



Forest Research

The Research Agency of the Forestry Commission

TECHNICAL DEVELOPMENT

Timber Miles

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Background

- *The Validity of Food Miles as an Indicator of Sustainable Development* (Report for DEFRA 2005)
- *Changing our ways - Scotland's Climate Change Programme* (Scottish Executive 2006)
- *The Scottish Forestry Strategy* (FC Scotland 2006)
- Current surveys commissioned by FC Scotland

Food Miles

- HGV data from the Department for Transport
Continuing Survey of Road Goods Transport
- Food transport accounts for 25% of UK HGV activity
- HGV food *tonne miles* have increased dramatically
- No equivalent increase in *vehicle miles*?
- Centralised processing and distribution
- Larger vehicles and improved load factors
- Environmental impact measured in *vehicle miles*



Scotland's Climate Change Programme

- Target for forestry sector to deliver annual savings of 0.6 Mt Carbon by 2010, rising to 1 MtC by 2020
- through afforestation, biomass energy, wood as a *substitute for energy intensive building materials and timber miles*
- Strategic Timber Transport Scheme
- development of local timber processing
- *use of wood as a local fuel*

Scottish Forestry Strategy

- Increase awareness of the forestry sector's contribution to tackling climate change
- Develop *a sound evidence base* for monitoring
- Promote predictable and stable timber supplies
- Encourage more use of timber
- *Increase timber supply chain efficiency*
- Indicators include an *index of roundwood road miles*



Data Sources

- Supplier data (Volume removed to destination)
- Processor data (Weight delivered from origin)
- *Haulier data* (Routes, loads and empty running)

Data Sources

- Department for Transport (DfT)
- Vehicle and Operator Services Agency (VOSA)
- ConFor and Timber Transport Forum
- Road Haulage Association
- Freight Transport Association
- Forestry Contracting Association
- Forestry Commission Economics and Statistics
- Forest Enterprise Scotland

Approach

- Cover letter to set out rationale for survey and request co-operation
- Questionnaire to obtain background information and gross annual totals
- Telephone follow up and interview

Questionnaire

- Total units, and number dedicated to timber
- Load capacity of timber units
- Return loads of other freight
- Timber origins and destinations
- Proportions of softwood/hardwood
- Proportions of small roundwood/logs and bars
- Average round trip and furthest delivery
- Annual total tonnes, miles and empty running

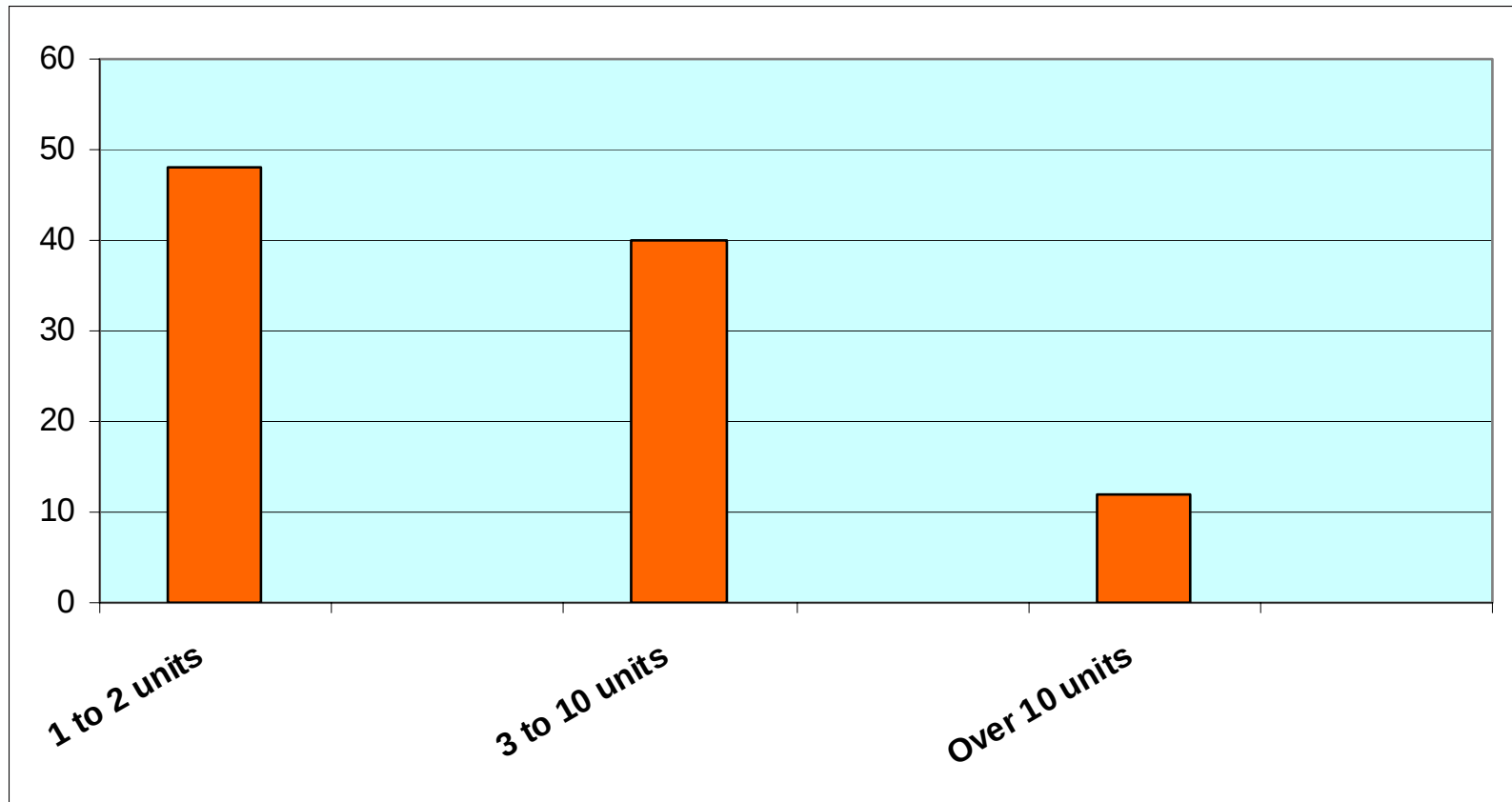


Response

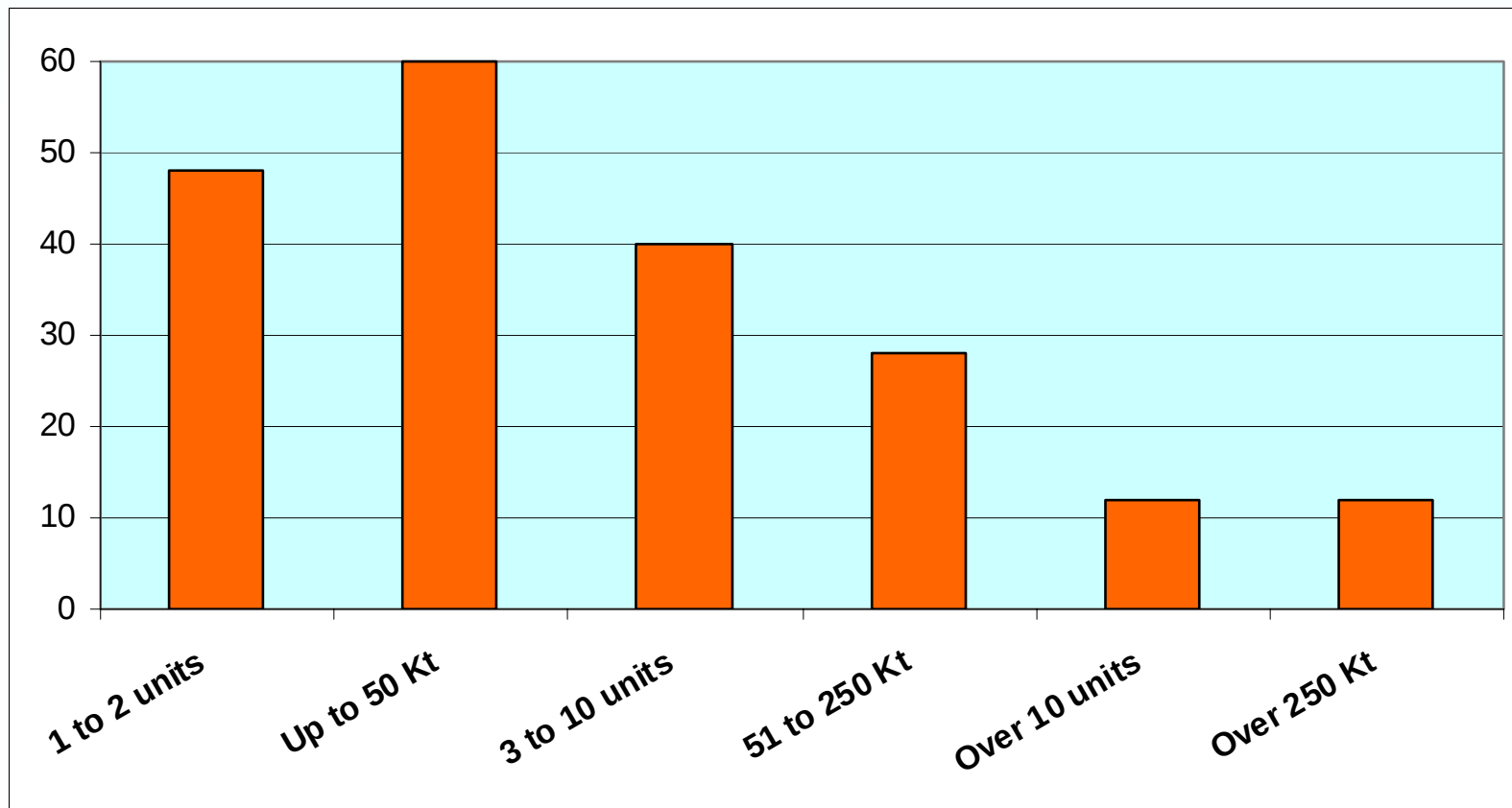
- 87 potential operators identified and approached
- Further contact made with 46 of these
- 25 complete, 2 partial and 5 nil returns received
- Hauliers throughout Scotland and Northern England representing around half of Scotland's total tonnage



Percentage



Percentage



Results

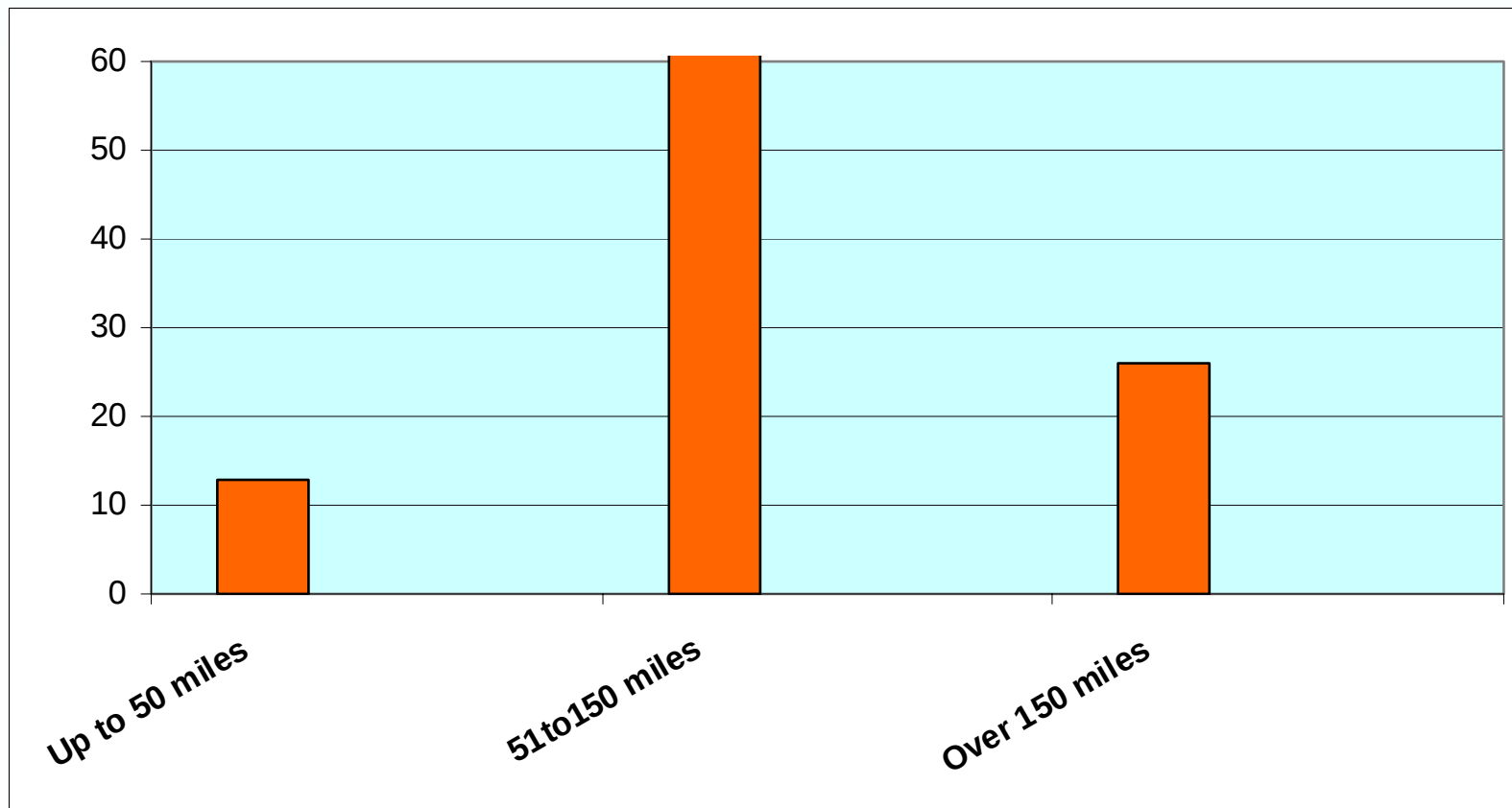
- Most respondents were timber specialists, moving 50,000 tonnes a year or less
- Most timber specialists operated one or two units
- In most cases, the ratio of mileage to tonnage ranged from 2:1 to 4:1
- Most journeys were between 50 and 150 miles
- Empty running estimates ranged from 20% to 50% for dedicated timber units



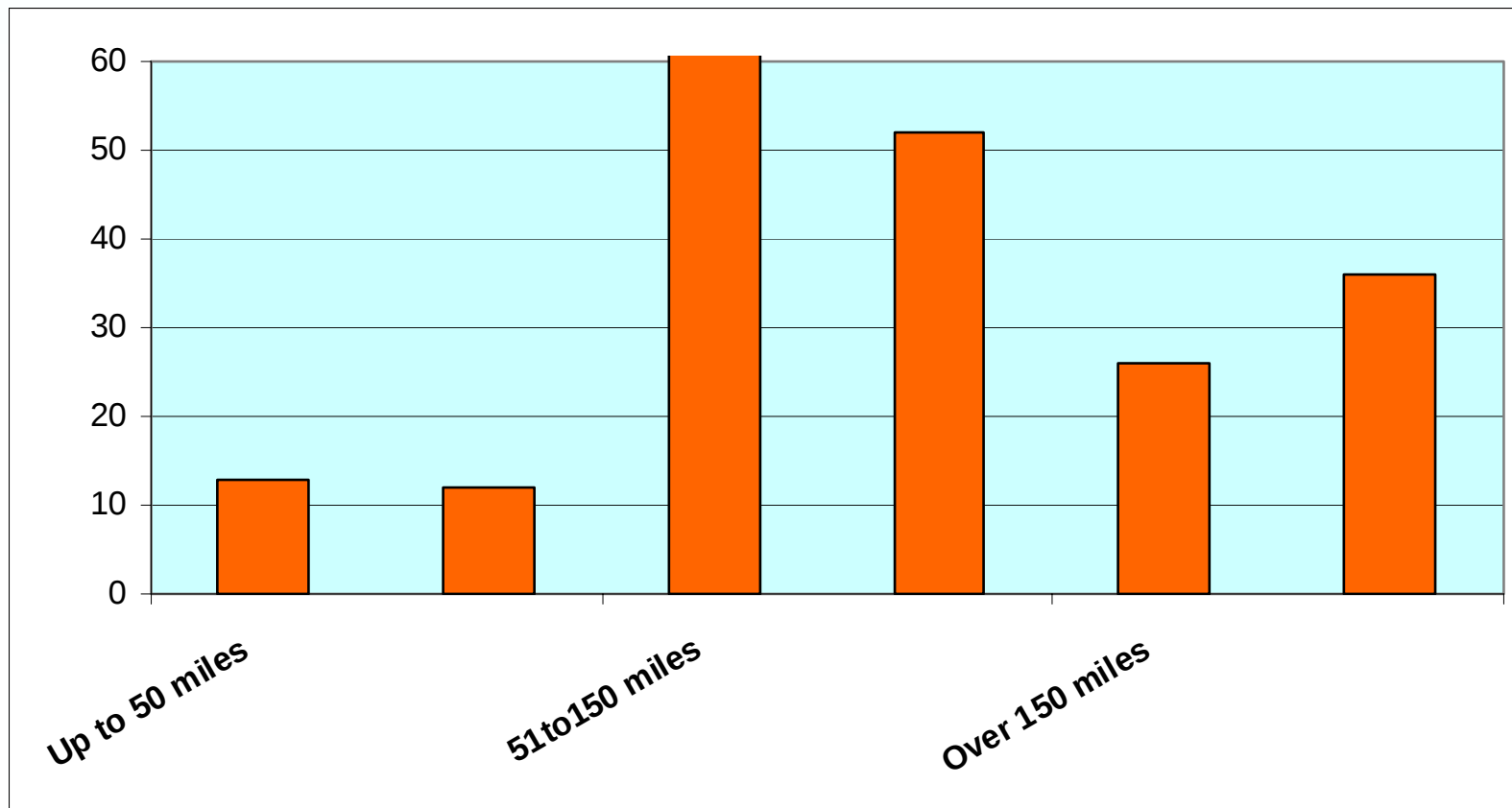
Results

- Over 97% of loads were of softwood
- Relative proportions of small roundwood and logs/bars ranged from 5% to 100% either way
- Most hauliers agreed that average journey length depended on the roundwood product carried

Percentage



Percentage



Context

- *UK Timber Statistics* (National Statistics 2006)
- 4.2 Mt of softwood from non-FC woods in 2005
- An estimated 75% harvested in Scotland
- 4.6 Mt from FC woods in 2005, 52% from Scotland



Context

- *Scottish Transport Statistics* (Scottish Executive 2006)
- ~165 Mt goods lifted by HGV in Scotland in 2005
- Goods moved a total of 8096 million *tonne miles*
- Average journey ~49 miles for all freight



Context

- Removals from Scotland total ~ 5.54 M green tonnes
- If 2.55 Mt moved ~ 129 million *loaded tonne miles*
- Scottish roundwood timber miles could total ~280 M
- Average journey would be 51 miles for round timber



Confidence

- Total *could* be between 165 - 397 million tonne miles
- Wide variation in average journeys reported
- Load does not always equal capacity
- Low empty running estimates may mean return loads of other freight are included in totals
- Tonnage and mileage are not recorded consistently
- Gross totals distort the picture



Continuing Survey of Road Goods Transport (GB)

Ref: _____

This information is required under Section 1 of the Statistics of Trade Act 1947

Name and address of registered keeper	
	Survey week from to
	Registration mark of vehicle

If this vehicle is no longer in your possession, please complete sections 4 and 5 ONLY on the back page and return the form immediately in the envelope provided (See Note 1).

Section 1: Vehicle Details

1. Trailer type (please tick as appropriate)

Flat/drop sided ☐	Solid bulk tanker ☐
Box/non specialised ☐	Livestock carrier ☐
Temperature controlled ☐	Car transporter ☐
Curtain sided ☐	Tipper ☐
Liquid tanker ☐	Other ☐

4. Is this vehicle ever used to carry abnormal loads under a Special Types General Order ?

Yes ☐
No ☐

5. If 'Yes', when under an STGO, what is the gross train weight ?

kg

2. (See Note 2)

Gross vehicle weight kg

Carrying capacity kg

3. Please tick the box that best describes the axle configuration

6. Please state the number of retractable axles that the vehicle has

Tractive Unit ☐

Trailer* ☐

*If more than one trailer is used, describe the one used most often

7. Please state the number of super single tyres that this trailer has fitted

☐



Journeys made on each day with four or fewer stops. Please use accompanying guidance notes to help you complete the journey information

Day of week	Journeys		Type of Goods Please describe the goods carried (see Note 6). If the goods are a dangerous substance please code product as shown in Note 7.	Distance travelled		Weight of Goods Carried If empty put zero, if unknown please estimate - (see Note 8) Kilogrammes	Please tick if more than 90% of available space was filled with this load	Please tick if the load was limited by weight	MOA (how carried - see Note 9)	No of trailer axles, if trailer not as Q3 (see note 10)	Please tick if load was carried under STGO
	Please give nearest town and county name. If the journey was to or from a dock, airport or rail terminal, please show this (eg, Dover - Docks, Birmingham - rail) and how the goods were transferred (see Notes 4 & 5)			*(indicate whether miles or kms by deleting as appropriate)							
	Origin	Destination		Loaded miles/km*	Empty miles/km*						

Conclusions

- A detailed survey method is needed
- Industry support is crucial
- Timber Miles can be calculated with confidence
- Timber supply and use will be seen to be sustainable
- Development in the forestry sector will benefit both industry and environment



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