

Report of	Meeting	Date
Director of Development and Regeneration	Development Control Committee	19 <sup>th</sup> June 2007

## **PROPOSED CHANGES TO PERMITTED DEVELOPMENT RIGHTS FOR HOUSEHOLDER MICRO-GENERATION**

### **PURPOSE OF REPORT**

1. The purpose of this report is to outline to Members the consultation paper on changes to permitted development rights for householder microgeneration and seek endorsement for the proposed responses to the paper.

### **CORPORATE PRIORITIES**

2. Developments relating to microgeneration will have implications for the Borough that relate to the Council's Strategic Objective of 'developing the character and feel of Chorley as a good place to live.'

### **RISK ISSUES**

3. The issues and recommendations made in this report involve no risk considerations.

### **BACKGROUND**

4. The consultation paper primarily sets out the Government's proposals to the planning system in relation to the installation of microgeneration equipment for domestic properties. The paper outlines the changes recommended in order to clarify and expand the scope of permitted development. The revised system would remove the need for planning applications on domestic properties but will also clearly outline what is permitted development and what will require planning applications to be made. These changes will be delivered through changes made to the Town and Country Planning (General Permitted Development) Order 1995 (GPDO).
5. The draft Planning Policy Statement (PPS) *Planning and Climate Change*, which was published for consultation in December 2006, sets out a clear and challenging role for regional and local spatial strategies on energy. These are expected to help shape the framework for energy supply in their area including, at local level, by expanding the scope for new development to gain a significant proportion of its energy on-site. The PPS states that planning authorities should include policies in their development plans that require a percentage of the energy in new developments to come from on-site renewables, where it is viable.
6. The Householder Development Consents Review (HDCR) was launched in January 2005 as part of the then Office of the Deputy Prime Minister's (ODPM) 5 year plan: *Sustainable Communities: Home for All*. The Review looked at ways of reducing bureaucracy for

householders seeking to improve their homes, while protecting the interests of neighbours, the wider community and the environment.

7. The HDCR Steering Group's Report made eleven recommendations. As a first stage the ODPM decided to examine how to reform Parts 1 and 2 of the GPDO, which cover what householders can already do to their homes without the need for planning permission.
8. Les Sparks and Emrys Jones undertook a study for the Review. They found that several categories of development require a planning application even though they have little or no impact beyond the host property and recommended the system be reformed using an impact approach based upon the height of a proposal and its proximity to the plot boundary.
9. While the Government wants to encourage the widest possible take-up of microgeneration by removing unnecessary regulatory barriers, it is concerned to ensure that the right levels of control are retained to protect the reasonable interests of neighbours, the environment and the wider community. Therefore, the recommendations also sought to address the impacts on amenity of domestic microgeneration technologies, including those of visual appearance, and the implications of any potential nuisances such as noise and vibration.

## **PROPOSED CHANGES**

### **Solar**

10. Solar microgeneration technology is by far the most common form of microgeneration equipment currently in use in England. There are two different types of solar system. The first is a water heating system, which uses solar energy to heat water and the second, is a photovoltaic system, which converts the sun's energy into electricity.
11. The installation of solar equipment is one of the existing grey areas with regard to permitted development. Solar water heating and photovoltaic systems are identified as sharing many characteristics that could have a potential planning impact. The approach proposed therefore does not differentiate between the two systems.
12. Solar equipment will generally be mounted on a building although it is possible for it to be mounted as a stand-alone unit. In relation to stand-alone equipment, the distance to neighbouring properties and overshadowing also needs to be considered in terms of the visual impact. There is little evidence of likely demonstrable visual harm being caused by solar equipment, other than on principal building elevations in protected areas. The proposals are therefore suggested that there should be a presumption in favour of the domestic installation of solar microgeneration equipment, subject to a limited degree of control to ensure that what impacts there are are acceptable.
13. The main restriction would relate to both solar panels on buildings and solar stand-alone installations and would also reflect the potential visual impact that may occur in a Conservation Area. The Government proposes that the installation of solar technology should not be permitted where it would face onto and be visible from a highway in such an Area. For listed buildings, irrespective of where they are located, it is likely that Listed Building consent would be required for solar, and indeed, most other forms of renewable energy capture and installations.
14. In relation to solar panels on buildings, it is proposed that such equipment should be considered permitted development subject to them projecting no more than 150mm from the existing roof plane or standing off no more than 150mm from a wall. In addition, in order to ensure that the visual impact is minimised, no part of the installation should be higher than the highest part of the roof. In relation to restrictions for the coverage of surface, it was suggested this should be limited so as not to exceed 60% of the roof or

wall. However, the Government decided that it is arguable as to whether there is a correlation between the extent of the coverage of panels and their visual impact and therefore it is proposed there should be no such limit.

15. In relation to solar stand-alone installations, the key additional issue is the dimensions of the unit and the positioning in relation to property boundaries. In terms of height, the existing limits of 4m in the GPDO for structures of this kind are proposed to be used. It is also proposed that due to the nature of the equipment and the potential of over shadowing on neighbouring properties, that development of this type should be no nearer than 3-4m from a property boundary. In the case where a stand-alone unit is in the front curtilage of a dwelling, the structure will be required to be set back 10m from a highway.

## **Heat Pumps**

16. Heat pumps extract heat from outside a building and release that heat usually at a higher temperature inside the building. The three main types are ground source heat pumps (GSHPs), water source heat pumps (WSHPs) and air source heat pumps (ASHPs), which, as the name suggest; extract heat from the ground, bodies of water and the air respectively.
17. A GSHP is used to extract heat from the ground for use in space and water heating and can also use the same process to supply cooling. These units take advantage of the Earth's constant temperature. The ground loop could comprise a trench system in which a pipe is buried, or a vertical system in which a borehole is drilled to a greater depth. Trenches can be laid into the ground at a depth between 1 and 2 metres.
18. A WSHP can either be a closed loop or an open loop. The closed loop comprises a pipe containing an anti-freeze mixture and similar to that used for a GSHP. A WSHP can be either submerged in a river or lake or be installed in the form of a vertical bore into a groundwater body. In the UK, the relatively stable temperature of groundwater of between 4-10°C means these pumps may well be quite efficient. An open loop is a bore that draws the water directly from an aquifer before the water is discharged into a separate well or returned as surface water.
19. A ASHP draws heat from the ambient air. If placed outside a building, their cheaper costs of installation might be offset somewhat by the variability in air temperature.
20. In relation to GSHPs and WSHPs the Government believes that the existing permitted development requirements are adequate for GSHPs and WSHPs and do not need to be addressed through any changes to the GPDO.
21. However, in relation to ASHPs, the visual impact needs to be considered. ASHPs are most commonly mounted at ground level or on a wall of the building in question, though, they may also be positioned on a balcony of an apartment or alternatively on a flat roof. The mounting is generally sited in an as discrete location as possible, considering also noise implications and airflow to the pump. Ducting may also be required to ensure the unit has a reasonable airflow, given that ducting is not attractive, it is proposed that guidance is also given as to the careful location of these units, which, should be acceptable on visual grounds. Taking this into account, the Government that the planning proposes restrictions on the installation of heat pumps should be limited to controlling such development in Conservation Areas where it would only be permitted if it does not face onto and not visible from a highway otherwise a planning application would be necessary it is proposed.

## **Wind Turbines**

22. Wind turbines are the third biggest form of domestic microgeneration in terms of potential. They are far less common than solar microgeneration and can be made at any size. If turbine technology advances, their contribution is likely to expand significantly especially as they are promoted more commercially and become more of a mainstream product. The power produced by wind turbines depends solely on the 'swept area' of the rotor. This means that a 'horizontal axis' turbine with a rotor diameter of 2m would produce roughly four times the power of a turbine with a 1m diameter rotor.
23. All types of wind turbines place a rotor into the wind flow. Faster winds contain more energy than slower winds. Winds also vary between heights above the ground, the higher above the ground, the faster the winds. This means that, traditionally, wind turbines are usually placed on tall towers. However, more recent turbines are designed to be sited on buildings.
24. Four main issues have been highlighted as areas for consideration with wind turbines: size and scale; safety; nuisance and the impact on bats.
25. A further consideration that needs more thought is the potential impact of domestic wind turbines on radar. The issue will be taken forward in parallel with this consultation and involve further work with the microgeneration industry, Defence Estates, the National Air Traffic Services and the Civil Aviation Authority.
26. The consultation document suggests the visual impact of wind turbines on the local landscape could be considered small if they were relatively small in size. In relation to stand-alone turbines, the height of the pole on which the turbine is mounted is a key consideration. Many local planning authorities consider the visual impact to be the key issue in relation to planning applications and turbines mounted on poles of up to 10m high are usually granted permission. It is therefore proposed that permitted development rights are set at that maximum level.
27. In relation to turbines mounted on buildings, the consultation document equates those that are up to 3m above the ridgeline of a property as being comparable to a stand-alone height of 10m. A protection of 3m is adequate in many circumstances, but would enable the turbine to be 'read' as part of the property thus reducing visual impact. In terms of diameter, 2m would be a suitable compromise between energy production and potential impact suggests the consultation document.
28. It is also proposed that the cumulative visual impact be considered such that only one turbine should be placed on a 'typical' dwelling. However larger blocks of flats (not house conversions) could accommodate four turbines without causing an undue impact. Buildings below 15m in height should only accommodate one turbine it is proposed, whilst buildings above 15m could accommodate four without needing to apply for planning permission.
29. Visual impact is not only determined by the size and number of the turbines but also by the proximity of the turbines. It is therefore proposed that stand-alone turbines should be located no nearer than 5m to a highway and 2m to a property boundary. However, given that topple has to be considered and that the maximum height of a turbine could be 11m, the Government is proposing this distance be set at 12m from a highway and 12m from a property boundary.
30. In relation to the issue of noise and vibration annoyance, the Government is proposing that limitations on noise are put in place to ensure that the potential impacts are controlled both internally and externally for neighbouring dwellings. The Government proposes a level deemed acceptable for vibration at the threshold of perception.

31. The issue of bats and turbines was highlighted earlier in this report and has been acknowledged that evidence does not exist to assist in determining the possible level of risk. All bats and their roosts are already afforded legal protection under the Conservation (Natural Habitats, &c.) Regulations 1994 and the Wildlife and Countryside Act 1981 (as amended), which has been enhanced through the Countryside and Rights of Way Act 2000. The Government believes this affords sufficient protection.

## **Biomass**

32. Biomass refers to all plant and animal material, although in domestic applications it more commonly refers to wood. The most frequent application is direct heating. Fuel sources are now readily available including wood from forests, urban tree pruning, farmed coppices, or farm and factory waste, and fuel can now be commercially sourced in the form of wood chips or pellets. Traditionally, logs can also be used.
33. Biomass has the advantage that it can be grown, stored and transported and although it emits carbon dioxide when burnt, it is considered close to carbon-neutral because the amount of carbon emitted when it is burnt is the same as that which is absorbed during growth. It is effectively recycling the carbon and avoiding consumption of carbon stored in fossil fuels.
34. Biomass heating is installed in the form of a single room heater or for multiple rooms as a boiler, which feeds into a central heating system. Biomass stoves are one of the most traditional methods of domestic heating to a living area. These can almost always be accommodated within a property and so do not need further permitted development rights.

## **Combined Heat and Power**

35. A combined heat and power (CHP) device simultaneously generates both heat and power and, when the device is an internal combustion engine, it is a mature technology widely used in industry. Recovering the heat from a power generating process leads to high overall efficiencies and, in a domestic situation, using micro-CHP means no electrical losses over transmission lines. A micro-CHP unit will be operated on the heating demand rather than the electricity demand of a household. It can provide space and water heating in residential or commercial buildings, similar to a conventional boiler. Biomass CHP units are available but are more difficult to scale down from industrial size. It is recognised in the consultation document that there are few planning considerations in relation to CHP.

## **Hydro**

36. Hydroelectricity generation operates by converting the potential energy stored in water to turn a turbine that then produces electricity. These schemes are very rare in a domestic context and very few would be sited within the curtilage of a dwellinghouse. Taking this into consideration, there is little scope to provide additional permitted development rights.

## **CONCLUSION**

37. It is considered that the changes proposed to the GPDO to take account of microgeneration should be supported so allowing householders to provide such improvements to their properties without the need to gain planning permission.

## **COMMENTS OF THE DIRECTOR OF FINANCE**

38. There are no financial implications associated with this report.

### COMMENTS OF THE DIRECTOR OF HUMAN RESOURCES

39. There are no HR implications to this report.

### RECOMMENDATION

40. That the comments are noted and the proposed responses to the consultation paper questions (in appendix 1) be endorsed.

JANE E MEEK  
DIRECTOR OF DEVELOPMENT AND REGENERATION

Background Papers			
Document	Date	File	Place of Inspection
Changes to Permitted Development consultation paper 1: Permitted Development Rights for Householder Microgeneration	April 2007	-	Union Street Offices
Department for Local Communities and Local Government: Householder Development Consents Review Steering Group Report	July 2006	-	Union Street Offices

Report Author	Ext	Date	Doc ID
Rachael Hulme	5283	18 <sup>th</sup> May 2007	

### Appendix 1 – Summary of questions

QUESTION	COMMENTS
<b><i>Question 1 – Do you agree with the principle of an impact approach for permitted development?</i></b>	Yes, it is important to have an impact approach for permitted development as microgeneration which is considered not to have a detrimental impact in terms of visual and noise annoyance currently needs planning permission in many cases, in these cases planning permission is almost always granted and would therefore take out the lengthy process where no detriment is caused.
<b><i>Question 2 - Do you agree with a restriction on development facing onto and visible from a highway in conservation areas and in World</i></b>	Yes, these areas are very important and the addition of a microgeneration system fronting onto and visible from a highway in these specific areas could easily cause detriment to the character of

<b>Heritage Sites?</b>	the area and therefore more control is needed to reduce any negative impact.
<b>Question 3 - Should the restriction apply in the same way to the other types of designated area?</b>	Yes, the restrictions should apply to all designated areas as these areas are designated to allow extra protection and control.
<b>Question 4 - Do you agree that the impact of noise should be dealt with by specific noise restrictions based on decibel levels at/in neighbouring dwellings in the way proposed in Annex 2?</b>	Yes.
<b>Question 5 - If not, what alternative approach would best address this issue?</b>	N/A
<b>Question 6 - Do you support a general restriction (on permitted development) so as to require that visual impact is minimised in exercising the rights?</b>	Yes
<b>Question 7 - Do you agree that local planning authorities should be able to restrict permitted development rights for microgeneration where the benefit from the technology is outweighed by its impact?</b>	Yes, it is important to minimise impact so local authorities should be able to restrict permitted development where the benefit from the technology is outweighed by its impact.
<b>Question 8 - Do you agree that the existing protection is adequate?</b>	No
<b>Question 9 - Is guidance sufficient to address the potential impact on archaeologically sensitive areas?</b>	Yes, there are separate controls to cover these.
<b>Question 10 - In addition to providing advice as to the scope of the changes to the GPDO, what could guidance also usefully cover?</b>	An explanation of what determines the efficiency of the different technologies so as to give an appreciation of necessary size and positioning of installations.
<b>Question 11 - Do you agree with the recommendations for solar microgeneration?</b>	Yes, these recommendations are appropriate.
<b>Question 12 - Do you agree that there should be no restriction in terms of the coverage of roofs and walls by solar panels? If not, what would be an acceptable percentage?</b>	Yes

<b>Question 13 - Generally, should the same level of permissiveness apply to solar panels on a wall as on a roof?</b>	Yes
<b>Question 14 - Do you agree with a minimum separation distance of 5m to the boundary of a highway or neighbouring property for a stand-alone solar unit?</b>	Yes
<b>Question 15 - Do you agree with the recommendations for heat pumps?</b>	Yes
<b>Question 16 - Do you agree that the likely impact of noise from ASHPs should be dealt with by specific noise restrictions in the same way as proposed for domestic wind turbines?</b>	Yes
<b>Question 17 - Do you agree with the recommendations for wind turbines?</b>	Yes
<b>Question 18 - Do you agree that the likely impact of noise from turbines should be dealt with by specific noise restrictions in the way proposed?</b>	Yes
<b>Question 19 - Do you agree with the recommendations for biomass?</b>	Yes
<b>Question 20 - Do you agree with the recommendations for CHP?</b>	Yes
<b>Question 21 - Do you agree there should be no additional permitted development rights for hydro?</b>	Yes