NORLOG PRICE: - includes 115x135mm T&G interlocking log walls or 150mm round log, outside walls insulated, and finished with log panel. (Other log sizes ranging from 45mm to 250mm thick are available), Roof construction with all necessary, rafters, roof boarding and insulation; all windows complete with double or triple glazing; solid pine panel doors, 28mm flooring, floor joists and insulation, skirting, architraves.

OTHER TRADES PRICE

Includes: foundations; internal plumbing; electrics; cleaning & painting; and roof finish. In most situations it may be more economical to have these done by local tradesmen.

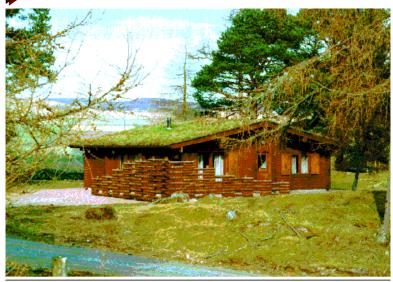
Not included: kitchen units, wardrobes or other fitments; the external groundworks; drains;



water supply; access roads etc. These can vary considerably depending on site conditions and accessibility.

PAYMENT – 30% of Norlog Cost must be paid at time of ordering the building, on receiving this manufacture starts in the mill, delivery is around 7 weeks from this time. A further 45% is due as materials arrive on site; rest due on completion of Norlog part. As per our Norlog Order Sheet and Conditions. Any other method of payment may be acceptable subject to us being notified prior to costings being given, as it may affect the price. 2% per month interest will be charged on all overdue payments. Legal ownership of all goods will only pass when payment in full has been received.

NORLOG



Norlog House Built in Kirkmichael 1994

Norlog Ltd

Kirkmichael, Perthshire PH10 7NY *Tel.* (01250) 881321 *Mob.* 07748 186806

*E- mail: jdrattray@hotmail.*co.uk

<u>http://www.norlog.co.uk</u> Reg. OfficeTigh-na-Bruaich,Kirkmichael, Perthshire PH10 7NA. Reg in Scotland No 168686

GENERAL INFORMATION FROM JAMES RATTRAY

I have been constructing Log Cabins for more than 40 years, in Britain and Ireland. The buildings vary from one of the largest log buildings in Europe for the Wildfowl Trust at Martin Mere in Lancashire, to the smallest - ski club huts at Glenshee, Perthshire. Sites have ranged from the remote west coast of Scotland to the city streets of London, and they blend in equally well in either situation. Buildings are individually designed to suit both client and site. Most buildings are permanent homes, but also club, recreation and holiday buildings. We mainly used Norwegian Logs, but are now using Estonian logs. This mill gives us a larger range of Round Square or laminated logs.

A certain amount of movement and settlement of the building takes place after erection due to natural drying out and shrinkage. This must be accurately calculated and allowed for during construction and requires specialist skill and experience. Without this necessary experience, serious structural problems will almost inevitably arise, many of which will not be evident until it is too late for any remedial action to be taken. The allowance for shrinkage varies depending on the moisture content of the logs, at the time they are built. The Norwegian logs would be around 30%, the Estonian logs are around 18%, and laminated logs below 10%. Wood shrinks and swells as it gives up and absorbs moisture. It does not matter if it is kiln-dried, air-dried or green, log homes are going to settle. The sensible thing to do is design for that settlement.

Anyone wishing a log home should visit as many different log buildings as possible - old and new - and if possible discuss any problems there may be with log home owners. It is important to protect the buildings from extreme weather conditions. On extremely exposed sites it is important to grow bushes, or erect some sort of trellis clear of the building, to break the wind speed, which would give the logwork additional protection. Or certain sealants may be used at this time.

NORLOG

HEALTHY LIVING

In an effort to produce a healthy environment in which to live, we feel that a log home is a good start. Our skin, the 'first skin', breathes in order to keep us healthy - ideally, our clothes or 'second skin' should 'breathe' therefore we try to wear clothes made from natural materials - the same goes for our 'third skin', our home. Therefore rather than lining the house with plastic vapour barriers and sealing us in, a log house breathes and allows air and moisture to pass gradually through its 'skin'. In passing through wood, air is filtered and purified because, like wool, wood has a detoxifying effect. Wood even removes unpleasant odours quickly.

Although the introduction of plastic vapour barriers and draughtproofing has come about from a need to conserve energy, there comes a point when it defeats the purpose of healthy living - causing probably many illnesses, particularly respiratory.

Timber as a building material uses less energy to produce and is stronger than many other materials. It is completely recyclable and biodegradable at the end of its use.

Timber floors need little in the way of maintenance by chemicals for cleaning and electricity use for removing dust and dirt - they can be swept clean using brushes and mops etc.

The turf sheet is a high tenancy PVC coated polyester fabric, with a temperature resistance of -30°C to +70°C, tested to BS3424, and is a rot-proof, waterproof material necessary to protect your house form the elements. The turf has further insulating properties and also slows down any temperature changes that can occur, the weight of the turf giving a tightly sandwiched roof. One of the advantages of turf is that the earth is a natural moderator of temperature. Below the frost line the temperature remains fairly constant and is usually close to the area's average annual air temperature. The soil slows the passage of heat gained or lost.

Wood and the Environment - Wood creates no environmental problems. It improves the climate: gives off oxygen; absorbs carbon dioxide; increases air humidity; filters air; entails no health problems; and can be re-used when it has served its purpose.

After manufacture has taken place, our complete order is then shipped from the mill direct to the site in the UK in 13 metre trailers.



It is essential that all ground works etc. are completed by this stage, and the site cleared up to help keep the logs clean. A rough terrain forklift is then required to off-load the logs; they are then laid around the site ready for construction.

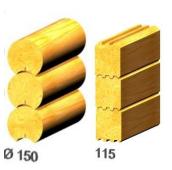
Foundations - A simple concrete raft is all that is necessary to support all the log walls, as the load is spread evenly throughout the structure

Thank you for looking through our brochure. If you have any questions, please do not hesitate to contact us. There are a selection of log cabins here in Kirkmichael, which we would be pleased to show anyone interested. Please phone to arrange a suitable time.

NORLOG

Log homes are usually found in the coldest parts of the world - the mountains of Scandinavia, Russia, Austria, Canada etc. The main reason for this being their ability to hold and re-radiate heat - and their ease of construction under difficult conditions.

• Norlog Construction is the modern precision-machined version



of the long established system of log construction used in Scandinavia for centuries. Each log is planed from Pine or Spruce trees. The Square Logs have tongued and grooved sections to lock them together, while the Round Logs have saddle joints, with halvings machined into the logs at each intersection.

- Treatment of Logs: The logs are treated against fungal and insect attack before leaving the mill. After erection, they then require to be cleaned then treated externally with a good quality preservative with desired colour. Internal surfaces of the log building should be treated with a clear flame retardant. We are stockists of Albi Flame Retardant and this can either be matt or gloss finish normally a matt finish is preferred. We can either supply these for your own application, or we could apply them if necessary.
- Roof: The roof can be finished in a variety of different ways, but generally speaking a heavy roof is desirable for the correct settlement of the structure. A turf roof, laid on a special turf sheet is the most satisfactory method - concrete roof tiles and other coverings can also be used.

The enclosed plans will give you an idea of cost per size. You can send me a sketch with dimensions of the layout you wish and I will send back a plan with costing.

NIXON



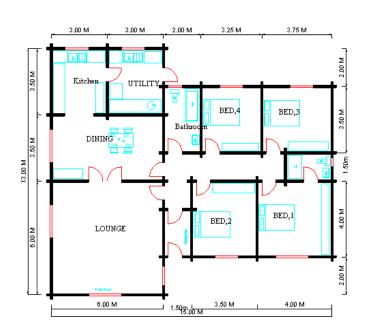
Costings at Jan 2009

House built in 1989 in Kent

Norlog - £114,480 Other Trades - £23,400

Total - £137,880

Floor Area: 159m²



NORLOG

VIKING



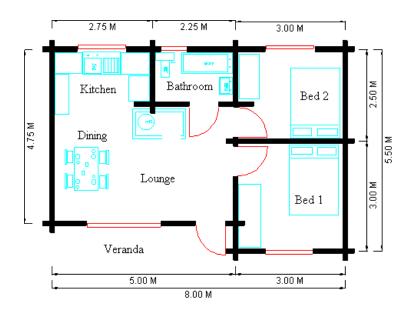
Costings at Jan 2009

Holiday Chalet built at Glenshee

Norlog - £35,936 Other Trades - £13,253

Total - £49,189

Floor Area: 43m^2



NORLEISURE



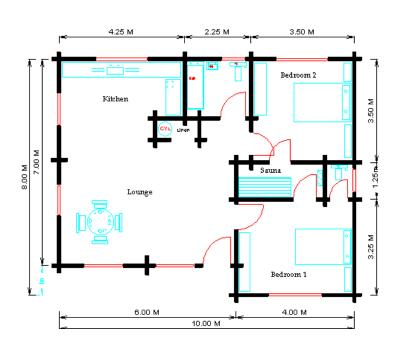
Costings at Jan 2009

House built in 1989 near Forfar for Mr S Gibb

Norlog - £59,200 Other Trades - £16,224

Total - £75,424

Floor Area: 80m^2



NORLOG

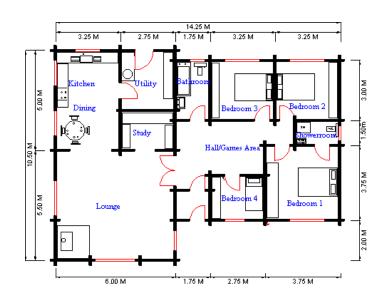
STEWART



Costings at Jan 2009

Norlog - £89,139 Other Trades - £20,780 **Total -** £109,919 House built in 1990 at Spittal of Glenshee for Mr & Mrs Stewart

Floor Area of 129m²



NEISH

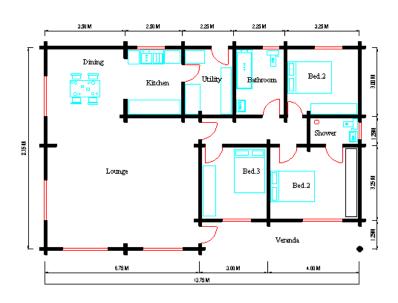
Costings at Jan 2009

Norlog - £83,127 Other Trades - £19,500

Total - £102,627

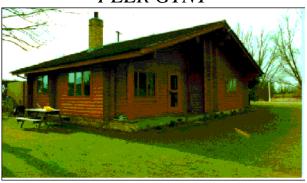
House built in 1986 at Glenborrodale for Mr & Mrs Neish

Floor Area: 121m²



NORLOG

PEER GYNT



Costings at Jan 2009

Norlog - £63,888

Other Trades - £15,600

Total - £79,488

House built in 1979 at Landbeach Lake, Cambridge for Mr C Gazeley

Floor Area of 84m²

