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**HEALTH AND SAFETY COMMISSION
ARBORICULTURE AND FORESTRY ADVISORY GROUP**

Review of Research in Arboriculture and Forestry 2005-08

Paper for AFAG Meeting: 19 April 2006

ISSUES

1. AFAG adopts an evidence-based approach to promoting good practice, developing guidance and identifying key aims and objectives. Central to this approach is the use of independent and objective research to inform AFAG Project Groups and ensure the delivery of the AFAG Workplan 2005-08.
2. This paper aims to inform Members of:
 - i. the progress and status of current research projects;
 - ii. changes in HSE policy in relation to publication of research reports,
 - iii. possible areas of research for 2007-08 and
 - iv. to ask Members to consider future research projects in relation to the development of the AFAG Workplan beyond 2008.

BACKGROUND

3. A number of research projects have been in progress since April 2005 addressing a range of issues across the tree work sector (see AFAG 05/02). These are detailed in the attached Appendix which also provides an update on the status of each project and a proposed timescale for the publication and dissemination of the results throughout the industry. The majority of the research described has been co-funded by HSE and FC. In many cases, significant assistance has also been given by the tree work industry – both in terms of developing the research strategy and providing resources to ensure the research is robust and completed on time.

4. All current research projects should be completed within the proposed timescales to allow the results to be fed into the relevant AFAG Project Groups. This should ensure that Project Groups dependent upon research will complete within the AFAG 2005-08 Workplan. However, Members should note that where Projects aim to provide AFAG guidance, delivery will depend upon the acceptance by HSE of a business case for producing guidance (whether web-based or printed) or an agreement with the industry to produce the guidance independently of HSE.

5. Members are also advised that the publication of HSE-funded research reports must now be approved by a senior manager and is co-ordinated by HSE's Communications Directorate. Group members need to be aware that this process may lead to some delays in the publication of research reports. However, any organisation co-funding research with HSE has access to the research report, under the conditions detailed in the relevant Memorandum of Understanding.

6. The Agriculture and Food Sector has been approached by FC to investigate the possibility of HSE co-funding further research in 2007-08. In particular, to contribute to Phase II of the Machine-Assisted Takedown of Trees research (see Appendix). It may also be necessary to bid for additional funds for further projects (with FC), to assist the delivery of other AFAG Project Groups. Initial discussions between the Sector and FC have identified the following potential topics:

- i. Musculo-Skeletal Disorders related to tree work,
- ii. Heat stress (and other ergonomics issues) associated with the use of PPE in tree work.

7. Consideration also needs to be given to research projects to contribute to a possible future AFAG workplan, ie for 2008 and beyond. In particular, further research associated with occupational ill health relating to tree work is anticipated.

RECOMMENDATIONS

8. Members are invited to:

- i. Comment on the current progress of the research programme as described in the Appendix;
- ii. Acknowledge the contribution and potential impact of the research co-funded by HSE and FC and the valuable contribution made by individuals and businesses in the tree work industry in delivering the research programme;
- iii. Note the current HSE protocol relating to publication of research reports, and
- iv. Comment on the proposals for research in 2007-08 and beyond.

REVIEW OF AFAG RESEARCH IN FORESTRY AND ARBORICULTURE (2005-08)

TITLE	DESCRIPTION	STATUS
Machine Assisted Takedown of Trees	The number of accidents occurring during manual felling is thought to be due to either lack of training or the adoption of incorrect working practice. The report of Phase I highlights that, despite adequate training provision and copious safety guidance, accidents still occur during the takedown of hung-up and windblown trees. Two-phase research project proposed to investigate use of machine-assisted methods.	First stage (fully funded by FC) completed and report made to AFAG Project Group B5 and AFAG Members. Phase II under development for co-funded (HSE/FC) research project to begin Q1 07/08, for completion by Q3 07/08 to enable production of guidance and ensure AFAG Project Group B5 completed in Q4 07/08.
Whole Body vibration exposure of operators of forest machines	The initial research assessed the vibration exposure of operators of harvesters and forwarders in UK forests. The research also includes some additional results from a mobile chipper and a bucket excavator used for ground preparation. The forwarders and harvesters measured were chosen to represent a wide range of both the vehicle and terrain types seen in the UK. Further machines were identified for study and this additional work is now completed.	Additional research examining exposure of operators of excavators, forwarders, dozers and forest tractors undertaking a range of activities completed and report due to be published Q1 07/08. Business case to be submitted for AFAG guidance Q1/2, 2007/08
Noise exposure – chippers	A collaborative / joint sponsored study with HSE and FC to gather noise levels from a range of wood chippers used in the forestry industry and also by arboriculture and landscape contractors. This work will assist compliance and enforcement under the NAWR and SMSR. Additional support already offered from the industry.	Research initially delayed by HSL but measurements now completed. Report published and results to be disseminated to industry Q1 07/08. Business case to be submitted for industry guidance Q1/2 07/08 if required.
Rigging and Dismantling	To define the appropriate equipment, working techniques and forces involved in rigging and dismantling (i.e. the removal of cut sections of timber). The results of the work will be used to produce detailed guidance to enable the arboriculture industry to carry out this work safely. This guidance will be produced jointly with the industry.	Joint HSE/FC sponsored research being carried out by Trevolution Ltd. Due to be completed by 4/07 and the final report available by 8/07. <i>Guidance to be drafted by 1/08 (prov).</i>

TITLE	DESCRIPTION	STATUS
Forestry intervention appraisal and evaluation framework	To develop Bomel's Agricultural Barometer of Cultural Change Model for use in the forestry industry. This will be used to evaluate interventions including forestry SHADs. The research also presents a comprehensive statistical analysis of forestry accidents, including data on activity, age, sector and geographical area. The research also examines the behavioural influences behind risk taking behaviour and factors that encourage poor practice. By combining these data the research produces a 'key influences network' model to help better understand factors contributing to accidents in forestry to inform future planning and interventions. Significant assistance has been received from the forestry industry to deliver this project.	Research completed and report to be published Q1 07/08. Results to be disseminated to industry/AFAG and within HSE asap during 07/08.