HARTLEPOOL LOCAL PLAN

EVIDENCE PAPER – RENEWABLE ENERGY GENERATION

September 2016

1. Overarching context

1.1 The purpose of this report is to provide background and context to inform policy preparation for renewable energy generation in the new Hartlepool Local Plan. Renewable energy generation will form part of a suite of Local Plan policies and proposals that address wider climate change and energy efficiency issues.

1.2 Addressing climate change and supporting the transition to a low carbon future is a priority of delivering sustainable development and is a core central government planning principle[1]. The Climate Change Act 2008 established a legal framework that underpins the UK government's commitment to tackling climate change, including reducing CO_2 emissions and addressing climate risks.

1.3 The 2011 Energy White Paper[2] aims to establish a diverse and secure range of low carbon sources of electricity. The government is seeking to transform the UK into a low carbon economy and meet a 15% renewable energy target by 2020 and an 80% carbon reduction target by 2050. Following the United Nations Climate Change Conference in Paris in December 2015 a deal was agreed that attempts to limit the global rise in temperatures to less than 2 degrees C. There is a long term goal of net zero emissions by the end of the century, with progress independently assessed in 2018 and every five years thereafter. Reflecting the reducing cost of low carbon technologies, targets on reducing emissions will be able to be stepped up. In 2020 all countries will be expected to update their plans to cut emissions by 2030.

1.4 The National Policy Statement for Energy[3] notes that the UK has substantial renewable energy resources, particularly wind and tidal. The cost of renewable energy is principally in construction and maintenance as the resource itself is usually free, helping to protect consumers against a volatile but generally increasing cost of fossil fuels.

1.5 Future large scale renewable energy generation is likely to come from the following sources:

- Onshore wind – now well-established as a reliable source of renewable electricity; however the withdrawal of government support for onshore

[1] National Planning Policy Framework, paragraph 17, Department for Communities & Local Government, March 2012

[2] Planning for our electric future: a White Paper for secure affordable and low carbon electricity; Department for Energy & Climate Change, July 2011

[3] The Overarching National Policy Statement for Energy; Department for Energy & Climate Change (EN-1), July 2011

wind farms from April 2015 (through the Renewable Obligations Certificate) could result in fewer planning applications, reflecting financial and viability concerns;

- Offshore wind – expected to provide the largest single contribution towards 2020 renewable energy generation targets;
- Solar Photovoltaic (PV) developments – ground mounted solar PV panels convert sunlight into energy. Rising energy costs and the access to subsidies increased the attractiveness of solar PV developments for a number of years but now more recent changes in Government attitudes to subsidies, particularly through the Renewables Obligation, may affect the number of solar farms being planned or going forward
- Biomass – involves the combustion of fuel such as wood, which is renewable because, through planting and re-growth, the biomass can be replaced in a matter of decades and the cycle can be continuously repeated;
- Energy from Waste (EfW) – the combustion of waste, or similar processes, reduces the amount of waste going to landfill in accordance with the Waste Hierarchy[4] and to recover energy from that waste as electricity or heat, and
- Wave and Tidal – there appears to be considerable potential for this in the UK. However although a number of full-scale prototypes are currently in operation many of the technologies are still developing.

1.6 Local planning authorities are responsible for the determination of renewable and low carbon energy generation development of 50 megawatts (MW) or less installed capacity. Proposals with a generating capacity of over 50 MW are currently considered by the Secretary of State for Energy under the Planning Act 2008, and the local planning authority is a statutory consultee. However it is now the Government's intention to amend legislation so that all applications for onshore wind energy developments are handled by local planning authorities.

1.7 The National Planning Policy Framework (NPPF)[5] sets out the governments' planning policies to achieve sustainable development. Paragraph 17 of the NPPF states that one of the principles that planning should support is "the transition to a low carbon future in a changing climate ……and encourage the use of renewable resources (for example, by the development of renewable energy)."

1.8 Paragraph 97 of the NPPF states "To help increase the use and supply of renewable and low carbon energy, local planning authorities should recognise the responsibility on all communities to contribute to energy generation from renewable or low carbon sources. They should:

- have a positive strategy to promote energy from renewable and low carbon sources

[4] As set out in Article 4 of the revised Waste Framework Directive and the Waste (England and Wales) Regulations 2011

[5] National Planning Policy Framework; Department for Communities & Local Government, March 2012

- design their policies to maximise renewable and low carbon energy development while ensuring that adverse impacts are addressed satisfactorily, including cumulative landscape and visual impacts
- consider identifying suitable areas for renewable and low carbon energy sources, and supporting infrastructure, where this would help secure the development of such sources;
- support community-led initiatives for renewable and low carbon energy, and
- identify opportunities where development can draw its energy supply from decentralised, renewable or low carbon energy supply systems and for co-locating potential heat customers and suppliers."

1.9 The Government's on-line Planning Practice Guidance for Renewable and Low Carbon Energy (NPPG)[6] was updated in June 2015. The update reflects a Written Ministerial Statement issued on 18th June 2015 which made it clear that when considering planning applications for wind energy development, local planning authorities should (subject to a transitional arrangement[7]) only grant permission if the proposal is in an area identified as suitable for wind energy in a Local or Neighbourhood Plan, and the proposal has the backing of the local community. This now reflects the Conservative Party 2015 Manifesto which contained a policy to give "local people" a "final say" on wind farm applications.

1.10 A prospective applicant for planning permission is required to undertake compulsory pre-application consultation with the local community. The requirements that must be fulfilled as part of the compulsory pre-application are set out in sections 61W and 61X of the Town and Country Planning Act 1990 and Article 4 of the Town and Country Planning (Development Management Procedure (England) Order 2015[8]. The requirements are also summarised in the Government's Planning Practice Guidance[9]. If the pre-application consultation requirements are not met and a planning application is submitted, the local planning authority will not be able to validate it until the applicant complies.

1.11 Key general points in the NPPG include:

- renewable energy does not automatically override environmental protections and the planning concerns of local communities;
- Local Plans should consider the local potential for renewable and low carbon energy generation, including:
  - the range of potential technologies and the range of policies needed to encourage their development in the right places

[6] Planning Practice Guidance; Renewable & Low Carbon Energy, updated June 2015 (http://planningguidance.planningportal.gov.uk)

[7] Transitional arrangement – where a planning application for a wind energy development has already been submitted and the development plan does not identify suitable sites, local planning authorities can find the proposal acceptable if, following consultation, they are satisfied it has addressed the planning impacts identified by affected local communities and has their backing

[8] http://www.legislation.gov.uk/ukpga/2011/20/part/6/chapter/4/enacted and http://www.legislation.gov.uk/uksi/2015/595/article/4/made

[9] Planning Practice Guidance; Renewable & Low Carbon Energy, updated June 2015 (http://planningguidance.planningportal.gov.uk)

- recognition that different technologies can have different impacts in different places
- the fact that the UK has legal commitments to cut greenhouse gases but there is no quota that a Local Plan has to deliver;

- local planning authorities should consider policies that give positive weight to renewable/low carbon energy initiatives that have clear evidence of local community involvement. Neighbourhood plans can provide a good opportunity for communities to become involved in renewable energy schemes;
- there are no hard and fast rules about identifying suitable areas for renewable energy generation but account should be taken of the requirements of the technology and, critically, the potential impact on the local environment, including cumulative impacts
- community views should be listened to;
- full use should be made of tools such as landscape character assessments;
- identifying areas suitable for renewable energy gives greater certainty where development will be permitted. Where local planning authorities identify suitable areas, for example for wind farms or large solar farms, they should not have to give permission outside those areas for speculative developments if the impact is unacceptable, and
- if suitable areas are identified, a Local Plan should be clear on the factors that will be taken into account in considering individual proposals.

1.12 Specific guidance in the NPPG in relation to wind energy development includes:

- a planning application should not be approved unless the proposed development site is in an area identified as suitable for wind energy development in a Local or Neighbourhood Plan
- suitable areas for wind energy development will need to have been allocated clearly in a local or neighbourhood Plan. Maps showing the wind resource as favourable to wind turbines or similar will not be sufficient
- in identifying suitable areas it is also important to set out the factors that will be taken into account when considering individual proposals in these areas. These factors may be dependant on the investigatory work underpinning the identified area
- whether the proposal has the backing of the affected local community is a planning judgement for the local planning authority
- Noise – 'The assessment and rating of noise from wind farms' (ETSU-R-97) should be used by local authorities, along with various other good practice guidance;
- Safety – most issues can be mitigated through appropriate siting and consultation with affected bodies, including distance from buildings, power lines, air traffic and safety, defence, radar, and the strategic road network;
- Interference with electromagnetic transmissions – for example radio, television, phone signals. OFCOM acts as a central contact point;

- Ecology – there is a risk of bird and/or bat collision, disturbance and displacement; advice is available from Natural England;
- Heritage – harm to the setting of a heritage asset can be a significant issue;
- Shadow flicker and reflected light – modern wind turbines can be controlled so as to avoid shadow flicker when it has the potential to occur. Where the possibility of shadow flicker exists, mitigation can be secured through conditions. Turbines can also cause flashes of reflected light – these can be ameliorated to some extent but not eliminated;
- Energy output – can be a useful consideration, particularly if a decision is finely balanced;
- Cumulative landscape and visual impacts – landscape impact concerns the degree to which a development will become a significant or defining characteristic of the landscape. Visual impact concerns the degree to which a development will become a feature in particular views and the impact this has upon people experiencing those views, and

1.13 The NPPG also provides specific planning guidance for solar photovoltaic farms:

- Encourage use of previously-developed and non-agricultural land, provided it is not of high environmental value;
- Where agricultural land is proposed it should be shown to be necessary and poorer quality should be given preference to higher quality land; where appropriate agricultural use should continue and/or biodiversity encouraged;
- Solar farms are normally temporary structures and planning conditions can be used to ensure installations are removed and land restored;
- Visual impact, including glint and glare, on neighbouring uses and aircraft safety;
- Care must be taken to conserve heritage assets, and
- Landscape and visual impacts could be mitigated through, for example, screening with native hedges.

2. Local context

2.1 The Tees Valley Strategic Economic Plan (SEP)[10] contains a key ambition to drive the transition of the Tees Valley to a high value, low carbon economy. The SEP identifies low carbon opportunities as a key sector for growth in the Tees Valley. This includes on-shore and off-shore wind, energy from waste, and the wider energy sector including nuclear power. The Tees Valley Strategic Infrastructure Plan[11] refers to the potential for a replacement for the existing Hartlepool Nuclear Power Station, and in particular the role that the

[10] Tees Valley Strategic Economic Plan, Tees Valley Unlimited (Local Enterprise Partnership); April 2014. The Strategic Economic Plan (SEP) is a key sub-regional strategy to generate economic growth through transformational change, building on the Tees Valley's competitive advantages and tackling barriers to growth

[11] Tees Valley Strategic Infrastructure Plan, Tees Valley Unlimited (Local Enterprise Partnership); November 2014.

power station has played and will continue to play in the economy of Hartlepool and the wider Tees Valley sub-region.

2.2 There are two specific studies that are relevant to the consideration of major renewable energy proposals within the rural areas of Hartlepool:

- East Durham and Tees Plain Wind Farm Development and Landscape Capacity Study, and
- Hartlepool Landscape Assessment

2.3 The East Durham and Tees Plain Wind Farm Development and Landscape Capacity Study[12] provided an objective technical assessment of the capacity of an area to accommodate wind farm development using an agreed and accepted methodology. The study area, which covered rural areas from Chester-le-Street and Sunderland in the north, west to Durham and Sedgefield, and south to Darlington and Stockton-on-Tees, was divided into a number of landscape zones. Six of the zones covered land within Hartlepool Borough and within each zone various scenarios were tested. Conclusions for the zones within Hartlepool Borough were:

Zone 13 (part) – an area of gently rolling hills sloping east towards the coast, with the A19 passing through. It includes the existing wind farm development of 3 turbines at High Volts. The study concluded that there is some limited potential for wind turbine development associated with the existing turbine development provided that the cluster did not exceed more than 6 turbines. The study also noted that, theoretically, the zone may be able to accommodate additional small scale development, given constraints and separation distances from High Volts cumulative impacts may be unacceptably high.

Zone 17 – an undulating landscape bisected by the A19 falling gently to the south east towards the Tees Estuary. The study considered that in principle the landscape could have the capacity to accommodate 4 – 9 turbines, there is potentially little unconstrained land and separation distances from existing and permitted schemes at Walkway/Butterwick (Co. Durham) and High Volts are low therefore cumulative impacts could be unacceptably high.

Zone 18 – consisting of medium scale fields sloping gently east towards Hartlepool and the coast. The zone is sparsely settled with the exception of Hart village. The study considered that the zone had some limited capacity for wind development (less than 4 turbines). However as there is potentially little unconstrained land and separation distances from existing/permitted schemes in neighbouring zones (Walkway/Butterwick and High Volts) cumulative impacts could be unacceptably high.

Zone 21 (part) – contains new and continuing development of housing, business and other uses within the woodland setting of Wynyard. The study concluded that the area was unsuitable for turbine development due to its

[12] Wind Farm Development and Landscape Capacity Studies: East Durham and Tees Plain, North East Regional Assembly, August 2008; and Addendum, Association of North East Councils, October 2009

settled characteristics and its relationship with the Grade 2* listed Wynyard Park.

Zone 22 – a predominantly arable zone extending from Wynyard Business Park towards Hartlepool. The study concluded that the landscape could in principle have capacity to accommodate 4 – 9 turbines. However as separation distances from High Volts are low the cumulative impacts of further turbines in the zone could be a constraint.

Zone 27 – bordered by Billingham to the south and urban Hartlepool to the north east, and includes Newton Bewley village. The land begins to rise to the north beyond the zone, and there are views of large scale industrial development at North Tees to the south east. While the study noted that wind development could be related to the industrial development to the south and east of the zone, and the landscape could have capacity to accommodate more than one medium small – small scale development (i.e. 4 – 6 turbines per development), development constraints within the zone may make this unlikely.

A map showing the landscape zones from the study is attached as an appendix to this evidence paper.

2.4 The 2009 addendum to the Wind Farm Capacity Study provides some additional assessments in response to increased developer interest in a number of locations. These locations included, within Hartlepool, Red Gap Moor (5 turbines) in zone 17. The main study concluded that, although in principle the zone could accommodate 4 – 9 turbines, with similar potential in the adjacent zone 22, the cumulative impacts could be unacceptable. The study addendum therefore concluded that overall the level of development proposed at Red Gap Farm was below the capacity of the landscape identified in the main study. Zone 17 was identified as having limited suitability for further wind farm development and zone 22 as also having limited suitability, based on a high level review of the availability of technically unconstrained land and cumulative viability issues.

2.5 The Hartlepool Landscape Assessment[13] provides an evaluation of the landscape quality of the countryside and areas outside the limits to development that should be safeguarded from further development.

2.6 The Landscape Assessment conclusions regarding land around the existing wind farm at High Volts Farm and the proposed development at Red Gap Moor are:

- Both locations are in areas of undulating farmland of generally lower value landscapes, particularly around High Volts Farm where many field boundaries have been removed
- Landscape value – both locations of low value

[13] Hartlepool Landscape Assessment, Landmark Partnership on behalf of Hartlepool Borough Council, 2000

- Visual analysis – ridgeline and major views in north west Hartlepool, including the vicinity of High Volts
- Visual Quality – generally low, especially in the High Volts area
- Amenity value – low in the Red Gap Moor area, and low/medium at High Volts

2.7 Neither the Wind Farm Development and Landscape Capacity Study or the Hartlepool Landscape Assessment included the main built-up areas, although the latter did consider urban greenspace. However there have been three recent planning applications for large wind turbines in the Brenda Road area of south east Hartlepool[14]. These applications were subsequently called in by the Secretary of State but were deemed to be invalid due to insufficient public consultation. The Brenda Road area, along with much of south east Hartlepool, is a key industrial and employment location in the Borough and is dominated by industrial type structures and buildings of varying scale. The closest zone to this area considered as part of the Wind Farm Landscape Capacity Study is that between Billingham and Hartlepool (zone 27). This zone is considered to be a medium sensitivity and the Study noted that a 'small-medium' scale wind farm (up to 6 turbines) could potentially be accommodated, related to the industrial development of south east Hartlepool. The Study also noted however that the potential in zone 27 could be limited by the number of constraints in the area.

2.8 The adopted Hartlepool Local Plan 2006 contains a policy – PU7 – to guide the consideration of renewable energy. The policy provides general support for renewable energy projects, including the achievement of wider environmental and economic benefits. The policy also states that account should be taken of effects on visual appearance and character; amenity of residents, ecology, and radar and telecommunications. For wind turbine proposals the policy states that topography and turbine layout will be taken into account and all reasonable measures taken to reduce impact.

2.9 De-centralised energy/district heating schemes can make a significant contribution to energy supply from renewable sources. However there does need to be a critical mass of potential users close to the source of heat to make such schemes viable. Previous research[15] has indicated that there may be potential for district heating schemes in Hartlepool associated with developments adjoining the town centre and marina, although schemes were likely to require grant funding and/or subsidy to enable them to be viable.

3. Micro-renewables

3.1 This paper is principally about considering renewable and low carbon energy generation schemes at a strategic scale. Alongside this there is also potential to supply energy from small scale, micro-renewable schemes. Micro-renewables (or micro-generation) are generally small, domestic scale devices that generate energy from renewable sources. Micro-renewables are usually

[14] Planning applications. H/2014/0252; H/2014/0253; H/2014/0254

[15] Principally 'A District Heating Utility for the Tees Valley: Strategic Framework; Parsons Brinckerhoff on behalf of Tees Valley Unlimited, November 2010

accepted to be the production of heat (less than 45kW capacity) and/or electricity (less than 50kW) capacity from zero or low carbon sources. Small schemes can provide a limited but valuable contribution to renewables output and tackling climate change.

3.2 Micro-renewable devices include:

- Micro-wind turbines and roof mounted wind turbines
- Roof mounted solar technologies (including photovoltaic arrays and hot water panels)
- Heat pumps (ground source, air source and water source)
- Individual biomass boilers

3.3 Micro-renewable devices can be retrofitted to existing buildings, or built into new developments. The installation of micro-renewable devices will be assessed against the requirements of the planning system and many proposals will, depending on scale, fall within permitted development rights.

4. Existing and proposed renewable energy generation developments

4.1 Current and proposed strategic scale (0.5 MW generating capacity and above) energy generation developments in Hartlepool are summarised below.

Wind Turbine Developments/Proposals

Location	No. of turbines	Capacity	Height	Status
Sheraton Hill & Hulam Farms, Sheraton, Hartlepool/County Durham	5 (1 in Hartlepool Borough)	10 MW (Project) 2 MW (Turbine)	115 metres	Turbines in Co. Durham refused by County Council; further information requested for HBC turbine – no decision
High Volts Farm, Worset Lane, Hartlepool	3	7.83 MW (Project) 2.75MW (Turbine)	60 metres	Operational
Red Gap Moor, near Wynyard	5	15 MW (Project) 3 MW (Turbine)	125 metres	Approved
Graythorp Industrial Estate, Hartlepool	1	3 – 7.5 MW	175 metres	Approved by local authority but called in by Secretary of State – application deemed to be invalid due to insufficient public consultation – scheduled public inquiry cancelled
Land at Brenda Road West, Hartlepool	1	3 – 7.5 MW	175 metres	Approved by local authority but called in by Secretary of State – application deemed to be

Location	No. of turbines	Capacity	Height	Status
				invalid due to insufficient public consultation – scheduled public inquiry cancelled
Land at Tofts Road West, Hartlepool	1	3 – 7.5 MW	175 metres	Approved by local authority but called in by Secretary of State – application deemed to be invalid due to insufficient public consultation – scheduled public inquiry cancelled
Dovecote Farm, near Elwick, Hartlepool	1	0.5 MW	78 metres	Planning application refused

4.2 In addition to the above there have been a number of proposals for wind turbine developments that have not proceeded beyond the planning stage.

Solar Photovoltaic Array Developments/Proposals

Location	Area	Capacity	Status
Home Farm, Worset Lane, Hartlepool	22.4 hectares	13 MW	Planning application refused
East of Blue House Farm, Newton Bewley	11.0 hectares	5 MW	Planning application granted
South of Stob House Farm, Newton Bewley	10.0 hectares	5 MW	Planning application granted
South of Thorpe Bulmer Farm, Hartlepool	12.0 hectares	4.99 MW	Screening opinion request; decision – EIA not required
Potters Farm, Elwick	10.0 hectares	5 MW	Screening opinion request; decision – EIA not required

5. Community Benefits from Onshore Wind Developments

5.1 The government has recently issued a best practice guide to help provide benefits for local communities from onshore wind developments[16]. The aim of the guidance is to bring tangible rewards to communities which host wind projects, over and above the wider economic, energy security and environmental benefits that normally arise from onshore wind projects.

5.2 Community benefits can include:

[16] Community Benefits from Onshore Wind Developments: Best Practice Guidance for England; Department of Energy & Climate Change, October 2014

- Community benefit funds – voluntary monetary payments from an onshore wind developer to the community, usually provided via an annual cash sum, and
- Benefits in-kind – other voluntary benefits which the developer provides to the community, such as in-kind work, direct funding of projects, one-off funding, local energy discount schemes or other non-necessary site specific benefits.

5.3 There can also be other benefits such as:

- Social and economic benefits including job creation, skills training, apprenticeships, opportunities for educational visits, and raising awareness of climate change
- Material benefits derived from actions taken directly related to the development such as improved infrastructure

5.4 Voluntary community benefit schemes are becoming an established and integral part of onshore wind developments with a capacity of over 5 MW. The wind industry (through RenewableUK) has consolidated this voluntary approach which commits developers of onshore wind projects above 5 MW to provide a community package to the value of at least £5000 per MW of installed capacity per year, index-linked for the operational lifetime of the project. For onshore wind developments of less than 5 MW installed capacity where developers can offer some form of community benefit, the guidance states that this should be applied at a scale appropriate to the size of the development.

5.5 The guidance summarises a number of roles that the local authority can play in securing community benefits from onshore wind developments:

- Encouraging community aspirations to be set out in a neighbourhood plan;
- Supporting communities to work constructively with developers;
- Being clear about the role they can play in supporting communities and developers to identify local solutions;
- Encouraging community benefit discussions to be held in an open forum, and
- Ensuring that all parties involved in community benefit discussions are aware that their engagement does not affect their right to have a view on a proposed development through the formal planning process.

5.6 Although the government's guidance relates specifically to wind turbine developments many of the principles outlined could be applied to other large scale renewable energy projects such as solar/photovoltaic arrays.

6. An approach to renewable energy generation in the Hartlepool Local Plan

6.1 The Local Plan policy approach to renewable energy generation should:

- Provide broad support and encouragement to renewable energy projects, recognising the wider environmental and economic benefits that these can bring;
- Provide similar support for micro-renewable proposals;
- Set out criteria for the consideration of renewable energy proposals;
- Identify areas/locations within the Borough that are most suitable for strategic scale wind turbine developments – taking into account visual, environmental and amenity considerations, including cumulative impacts, and the level of support from local communities, and
- Encourage community benefits attached to renewable energy developments

Locations for wind turbine developments

6.2 The evidence provided by the Hartlepool Landscape Assessment and the Tees Plain Wind Farm Development and Landscape Assessment suggests two broad locations, within the rural area of Hartlepool, as potentially suitable for further wind turbine development:

- In the north west of the Borough, particularly to the south of Hart village. There is limited potential for further turbines associated with the existing 3 turbine High Volts scheme. The Tees Plain Landscape Assessment suggests that there is scope for up to 3 additional turbines in this area, limiting the total 'cluster' to no more than 6 turbines
- In the south west of the Borough. This area includes the 5 turbine development which has been approved at Red Gap Moor. The Tees Plain Landscape Assessment suggests potential for 4 – 9 turbines with any new development associated with the Red Gap Moor scheme.

6.3 It is proposed that an area of land around the existing High Volts development should be identified in the Local Plan as suitable for further wind turbine developments. However any development proposals should:

- be restricted to a maximum of 3 additional turbines
- ensure that the additional turbines are of a similar scale to the existing High Volts turbines

6.4 With regard to the Red Gap Moor area, despite the conclusions of the Landscape Assessment, it is considered inappropriate to identify an area in the Local Plan, in this vicinity, for further wind turbine developments. It is considered that the Red Gap area (Landscape Assessment Zone 17) will be at full capacity when the approved wind turbines (4) are constructed, and that any further wind turbines would unacceptably increase the cumulative visual and landscape impact. Although only a single turbine is proposed in Landscape Assessment Zone 22, it is considered, in the context of the Red Gap wind farm site, this zone will also be at capacity. Any further turbines in the immediate area beyond the Red Gap proposals are highly likely to unacceptably increase cumulative impact towards a landscape of wind farms. There is also a concern that further wind turbines could begin to dominate the landscape and countryside seen from the A19, creating the impression of a 'wind farm landscape' around Hartlepool.

6.5 As referred to in paragraph 2.7 there have been recent proposals to construct 3 large wind turbines in the Brenda Road area of south east Hartlepool. This is a predominantly industrial area and landscape, and there are several large structures in the area including the nuclear power station and the Huntsman plant.

6.6 It is proposed therefore that an area in south east Hartlepool (Brenda Road), be identified in the Local Plan as suitable for further wind turbine developments. While this is an industrial area and should be capable of accommodating reasonably large structures it is nevertheless necessary to have regard both to the cumulative visual impact of a number of turbines within a specific area and to the impact of views of the turbines from outside of the identified area. It is proposed therefore that only small/medium scale turbines should be acceptable, with a maximum tip height of 99 metres.

6.7 A map indicating the suggested area is attached as an appendix. The suggested area has been amended since the Local Plan Preferred Option. It now includes an area to the west of Brenda Road and to the north of the main railway line which was the site of one of the three large turbine applications, while all the area to the east of Brenda Road has been excluded. This is a smaller area than previously suggested and it is therefore proposed that no more than 4 turbines should be allowed within the area. This will also provide for the appropriate "topple distance" to be accommodated in view of the proximity of other buildings/structures, road and rail lines in the area. Topple distance is normally defined as at least the tip height of the turbine plus 10%.

6.8 For all wind turbine proposals (other than those of very small/domestic scale) a number of requirements/criteria will need to be considered as part of any planning application. These include:

- an assessment of impact on landscape/townscape, including an assessment of cumulative impact
- if appropriate a plan showing the zone of theoretical visibility (ZTV) of the proposed wind turbine; photomontages from certain viewpoints may also be necessary
- an ecological assessment, which should include where appropriate an assessment of impact on the Teesmouth and Cleveland Coast Special Protection Area (SPA) and any mitigation required
- an assessment of impact on historic assets
- information on noise from a wind turbine, particularly where this may affect places where people live and work
- a shadow flicker assessment where a proposed turbine is close to a sensitive receptor
- evidence that a proposed wind turbine would have no detrimental impact on telecommunications systems and air traffic control systems
- an appropriate flood risk assessment
- satisfactory highway and access arrangements

6.9 The High Volts area is within the Meteorological Office consultation zone for its radar installation at High Moorsley, between Durham and Sunderland. The

Met Office must be consulted[17] on any wind turbine application in the area so that it can determine the impact on its radar. Any impact will require mitigation. Mitigation could simply be a reduction in tip height and/or mitigation in the form of adjustment to radar quality control[18]. For further details contact: metofficesafeguarding@metoffice.gov.uk.

Wind Speeds

6.10 The East Durham and Tees Plain Study indicates that developers of large wind farms would typically seek sites with a minimum mean annual wind speed of 6.8+ m/s (metres/second – defined at 45m above ground level).

6.11 The Department for Energy & Climate Change provides an on-line wind speed database[19]. In Hartlepool the mean annual wind speeds for a block of 9 1km grid squares centred on High Volts ranges from 7.3 to 7.9 m/s at 45m above ground level. Mean annual wind speeds for a similar block of 9 1km grid squares in the Brenda Road area are in the range 6.8 to 6.9 m/s at 45m above ground level.

6.12 This is not to suggest that areas with wind speeds less than 6.8 m/s are unsuitable, but the database can be used to broadly identify the most promising wind resource areas.

Consideration of solar energy developments

6.13 In Hartlepool there have been no landscape assessments or other research investigating the impact of potential solar energy developments similar to the studies undertaken for wind turbines. The scale of likely future interest in developing solar energy farms in the Hartlepool area is not known at present, although there are indications at a national level that the number of applications could increase.

6.14 The National Planning Practice Guidance (NPPG) does not preclude solar farms on greenfield land but advises concentrating on brownfield and non-agricultural land. The NPPG also states that proposals on agricultural land should be 'shown to be necessary' and poorer quality land should be preferred to higher quality.

6.15 In the absence of any current evidence and assessments, applications for solar energy developments should be considered on their merits and in accordance with national guidance and Local Plan policy. Key criteria/requirements for the consideration of solar energy proposals include:

- if the proposal involves the use of agricultural land – evidence that poorer quality land is being used and evidence to demonstrate the extent to which other sites for the development have been considered, particularly previously-developed land/non-agricultural land

[17] As required by the Town & Country Planning (Safeguarded Meteorological Sites) (England) Direction 2014
[18] Any mitigation is subject to an agreement with the Met Office to recover its costs for the work
[19] http://tools.decc.gov.uk/windspeed/cgi-bin/nre/noabl1.pl

- ensuring that installations are removed and land is restored to its previous use when the development is no longer required; a condition restricting the life of the development is likely to be appropriate
- the effect of glint and glare on the landscape, on neighbouring uses, and highway and aircraft safety
- the need for, and impact of, security measures such as lighting and fencing
- the scope for mitigating landscape and visual impacts through, for example tree planting and screening with native hedges

6.16 A Landscape and Visual Impact Assessment will normally be expected to accompany applications for solar energy developments. Such an Assessment would normally include:

- Baseline landscape conditions – including current landscape conditions, consideration of existing local landscape assessments, sensitivity and importance of the landscape
- Predictions of impact – including scale/magnitude of change to the landscape, a Zone of Theoretical Visibility, evaluation of direct, indirect and cumulative effects
- Significance of impact – including judgements made, sensitivity of the landscape and receptors, significance of impacts following any mitigation
- Mitigation – including measures proposed to avoid, reduce and remedy any significant effects on the landscape, how mitigation measures will be implemented

Cumulative impact

6.17 Cumulative impact of wind turbines, solar farms and indeed other renewable energy developments can be a difficult and subjective issue. Cumulative impacts are likely to occur when a number of developments begin to influence the overall character and perception of a particular landscape or area. Cumulative impact may result in an eventual limit to the extent of renewable energy developments in particular areas, or indeed in the whole Borough. .

6.18 Consideration of cumulative impacts can probably only be undertaken on a case by case basis in the light of information on existing baseline conditions, descriptions and visualisations of effects on key receptors, and relationships with both existing and proposed developments. While it is clearly important to support renewable energy projects this should not be at the expense of such developments beginning to dominate certain areas of the Borough and adversely influencing perceptions.

Criteria for consideration of other renewable energy developments

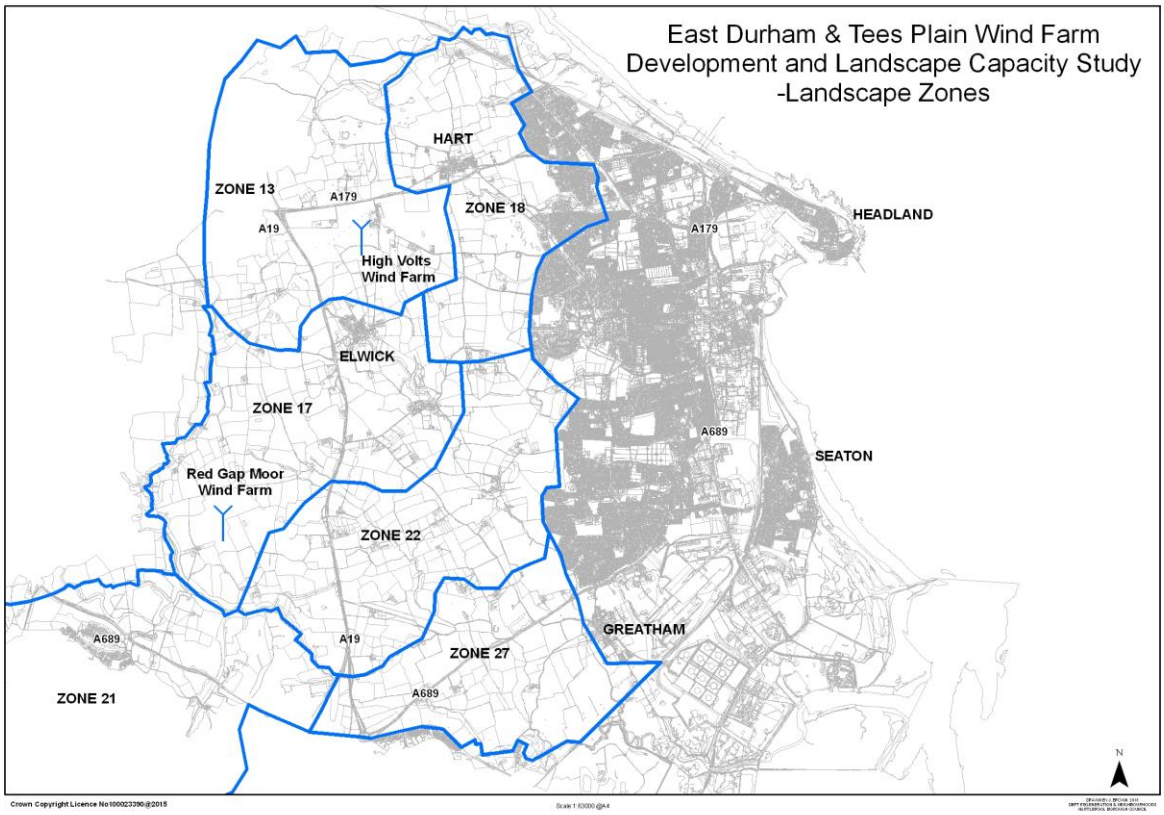
6.19 There may be applications for other types of renewable energy projects. Local Plan policy should make clear the criteria to be taken into account in considering renewable energy generation proposals. Criteria would need to include:

- Individual and cumulative impacts on the natural, built, historic and cultural environment, including buildings, features, habitats and species of national and local importance;
- Visual intrusion, including long distance views;
- Impact on amenity in residential and other areas, including air, dust, noise and odour;
- Potential impact on roads and traffic, especially relating to road safety concerns;
- Impact on air traffic, radar and telecommunications networks, and
- Securing community benefits where appropriate.

6.20 Where necessary appropriate compensation and/or mitigation measures may need to be provided.

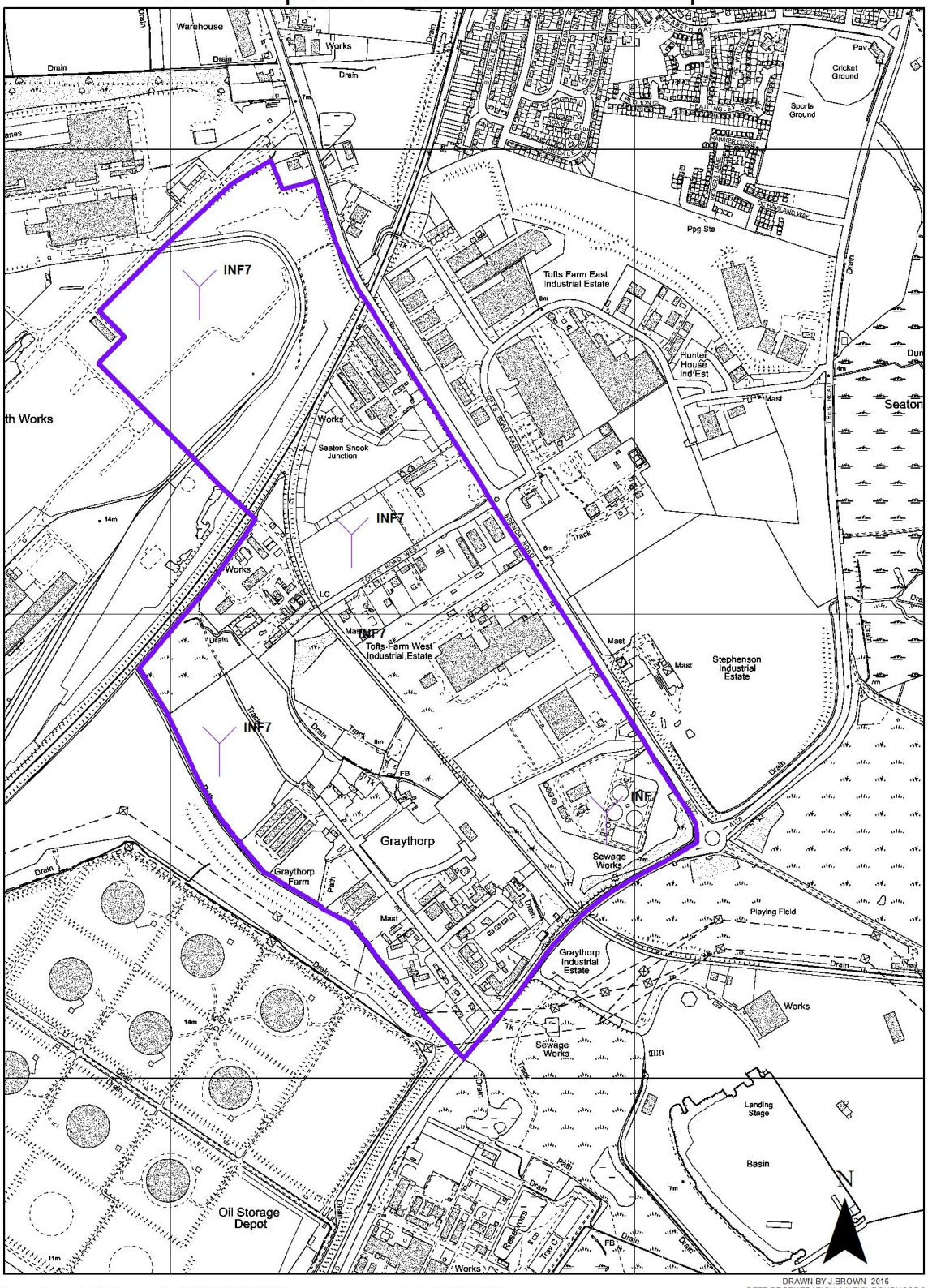
6.21 De-commissioning of renewable energy projects and restoration of the site will generally be secured by appropriate conditions.

Appendix 1


East Durham & Tees Plain Wind Farm
Development and Landscape Capacity Study
-Landscape Zones
HART
ZONE 13
A179
A19
ZONE 18
High Volts
Wind Farm
HEADLAND
A179
ELWICK
ZONE 17
A689
SEATON
Red Gap Moor
Wind Farm
ZONE 22
GREATHAM
A689
A19
ZONE 27
ZONE 21
A689
N
Crown Copyright Licence No100023390@2015
Scale 1:63000 @A4

Appendix 2

Area Proposed for Wind Turbine Development



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