

Ref: TC 19120

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22nd May 2019

Dear [REDACTED]

RE: Species identification.

Introduction

We confirm receipt of one hardwood specimen you sent to us for species identification, which we understand was taken from a timber window at Crescent House, Golden Lane, London. We understand the window the specimen originated from was installed between 1958 to 1962, and that the purpose of identification is to aid in the like for like replacement of timbers.

Scope of work

To carry out species identification of one hardwood sample received by BM TRADA.

The analysis will be carried out by way of microscopic analysis of wood anatomy. Note that it may not be possible to identify the species of a timber sample, in the absence of flowers, leaves and bark. It may only be possible to identify the group of species, genus or family of a timber sample.

To produce a report summarising our findings.

Procedures

The specimens were examined visually under a x10 hand lens to determine the gross features of the timber. Thin sections were then cut from the specimens from the radial, tangential and transverse planes and examined microscopically in order to determine the anatomical features present.

The features identified were then compared with published information and with reference timber samples held by BM TRADA.

It should be noted that there are several hundred timbers of commercial importance. Identification of individual species cannot always be made with certainty on the basis of microscopic analysis of a wood specimen alone (i.e. without leaves, bark or fruits etc.). Therefore, when comparing and matching features with published information or reference specimens, identification has been made based upon a level of confidence as follows:

- **Highly confident.** The features found closely match those of a single species, and the specimen also closely matches our reference samples of that species in colour and figure.
- **Confident.** The features found generally match those of several species. The specimen closely matches one of these species in colour, figure and features and our reference samples.
- **Fairly Confident.** The features found generally match those of several species. The specimen most closely matches one of our reference species samples colour, figure and features. However, features could not be found which would provide clear distinction between one of the possible matches.

We have also taken into consideration background information and historical data to assign the confidence level.

Findings

The characteristics of the specimen identified by further microscopic analysis were consistent with *Entandrophragma* spp.

There are a dozen *Entandrophragma* species. Distinction between some of these species is difficult, but possible, on the basis of microscopic analysis of anatomical features. Additionally, some distinction between *Entandrophragma* species can be made upon the basis of wood density.

The anatomical features present, and the density of the specimen at 680 kg/m³, was found to be most consistent with the following two *Entandrophragma* species:

- *Entandrophragma cylindricum*, commercially known in the UK as sapele, which has a published average densities of 640kg/m³ and 700kg/m³.
- *Entandrophragma utile*, commercially known in the UK as utile, which has a published average densities of 590kg/m³ and 660kg/m³.

Sapele and utile are moderately durable timbers, both of which have established use in exterior doors and windows in the UK.

Making distinction between sapele and utile is difficult and cannot be done by microscopic analysis of a wood sample. Whilst the density of the specimen was more consistent with published values for sapele, this alone is not sufficient to differentiate between the two timbers given that the published values are average, and not absolute values. Some further distinction may be made by odour. Sapele is reported to have a distinct 'cedar' like odour when processed, which was present in the sample. Utile is reported to *generally* lack this odour. In our opinion, both the presence of the cedar like odour, and the density of the sample, indicate the specimen was sapele.

Therefore, on the basis of the above, we are 'confident' that the sample is *Entandrophragma cylindricum*, commercially known in the UK as sapele

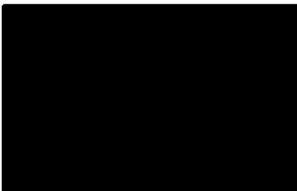
Conclusions

BM TRADA conclude the following:

- The specimen had anatomical features and characteristics consistent with *Entandrophragma cylindricum*, commercially known in the UK as sapele

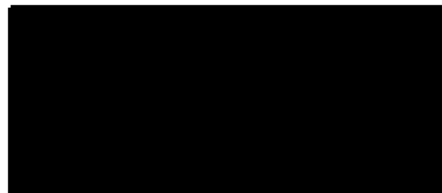
If you have any questions regarding the above, please let us know.

Yours sincerely,



Technical Officer

Authorised by:



Senior Technical Consultant