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Committee Chair  
Public Accounts Committee

[SeneddPAC@assembly.wales](mailto:SeneddPAC@assembly.wales)

20 February 2020

Dear Chair,

**Re: Natural Resources Wales progress**

Thank you for the letter from Darren Millar AM dated 31 January following NRW's recent appearance at the Public Accounts Committee. I am pleased the committee recognises the progress we have made in addressing issues previously raised by Auditor General Wales.

In your letter you asked for additional clarification relating to what mensuration data we hold and how we use it.

**Details of the methodology used by NRW to estimate the likely timber yields in coupes to be sold.**

We follow UK forest industry standard conventions for timber mensuration, and sell all produce by weight in tonnes. This approach ensures a standard methodology is understood by both customer and the forest grower, and the sale by weight ensures that all produce uplifted from the Welsh Government Woodland Estate (WGWE) is paid for by the customer, to ensure we attain the market value at that time for all produce supplied.

Whilst we transfer the risk to the customer of timber harvesting and obtaining the highest value products from each crop of trees sold, the sale by weight ensures that we obtain income from every tonne of timber produced, irrespective of the estimated measurement of timber to be derived from a site which is used at the sale point. Our current timber sale method is via open competition and thereby ensures we attain the highest current market value for the products sold at the time of sale.

We use the industry measuring conventions as prescribed in Forest Mensuration, A handbook for practitioners (Second Edition 2006), Forestry Commission. This is the standard used in the UK and is the taught method for industry professionals. Our Timber Measurement Field Guide 2008 FC49 is an abridged version of this Handbook. We measure our clearfells using the Abbreviated Tariff AB6 method. Both Forestry England and Forestry and Land Scotland use the same AB6 method by default and also

publish the measurement method in the sales particulars. This method gives a 95% confidence interval of +/-20% accuracy in volume and product assortment (p96). A B6 is one of the less accurate methods but is cheaper.

The more variation in a parcel (species, age, yield class), the greater the chance of falling outside of the 95% confidence interval. A more expensive full tariff method will give a +/- 12% accuracy to 95% confidence. There is a slight variation in our approach to thinning measurement across NRW, but teams still use conventions as described in the Handbook.

### **The reasons why the estimated timber yield specified in many Standing Sales+ contracts varied significantly from those achieved in practice (see paragraph 2.8 and Table 6 of the Supplementary Memorandum).**

Typically, timber chosen for standing sales plus contracts includes low value and poorer quality crops therefore the expense of tree measurement will have been less than for a higher value parcel of timber. This practice would further lower the confidence limits of accuracy.

In respect of figures provided to Wales Audit Office on this subject in March 2019, the figures provided were a snapshot at that point in time and did not account for accruals within the finance system. Therefore, the anticipated volume and income for financial year 2019/20 were higher than the actual obtained during this current financial year.

Only once the final settlement and despatch of timber from each contract is administered do we obtain a final figure to enable contract closure. This gives us assurance that we obtained the unit value of all timber sold for all timber harvested from a given site.

### **The extent to which NRW's approach to mensuration is industry standard, i.e. is the same methodology used by the Forestry Commission and Forestry and Land Scotland?**

As explained above, we use the same as both Forestry England and Forestry and Land Scotland.

### **How is NRW doing to improve the quality of the mensuration data it holds.**

We have amended our new terms and conditions for timber sales contracts to offer an estimate of volume in a given stand of timber. The customer is responsible for satisfying themselves with regards to the quantity and quality of timber supplied, and so we transfer the risk to the customer, although we retain the assurance of being paid for every tonne of timber harvested from the WGWE.

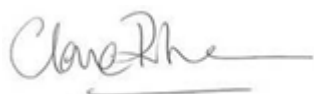
We have a dedicated all Wales team who undertake the timber measurement assessments and surveys, to ensure consistency of accuracy. Our all Wales team have already identified new technology and importantly some areas for improvement in respect of recording of data. Examples include sub compartment data base records and adoption of new technology such as measurement tree calipers.

In response to improving the timber mensuration and wider forest survey data, our All Wales survey team have undertaken a framework supplier tender for the provision of new survey technology and delivery of the timber mensuration demand on the WGWE. Without dismissing the long-standing traditional contract resource, the invitations to tender have been distributed wider to include the new technology such as light detection and ranging and satellite imagery.

In the short term the intensity of timber measurement is now based on the predicted value of a given stand. The higher the value of timber the higher density of measurement of trees, and subsequent greater confidence in accuracy of measure.

I hope this explanation is helpful and provides the necessary information you requested.

Yours sincerely,

A handwritten signature in grey ink, appearing to read 'Clare Pillman', with a horizontal line underneath.

Clare Pillman  
**Prif Weithredwr, Cyfoeth Naturiol Cymru**  
**Chief Executive, Natural Resources Wales**