

COMPETITION DETAILS AND PROJECT SPECIFICATION

THE LONG-TERM MAINTENANCE AND SCIENTIFIC CURATION OF NATIONAL FRUIT COLLECTIONS

Competition Code:	SFFSD 0610
Date for return of tenders:	4.00pm on Monday 14th May 2007
Address for tender submission: (the Competition Code must be shown on the envelope and the tender submitted in line with the instructions in the attached guidance, otherwise your tender may not be accepted)	Mrs E James Defra Area 1D Nobel House 17 Smith Square London SW1P 3JR
Number of electronic & hard copies required:	1 copy on CD-ROM or 3½" disk, plus 8 hard copies
Contact for information relating to this project specification:	Name: Dr Emma Hennessey Tel no: 0207 238 1528 e-mail: emma.hennessey@defra.gsi.gov.uk
Proposed ownership of Intellectual Property (contractor or Defra):	Defra
Proposed start-date (if known):	01/04/2008
Proposed end-date (if known):	31/03/2013

Project Specification

The purpose of this document is to invite suitable candidates to submit proposals (on SID 3 forms) for the long-term maintenance and scientific curation of Defra's National Fruit Collections. Bids can, if appropriate, also include plans for relocating the Collections.

The National Fruit Collections, owned by Defra, are currently situated at Brogdale Farm, Faversham, Kent. The Collections include varieties of the following crops: dessert, culinary, cider and ornamental apples; apricots; sweet, sour and duke cherries; European plums, damsons, bullaces, greengages, mirabelles, Japanese plums, cherry plums and myrobalans; ornamental Prunus; and dessert, culinary, perry and ornamental pears.

The International Treaty on Plant Genetic Resources¹ aims to protect the world's most important food and forage crops in an effort to safeguard global

1 - <ftp://ftp.fao.org/ag/cgrfa/it/ITPGRRe.pdf>

food security. The Treaty seeks to ensure the conservation and sustainable use of plant genetic resources for food and agriculture and the fair and equitable sharing of the benefits arising from their use. Annex 1 of the Treaty comprises a list of crops for which conservation is considered most important. This list includes *Malus* (apple). In line with the Treaty, Defra wishes to ensure the longer-term security of, particularly, the apple collection through *ex-situ* conservation.

Two contractors are currently responsible for the maintenance (Brogdale Horticultural Trust) and scientific curation (Imperial College) of the Collections. However, in line with current guidelines on procurement of research, we are obliged to ensure best value for Defra by issuing an open call for bids to carry out both the maintenance (either at the current site or elsewhere) and curation under a single contract.

Defra would like to invite bids for a single contract to provide a secure long-term location for, and to maintain and curate, its National Fruit Collections from 1st April 2008. The contract is for up to 5 years duration in the first instance.

Applicants are expected to submit bids that include:

Maintenance and housing

A detailed time-line and schedule for the maintenance, including re-propagation of the Collections, (using a GANTT chart or similar). The plan should detail how the Collections will be maintained to a standard of husbandry equivalent to that found in good commercial practice, in accordance with the specific requirements of their use as a germplasm resource. This includes a programme of cultivation, pruning, pesticide applications, re-propagation, as well as addition and removal as appropriate. A policy for the accession and de-accession of varieties should be included.

Should applicants wish to relocate the Collections, this should be justified and costed into their bid along with the costs of maintaining the existing Collections while the new Collection is established. A detailed timetable for moving and verifying the various Collections should be included.

The National Fruit Collection currently includes a range of species, some of which are more important to the U.K. than others. Separate costs for the maintenance and housing of each collection should be included, ideally along with a justification for why the various species should be included in the Collection.

Applicants **must** address the following:

- They must have a secure site for the long-term housing of the Collections to be eligible to apply;

- While Defra are primarily interested in the conservation of the Collection's genetic diversity, applicants should consider the Collection's wider use. In particular, educational and public good aspects have the potential to increase the value of the Collections as a national resource. While costs for such activities should not be included in bids, Defra are keen to see draft business plans identifying ways in which applicants plan to use the Collections for public good activities.
- Plans for the distribution of germplasm must be included, both for scientific and public interest.
- Plans to develop and maintain a website must be included. It is anticipated that the website will provide a focus for information about the Collections and their value as a genetic resource.
- Preference will be given to applicants able to display innovative solutions and approaches to both collection management, including layout and organisation of accessions, and to the methods for improving verification and characterisation.

Curation

Building on current knowledge, applicants are expected to submit plans for the continued verification and characterisation of accessions in the Collections.

1) Characterisation and Verification

Morphological characterisation of the apple collection will have been completed for 95% of apple accessions. Bids should include detailed plans for completing the verification of the Collections. Plans should be submitted for the continued exploitation of molecular tools for verification of the major Collections. Verification of the Collections should be timetabled in line with their re-propagation schedules. Plans for phenotypic characterisation of the apple collection must be included. Traits for characterisation include those related to climate change – such as drought tolerance, ability to yield well with reduced winter chill, pest and disease resistance and tolerance to water logging.

2) Records and Archives

Existing archives, records and works of reference should be maintained in a secure but accessible manner. Records of acquisition, location of material in the field and verification status details updated in digital format, as required. In addition, descriptive data relating to the Collections should be continued. Information relating to the accessions should be made available to users (via the website), along with relevant publications. Plans for ensuring the archives are available to interested parties should be included. A website describing the Collections and their use and value must be maintained.

3) Long-term Security of the Collections

By the time this planned contract starts, preliminary tests will have been carried out on the potential for cryopreservation of selected accessions within the collection. Building on this work, applicants are expected to submit plans to further test the suitability of cryopreservation or other in-vitro techniques for the long-term secure storage of the Collections.

Applications for the above project must reach Mrs E. James at Defra, no later than 4pm Monday 14th May 2007. Late applications will be returned unopened. Applications by fax or e-mail are not acceptable.