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

Review of Research in Arboriculture and Forestry 2005-09

Paper for AFAG Meeting: 21 May 2009

ISSUES

1. AFAG adopts an evidence-based approach to identify its key objectives, aiming to promote good practice and develop practical guidance for the treework industry. Central to this approach is the use of independent and objective research to inform AFAG's Project Groups and ensure the delivery of the AFAG Workplan.
2. This paper updates previous versions (*new information is shown in italics*) and aims to inform Members of:
 - i. the progress and status of current research projects;
 - ii. HSE policy in relation to publication of research reports;
 - iii. to ask Members to consider future research projects in relation to the development of the AFAG Workplan beyond 2009/10.

BACKGROUND

3. A number of research projects have been initiated and completed since April 2005 addressing a range of issues across the tree work sector. These are detailed in the attached Appendix which also provides an update on the status of each project, where the reports are available and/or 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 timescales shown to allow the results to be fed into the relevant AFAG Project Groups. This should ensure

that Project Groups dependent upon research will be completed within the agreed AFAG 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, eg through an industry body such as the Arboricultural Association.

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. Members are also requested to consider areas of research that should be considered as a priority for funding following the completion of the current AFAG workplan. This will allow Sector and FC to include this take account of this in their bids for funding during 2008-09. In particular, any research associated with occupational ill health risks in tree work are encouraged.

RECOMMENDATIONS

7. 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. Consider potential proposals for research in 2008-09 and beyond.

**HSE Agriculture & Food Sector
May 2009**

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

TITLE	DESCRIPTION	STATUS
Machine Assisted Takedown of <i>Edge</i> 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 <i>edge</i> , hung-up 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 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 08/09. <i>Research project completed. FC/HSE have replied to Project Officer (PO). PO to fwd technical comments and minor amendments to author. PO liaising with author. Awaiting feedback from PO. Conclusions will help to direct the current revision of AFAG 310 and 610. Work ongoing. Draft revisions to go out for comment via working group members. Discussions taking place for research report to be placed on website of HSE/FC (?). Possibility of specific training workshops to be developed specifically dealing with dangerous edge trees (?)</i>
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. Draft report to be considered at AFAG. Business case to be submitted for AFAG guidance Q4, 2007/08 or Q4 08.

TITLE	DESCRIPTION	STATUS
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. <i>Report available at http://www.hse.gov.uk/research/rrhtm/RR618.htm</i> HSE publication clearing process. Requirement for draft guidance to be assessed and, if needed, a business case proposed for inclusion in Ag Sectors '08 Comms plan.
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 carried out by Treevolution Ltd <i>Complete and report published – available on HSE's web site</i> http://www.hse.gov.uk/research/rrhtm/RR668.htm <i>AFAG/ Project Group met 29.1.09 to consider findings - proposed guidance and strategy for roll-out.</i>
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. Report delayed in peer review process. Efforts are underway to release an interim report to AFAG member, the industry and the general public.

