GP PLANNING LTD
ENVIRONMENTAL CONSULTANTS

The Stables
Long Lane
East Haddon
Northampton
NN6 8DU
T: 01604 771123
info@gpplanning.co.uk
www.gpplanning.co.uk

10 April 2014

Mr Peter Moor
Planning Services Department
Floor 3, Guildhall Road Block
County Hall
Northampton, NN1 1DN

Dear Peter,

Clarification on Dust Associated with the Proposed REGF at Pebble Hall Farm

Enclosed is a letter from GF Environmental which concludes that, if the proposed REGF is granted planning permission, the existing level of dust created at Pebble Hall will decrease. This is because the incoming wood material will be shredded to a larger particle size. The letter also comments on the potential construction dust and concludes that it is unlikely that dust will be an issue throughout the construction period.

The outside shredding of wood produces dust. However, it is stressed that the dust will not travel greater than a 200 metre radius. It is common practice to adopt a 200 metre distance, beyond which the potential for air quality impacts is significantly reduced. As the land within the 200 metre radius from the wood shredding activities is owned by the landowner of the wood shredding site, it can be concluded that dust will not be an issue for surrounding sensitive receptors (including Hothorpe Hall) and therefore this does not need to be assessed further. Experience of operating the wood shredding site during recent years supports this position, as does the lack of complaints to the Environment Agency since the operations commenced.

If this facility was located in an urban area, there would be a much higher potential for sensitive receptors to be located within a 200 metre radius, therefore making the development unacceptable due the impact on air quality. The Applicant has demonstrated in papargraphs 4.2.6 and 4.2.7 of the submitted Planning Statement that this facility should therefore be located in this isolated location, which has no sensitive receptors within a 500 metre radius of the site.

The Applicant is willing to accept a planning condition which requires a Dust Management Scheme to be submitted prior to the commencement of development, if necessary.

Please do not hesitate to contact me should you require any clarification on this.

Yours sincerely

Gill Pawson

Gill Pawson

8 Alcotts Green
Sandhurst
Gloucester
GL2 9PE
T +44 (0) 1452 730240
F +44 (0) 1452 730240
gfynes@gf-environmental.co.uk
www.gf-environmental.co.uk

20th April 2014

Re: Response to Consultation Comments Relating to Fugitive Dust Emissions from the Proposed Renewable Energy Generation Facility to be Built on the Welland Waste Management Site, near Theddingworth, Leicestershire

Introduction

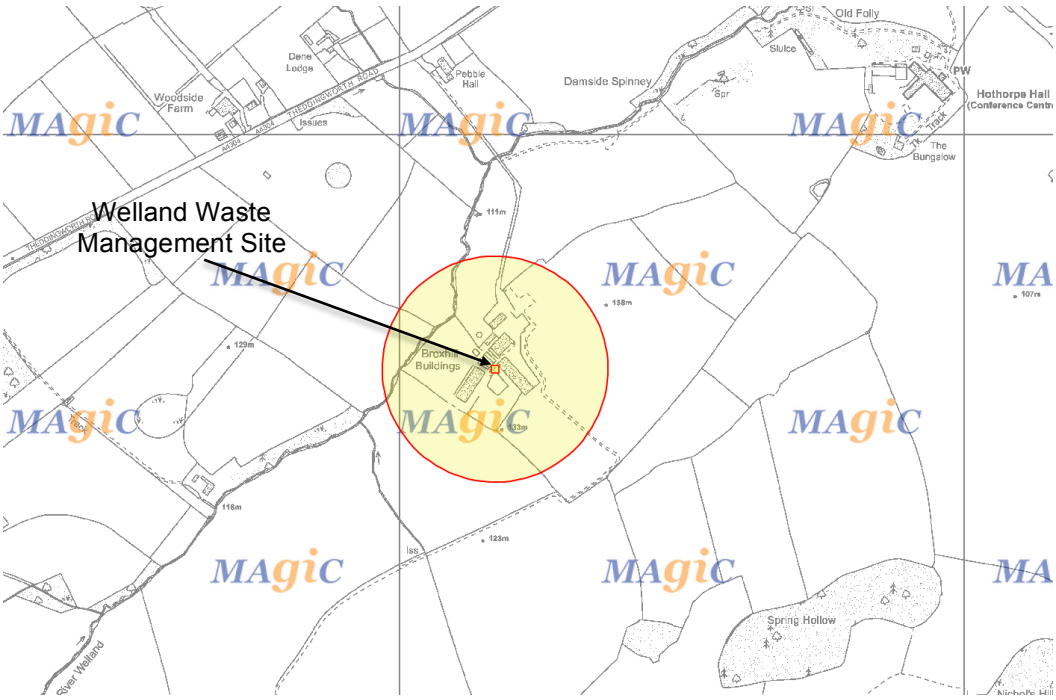
A planning application was submitted for a Renewable Energy Generation Facility (REGF) to be built on the Welland Waste Management site near Theddingworth, Leicestershire. Consultation comments have been received from Marrons Planning Ltd on behalf of the owners of Hothorpe Hall, located ~850 metres to the north east of the development site. Included in the consultation comments is a reference to concerns about the potential for fugitive dust emissions associated with the REGF.

The following document provides a response to those comments relating to the potential for fugitive dust emissions arising during the operation of the proposed REGF development. The document also comments on the potential for construction dust and concludes that it is unlikely that dust will be an issue throughout the construction period or operational period.

Existing Operations

Welland Waste Management currently operates a recycled wood processing facility on its Pebble Hall site near Theddingworth. Current practice associated with the consented activity of processing recycled wood involves a fine shredding process, in equipment that although not fully enclosed, is equipped with appropriate dust abatement capabilities. This finely shredded recycled wood material is then stored externally prior to being transferred into open trucks for onward despatch to third party sites. Although the trucks are sheeted prior to leaving the site, during the filling or transfer operation there is significant evolution of fine dust. These current activities are controlled such that the wind direction is monitored and activities stopped during periods when the wind blows from the site towards receptors.

Although it is acknowledged that the current practice of external shredding of wood produces dust, it should be stressed that the dust will not travel greater than a 200 metre radius. It is common practice for example when assessing dusty operations, such as opencast mining or quarrying activities, to consider that 200 metres is the maximum distance in which there is the potential for significant air quality impacts from the deposition of dust. As Welland Waste Management owns the land within a 200 metre radius of the wood shredding activities (see the map overleaf), it can be concluded that dust should not be an issue for surrounding sensitive receptors (including Hothorpe Hall). This conclusion is supported by the fact that there have been no complaints regarding dust as a result of the current activities at the Welland Waste Management site. Furthermore, the Environment Agency has received no complaints to date relating to dust from this site.



The lack of complaints, in spite of the dusty nature of the existing timber processing operations, demonstrates that the activities are managed more effectively by Welland Waste Management than would generally be the case in urban areas. It is not normally possible to control the activities to mitigate dust nuisance in an urban area by restricting shredding or transfer activities based upon wind direction, as receptors often surround the development and where it is often the case that the receptors are within 100 metres of the development.

Operational Impacts Associated with the REGF

As stated earlier, recycled wood processing is an activity that is currently consented and undertaken on site by Welland Waste Management. When operational, the REGF will utilise recycled wood as a fuel for a gasification-based power generation process, utilising the same biomass feedstocks that are currently brought to site for processing and onward despatch to third party sites. However, there is a major difference between current operations associated with the reception, storage and handling of the recycled wood feedstocks and how they will be managed by the REGF. Upon arrival on site, recycled wood will be delivered to the processing area as per current practice and then prepared, but the design intent is that the prepared timber fuel delivered to the REGF will no longer be stored externally on a routine basis, but will be transferred directly into the fuel reception hall. This is a fully enclosed building with appropriate dust suppression systems, which will minimise the potential for fugitive dust emissions to escape from the building and migrate off-site into the surrounding area.

With the introduction of the REGF, the particle size of the prepared timber will also be considerably larger than that currently produced (mean of 70mm rather than 20mm particle size) which will significantly reduce dust through the coarser size of particles generated, and through the amount of mechanical cutting needed to prepare the final fuel specification. Accordingly, the generation of process dust associated with the recycled wood shredding activities will be contained within an even smaller area within the Welland Waste Management site, than is currently the case with existing operations. Furthermore, once shredded the transfer of the shredded wood fuel will take place in enclosed conveyors into the REGF fuel reception hall, which is itself enclosed. So, although the REGF still requires shredded wood as a fuel for the power generation process, a much coarser size fraction is required, which reduces further the potential for the evolution of fine dust that could be a nuisance for nearby residential properties. The timber fuel size specification is governed by the selection of the Nexterra Gasification technology and would not be changed during the operational lifetime of the process.

Accordingly, the introduction of the REGF will have a beneficial impact on the potential for fugitive dust emissions into the area surrounding the Welland Waste Management site.

Construction Impacts

There is also the potential for fugitive dust emissions to arise during the construction phase of the REGF development, and Welland Waste Management will develop a Construction Management Plan, with appropriate dust control procedures to ensure that construction dust does not pose a nuisance threat to nearby residential properties. This construction management plan will be agreed with Northamptonshire CC before the commencement of construction.

Construction dust may be generated as a consequence of ground excavation works in preparation of the foundations for the proposed REGF development, and if the weather is dry during the construction period, then dust may be generated by the movement of vehicles on the site, remediation works, site clearance, cut and fill operations and grading works.

The potential for unacceptable impacts resulting from the deposition of construction dust is primarily dependent on the duration of exposure (i.e. construction duration) and separation distance from the source to receptor. It is common practice (in mineral planning for example[1]) to use a distance of between 100 to 200m from major sources as the radius within which there is the potential for significant air quality impacts from deposition of dust.

The nearest receptors where local residents may be exposed to emissions from the proposed development are ~0.8km to the north-east of the site at Hothorpe Hall. Accordingly, if significant quantities of dust were to be generated as a result of on-site construction work, then deposition rates at Hothorpe Hall are likely to be low, and unlikely to constitute a reasonable cause for nuisance complaints. Irrespective of this, Welland Waste Management and its civils contractors will apply the principles of the industry best practice to ensure that the potential for fugitive dust emissions is minimised, and is not a cause for nuisance complaints from neighbouring properties.

To prevent unacceptable impact from dust re-suspended by construction vehicles, mitigation measures could be employed if necessary (on the road network, for example). These would be selected with regard to best practice guidance[2], and may include as appropriate: damping down dusty surfaces; controlling the speed of mobile plant crossing un-surfaced areas; mechanical road sweeper on public road; covering HGVs carrying dusty materials. The residual impact at the nearest residential properties is expected to be negligible. These procedures will be written into the construction management plan.

Should any activity associated with the construction phase of the REGF cause or appear likely to cause visible dust to be carried towards any sensitive boundary, particularly at nearby residential properties, the activity giving rise to the emissions will be modified or suspended until the conditions giving rise to the emissions have been resolved. Similar procedures already apply to windblown litter that may arise on site. These practices are already undertaken at the site and there have been no dust complaints associated with existing operations.

The following specific mitigation measures may be appropriate for the control of fugitive dust emissions during the construction of the REGF:

- In order to prevent dust nuisance to adjoining premises during dry weather, there should be adequate screening and damping down during all restoration works, clearance works and other site preparations;
- Haulage routes to and from the development site should be watered as necessary to minimise dust nuisance, and should be stabilised/compacted to reduce off-site transfer of soil and other materials;
- Paved roads near to exits should be kept clean and vehicles transporting dusty materials onto and off site should be covered;
- All vehicles leaving the site should be inspected and cleaned as necessary, and suitable wheel wash equipment should be provided at site entrances and exits;
- Storage locations for potentially dusty materials must be located away from the site boundary;

[1] Minerals Policy Statement 2: Controlling and Mitigating the Environmental Effects of Mineral Extraction in England, Annex 1:
[2] Greater London Authority, Best Practice Guidance The control of dust and emissions from construction and demolition

- As far as possible, site vehicles should have vertically mounted exhausts to avoid re-entrainment of surface dust;
- All site traffic should keep to designated haul routes to reduce the break down and subsequent entrainment of fine material into the atmosphere.

Accordingly, fugitive dust emissions during the construction phase of the REGF are expected to be minimal.

Conclusions

The introduction of the REGF on the Welland Waste Management site near Theddingworth will significantly reduce the potential for fugitive dust emissions from the existing consented activities associated with the reception, storage and handing of recycled wood. Current operations are managed effectively by Welland Waste Management, with no reported complaints about dust deposition at nearby receptor locations, including Hothorpe Hall.

Although the REGF will utilise the same wood processing facilities that are currently employed on site, the wood gasification process requires a much coarser feedstock, which will reduce considerably the amount of dust generated by the shredding process. With all materials handling and storage operations undertaken within fully enclosed conveyors and buildings, the introduction of the REGF will have a beneficial impact on the potential for fugitive dust emissions to migrate into the area surrounding the Welland Waste Management site.

Potential dust impacts associated with the construction of the REGF will be controlled effectively by a Construction Management Plan that will be agreed with relevant authorities prior to the commencement of construction.

Geoff Fynes

Via e-mail
Geoff Fynes