Australian Government

Department of Health and Ageing
Office of the Gene Technology Regulator

PRACTICE NOTE:
FIELD MONITORING PATTERNS
In accordance with the
Gene Technology Act 2000

July 2007

Monitoring and compliance activities are under continual improvement and will evolve as systems are assessed and validated. This document is intended as a guide only. Readers of this document should also familiarise themselves with the gene technology legislation.

1. Purpose of the field inspections

The *Gene Technology Act 2000* (the Act) provides powers for inspectors to conduct checks to determine whether dealings comply with the Act and Regulations. The OGTR has developed a number of field monitoring procedures that provide an accurate basis upon which to determine compliance or non-compliance in relation to field trials conducted under Dealings involving Intentional Release (DIRs).

When developing these procedures the OGTR sought to identify inspection techniques that would provide a high level of accuracy.

To assist in providing an accurate judgement on the level of compliance it was necessary to consider a range of vegetation and crop types and a diverse level of ground cover and vegetation thickness and height that may be encountered during the inspections.

2. Developing inspection methods

The field monitoring techniques were developed after considering a range of field inspection techniques, including rigid grid pattern inspections, random inspection patterns and targeted risk inspection methods.

Rigid grid inspections usually involve one or a number of persons inspecting a trial site on a set grid pattern. The width of the grids vary, but we have found that a common grid size used in Australia by GM research organisations conducting field trials to be 30 m with possible inclusion of S shaped walking patterns within the 30 m grid.

The random inspection techniques studied were most commonly used by seed certification organisations when inspecting sites for accreditation of crops for use as certified seed. In these inspections, sampling points used are based on random patterns to eliminate as much bias in the inspection as possible.

Other techniques considered by the OGTR are targeted risk inspection methods. This involves examination of areas of the trial site that may present increased opportunities for non-compliance.

3. Use of particular inspection methods

Given that the characteristics of each trial site may vary the OGTR has developed and will use a number of field monitoring procedures depending on the situation at each trial site.

On lightly-vegetated trial sites where visibility of possible volunteers is high loose grid pattern (30 m grid) or random pattern may be used. On densely-vegetated sites where visibility is low tighter grid patterns (1–5 m) or random sampling patterns may be used.

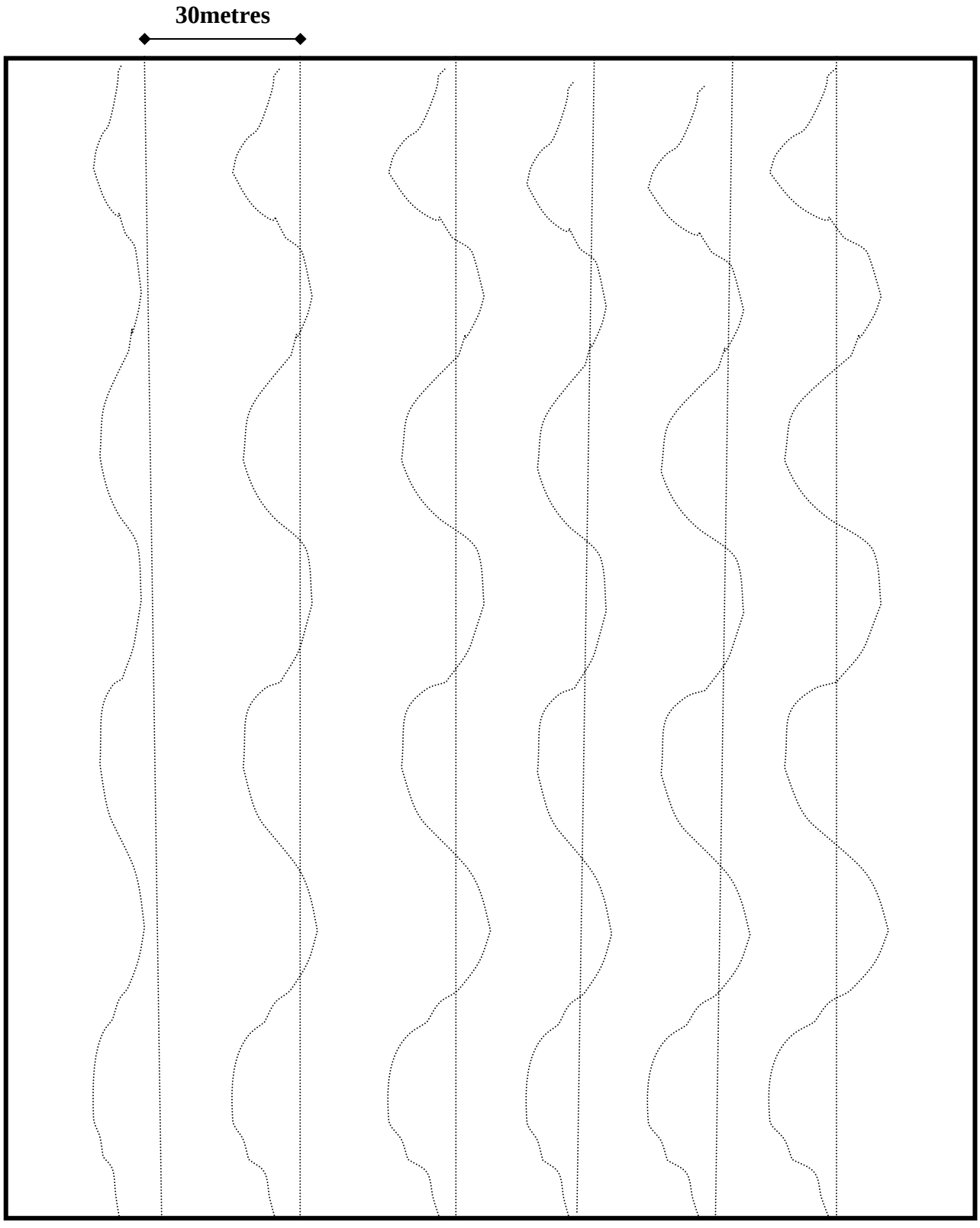
On all sites the perceived high risk areas may be targeted and inspected regardless of whether a grid or random pattern has been used for the rest of the site.

An inspection of the perimeter and any monitoring zone surrounding the trial site may form part of the inspection.

The decision on which particular method to use at any given site will depend on a number of factors including type of crop/vegetation growing on the site, the denseness and growth stage of vegetation/crop growing on the trial site, the shape of the trial site, past history of the site and risk factors identified by the inspectors.

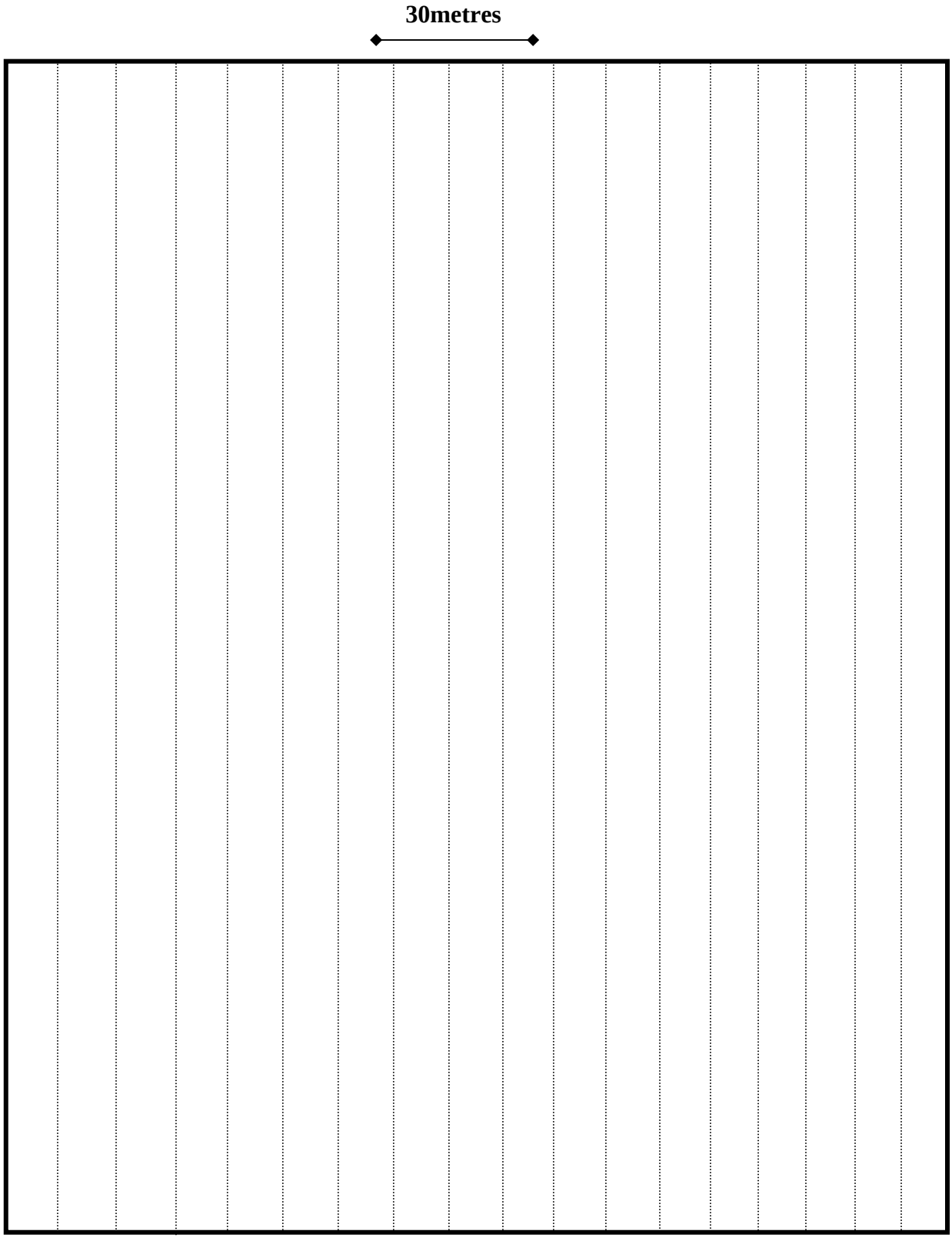
GRID PATTERN

Example of grid pattern using 30 metre spacing. With straight line and serpentine walking patterns. May also include detailed inspection of a sample area and inspection of the perimeter and any monitoring zone associated with the trial site.



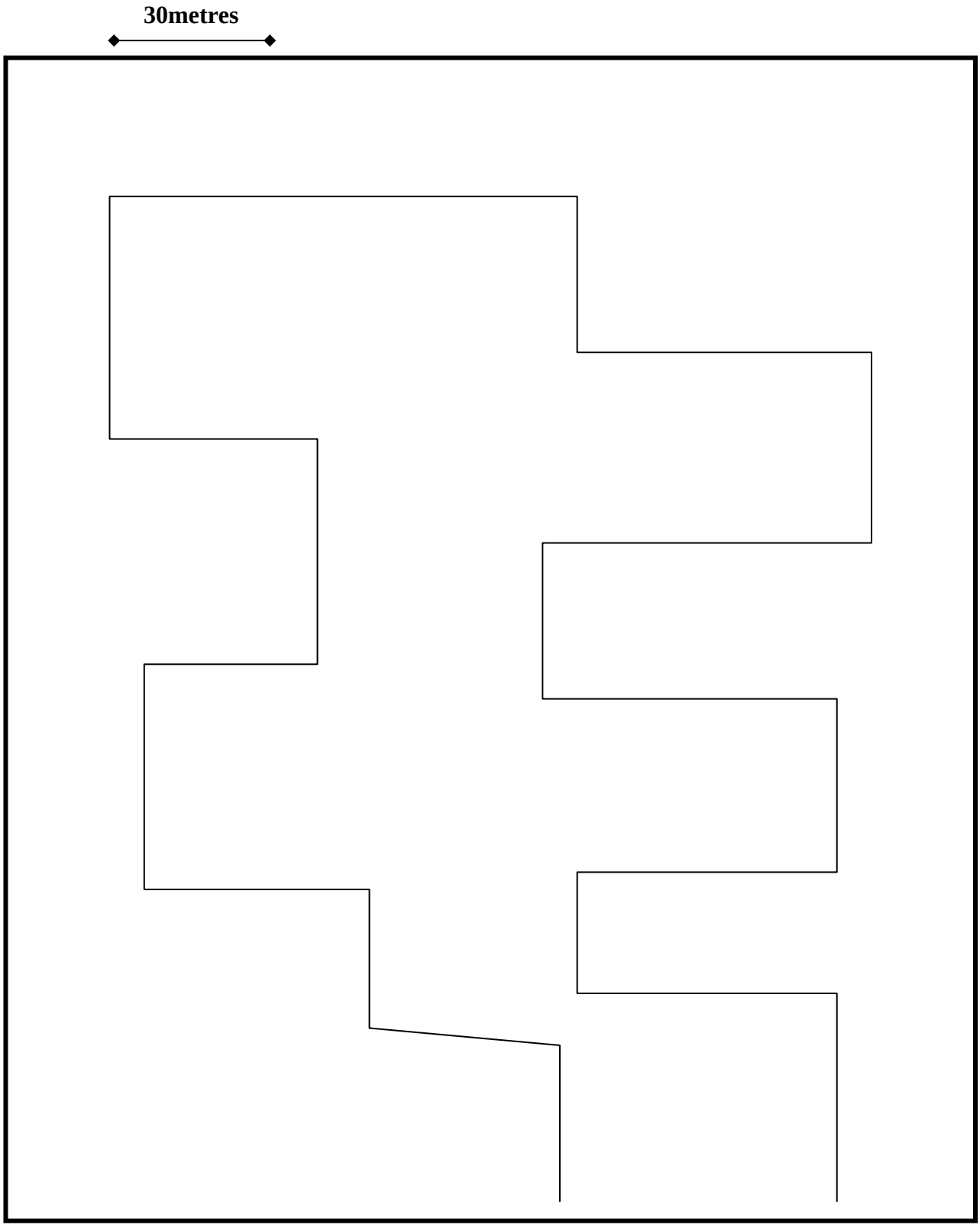
GRID PATTERN: TIGHTER SPACING

Example of grid pattern using tighter walking spaces. Used when crop/vegetation is thicker and higher and visibility of possible volunteers is low. May also include detailed inspection of a sample area and inspection of the perimeter and any monitoring zone associated with the trial site.



RANDOM PATTERN

Example of random pattern. Can be used at any time with either high or low visibility circumstances. Involves walking a set distance (say 10 or 20 metres) then making a more detailed inspection of a sample area and then changing direction and walking the set distance again. An inspection of the perimeter and any monitoring zone may also be conducted.



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