish.

LCA 126: Larne Coast

- 4.18 There has been no applications for solar energy development in this LCA. The high scenic quality and distinctive landscape features of this LCA and its importance for the settings of the A2 Coast Road, Sallagh Braes, Knockdhu ASAI and settlements of Ballygalley and Larne make much of this LCA visually highly sensitive to solar farm development. These factors act as key constraints on solar farm development within this spatially constrained LCA.

LCA 127: Larne Ridgeland

- 4.19 There have been no applications for solar energy development in this LCA. The high scenic quality of the northern slopes of this LCA and their importance for the setting of Larne town make this part of the LCA visually highly sensitive to solar farm development. The slopes and ridges in the south-eastern part of the LCA and the valleys of the Glynn River and Dunisland Water would also be visually highly

sensitive to solar farm development. In less sensitive areas such as the A8 transport corridor, there may be some potential to accommodate solar energy development depending on constraining factors such as the topography and critical views.

LCA 128: Island Magee

- 4.20 Solar energy proposals have been approved at three sites in this LCA and all proposals were for small-scale solar energy schemes. The high scenic quality, general openness of the landscape and the remote and wild qualities of Islandmagee make many areas of this peninsula visually highly sensitive to solar farm development. Other areas of this LCA, and not on the Islandmagee peninsula, are also visually highly sensitive to solar farm development as they are prominent in long range views from public receptors, for example settlements and the Causeway Coastal Route, and these areas contribute significantly to the setting of Larne Lough and nearby settlements.

LCA 129: Carrickfergus Shoreline

- 4.21 Within the MEA part of this LCA, a solar farm has been granted planning permission on a site located west of Castle Dobbs and north of Kilroot Business Park. This LCA has limited potential to accommodate any further solar farm development, as much of this area is urbanised and other areas are visually highly sensitive. For example, some areas are within rural landscape wedges which seek to stop the coalescence of settlements and other areas are important for the setting of settlements or the coast.

LCA 130: Carrickfergus Farmed Escarpment

- 4.22 There has been one application for a solar farm in the MEA part of this LCA. This site is located east of Red Brae Road and was granted planning permission. This LCA has very limited potential to accommodate large-scale solar farm development as the landscape is important for the setting of the Carrickfergus Escarpment and the coastal settlements and is widely visible from surrounding areas, particularly from the B90. The views into and across this landscape and the elevated position of the land may make it difficult to avoid any adverse visual impacts of solar farm development.

Summary of the Pressure for Solar Energy Development in the Open Countryside within Mid and East Antrim (between 2000 and 2018).

- 4.23 Table 5 and Table 6 indicate that development pressure for solar energy development is relatively low within Mid and East Antrim for the period 2000 – 2018. All applications relating to non-domestic solar energy schemes were received between 2012 and 2016. The low numbers of applications may relate to the key constraints identified in the analysis of the pressure for solar energy development within MEA. Many of the Borough's distinctive landscapes are located within the AONB or are important for the setting of entities such as the coast, river corridors or key settlements and/or have significant natural heritage and historic environment assets that all act as key constraints on large-scale solar energy development. However, there are some areas within the Borough that have the potential to accommodate large-scale solar energy infrastructure, subject to meeting relevant planning requirements. There has been no applications for solar energy development since 2016 and this is considered to be linked to the closure of the NIRO to all technologies on 31 March 2017, with exceptions for those projects that met the criteria for grace periods.
- 4.24 There have been two applications for solar farm development in the Carrickfergus area, one adjacent to Carrickfergus settlement development limits at Castle Dobbs and one close to the Red Brae Road. There has been one application for a solar farm between Ballymena and Broughshane (Ballygarvey

Road). These applications are located close to urban centres. There has been no pressure for large-scale solar energy development within the most vulnerable landscapes and this may be due to the relative remoteness of such landscapes. There has applications for solar energy development on the Islandmagee peninsula which is an identified Area of Scenic Quality (ASQ). However, these proposals have generally been of a scale which would, or has, enabled their satisfactory integration into the landscape.

- 4.25 Despite the relatively low development pressure for solar energy development, it is recognised that solar farms can be an obtrusive form of development. As such, any such development of a significant scale in our most sensitive landscapes, is likely to have a significant adverse impact on the landscape and its associated assets. Therefore, it is considered reasonable to provide these quality landscapes with 'additional' policy protection from solar farms which are of such a scale that they become obtrusive in the landscape, as such landscapes have limited capacity to absorb visually intrusive forms of development.



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