

## CHAPTER 19

### Forest Road Scheme

#### 19.1 Scope

The Forest Service provides grant aid for the construction of development/management and harvesting roads.

Forest road construction should be compatible with the code of best Forest Practice and Forest Service environmental guidelines.

#### 19.2 Forest Roads Manual

COFORD has produced a forest roads manual in conjunction with the Forest Service and industry partners. This comprehensive manual sets out a range of specifications for forest road construction across all site conditions found in Ireland. Companies and individuals involved in forest road construction should familiarise themselves with the contents of this manual.

#### 19.3 Management Roads

Management roads are constructed to enable vehicle access for managing forests. These roads are normally constructed before planting, although some may be built prior to canopy closure. Their purpose is to facilitate management and are also very important for safety and for fire fighting vehicles. Management roads will ultimately become part of the harvest road infrastructure.

Management roads should be constructed to the same design criteria as harvest roads, and will be subject to the same construction standards.

At design stage for a management road, consideration should be given to its intended future use. All decisions should be documented.

#### 19.4 Harvesting roads

In order to facilitate the successful thinning and clearfell of a forest crop, access by timber trucks is essential. The optimum road density for a given site is dependent on a number of factors such as volume of timber to be harvested, road construction costs and extraction method used. The economics of road building dictate that roads are built just before harvesting. The Forest Service grant aid harvesting roads to a density of 20m/ha or equivalent grant rate per hectare.

In order to assess a harvesting road application the following criteria are used:

- Timber must be ready for harvesting within the next 5 years.
- The length of road that will be grant aided is based on the total area of the plantation and the presence of existing harvesting roads.
- Grant aid will not be given in excess of 20m/ha or €571.40 /ha.
- Applicants may build roads in excess of 20m/ha to harvesting standard but grant aid cannot exceed €571.40 /ha, subject to costs.
- Existing roads within a plantation may require upgrading at the time of harvesting and this will be grant aided.

## 19.5 General Roading Issues

The following points should be considered in relation to forest roading:

- The forest road grant scheme is intended for forest purposes only.
- Access roads and internal roads are treated in the same manner from a grant aid point of view.
- Cooperative ventures involving joint or shared access between adjoining forests is advised.
- All proposed new entrances/lay-bys should be discussed with the county council local engineer and written approval supplied.
- For all applications adjoining a public road, a bellmouth entrance will be provided for as a minimum i.e equivalent to grant aid for 30m.
- For difficult sites or areas greater than 20ha, an approved forester must include specifications drawn up by an engineer and works should be appropriately supervised.
- Consideration will be given to increased funding where special construction works are involved as specified by the engineer.
- Consultation with prescribed bodies may be required in certain instances (see table 18).
- Co-operative road building involving more than one forest owner is encouraged

## 19.6 Access/rights of way

Prior to initial establishment, issues relating to plantation access and rights of way should be identified and resolved. Ideally the minimum width of access routes should be 7m.

## 19.7 Application Procedure

### 19.7.1 Approval

Before work commences on site written approval from the Forest Service must first issue. The following should be submitted to the Forest Service:

- Relevant sections of Form 1 and Form 1 Roads insert (signed by the applicant and an approved forester and where applicable an engineer/surveyor)
- Location map, 1:50,000 discovery series
- Roads Map (or Copy of Certified Species map with Roads label attached). This map should clearly delineate area to be served and length and position of proposed road. It is important that the entire length of the proposed road is clearly identified to allow the Forest Service to determine if referral to outside bodies is required. Plots should be highlighted on the species label and map which the road will serve. Use colour green to highlight areas served by management roads and blue for harvesting roads.
- For harvesting roads and management roads applications where no certified species map is available supporting inventory data must be supplied.
- Copy of current Biodiversity Map
- Relevant engineers specification where required.

Following a satisfactory site inspection from a Forest Service Inspector written approval with recommendations will issue.

## 19.7.2 Payment

Following completion of the site works, the following should be submitted to the Forest Service:

- Form 2 and Form 2 roads insert (signed by the applicant and an approved forester and where applicable an engineer/surveyor)
- Location map, 1:50,000 discovery series
- Certified Roads Map. This map should accurately represent the position and extent of completed forest road construction works for which grant aid is claimed. Where the services of an engineer /surveyor have been engaged at design stage, completed works must be certified as having met the specified standard. (See mapping convention below)
- Statement of Costs (detailing quantities of materials used and man hours)
- Invoice(s), Where works are carried out by the applicant a statement of the costs claimed for his/her own labour must be provided detailing the hours worked and cost per hour
- Current tax clearance certificate(s) or a C 2 Certificate for contractor(s) used
- A valid Mandate (where the grant is mandated to a contractor or bank). The requirements for mandates are listed in Appendix 2 and sample Mandates are included at Appendix 3 and 3A.

To facilitate field inspection, completed/upgraded harvesting road length should be marked on the ground using coloured wooden pegs, 1m in height. Lengths of newly constructed road should be marked using red pegs. Lengths of newly upgraded road should be marked using blue pegs.

## 19.8 Forest Road/Track Mapping Conventions

- Proposed management road and length to be shown with a dashed red line lettered ( i.e. A - - - - B )
- Proposed harvesting road and length to be shown with a dashed black line ( i.e. A - - - - B )
- Proposed upgraded forest road to be shown cross and dash black line ( i.e. A x-x-x-x B )
- Existing forest roads to be shown by a continuous black line ( i.e. ————— )
- County road to be shown by broken black line. ( i.e. — · — · — )
- Harvest area (area to be harvested within the next five years) to be served by the proposed harvest road to be clearly coloured with a blue highlighter.
- Management area to be served by the proposed management road to be clearly coloured with a green highlighter.
- Supporting Inventory Details. A copy of current updated certified species map with plots and ages highlighted is sufficient. If forest was not grant aided and no certified species map is present applicant must submit a map showing plots served, age and species composition.
- A current updated Biodiversity Map identifying key features which must be identified and protected before road construction works begins.
- Sites of special construction works to be lettered and identified on the information label attached to the road map.

Table 22. Forest road specification

Feature	Dimensions and Comment
Tree Clearance	15 metres minimum
Interceptor Drains	2 or 3 excavated drains minimum of 3m from upper edge of roadway
Gradient	Maximum 1 in 10 on straight sections or 1 in 12 on curves.
Horizontal curves	Minimum radius 20 metres
Formation Width	Minimum 5.5 m on flat cross sections. Variable on side slopes with proviso that at least 4 m of total width is on solid parent material.
Camber	200 - 300 mm for mineral soils and shallow peats Not less than 300 mm for deep peats
Formation Work	(i) Strip organic/ peat soil over a minimum width of 7m (ii) Excavate and camber sub-grade material (iii) Grade and compact with a vibrating roller (iv) Provide stream and formation run – off culverts at 40 to 100 m intervals
Carriageway Width	3.4 metres with a 100 mm camber
Pavement	Base course & surfacing or combined single course
Bearing Capacity	Must be able to withstand a gross vehicle weight of 38 tonnes
Turning circle for bell mouths and internal T-junctions	Adequate for timber truck minimum 12m radius turning circle

## 19.9 Grant Rates

Grants of up to 80% of the cost incurred in the construction of a forest road are available subject to the maximum described in the table below. Applicants may build roads in excess of the density below to acceptable standards but grant aid will not exceed these maximum rates per hectare.

Road	€ / Linear metre	€ / Ha	Density (metre/ ha)
Harvesting	28.57	571.40	20
Harvesting upgrade (where development road grant was previously received)	28.57	371.41	13
Development and Management	28.57	199.99	7
Bell Mouths*	28.57	857.10	30

\* All plantations, irrespective of size, are eligible for grant aid to construct a bell mouth equivalent to 30m