

Assessment of plant biosecurity risks to Scotland from large-scale plantings for landscaping and infrastructure projects

Supplementary Information



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Survey for landscaping projects Scotland

1. Researcher instructions

Sections of the survey

- Researcher instructions
- Introduction (read to participants)
- Consent (read to participants)
- Business and project background
- Specification
- Hiring contractors
- Supplier choice
- Planting Establishment and maintenance
- Biosecurity awareness
- Demographics and future research
- Thank you

1. Researcher name

2. Landscape project

- Bilston Phase 2 extension
- Centre for Health Science 2
- Craighouse
- Edinburgh BioQuarter Ph 1
- Edinburgh Technopole Ph 1
- Education and Learning Hub
- Forth Valley College
- Fraser Avenue
- Kildean Spine Road
- Land at Rowett South
- Marston Hospital
- Orchard Village
- Public Square
- Weirs Wynd
- Other (please specify):

3. Participant name

4. Participant organisation / business

2. Introduction

Large scale infra-structure projects such as education or business campuses, public open space, travel infrastructure, and urban / suburban residential developments typically include extensive landscaping and planting programmes. The modest scale of domestic plant and tree production in Scotland creates challenges in obtaining material from local sources, which can result in favour of low-cost large-scale plant imports with associated risks of pest and disease entry.

This project aims to provide an understanding of how/whether biosecurity features in decision-making by identifying large-scale landscaping projects in Scotland and talking to the key individuals involved. We will then make recommendations for any changes required to improve bio-secure practices.

5. Your consent to take part is required in order to begin the survey. Please listen to the following statements carefully: Your responses will be confidential, which means your answers to survey questions will not be shared outside of the research team and we ask you give your permission for these individuals to have access to this data. Data that is used in any reports and other documents produced will be anonymised; meaning the research team will not identify individuals or organisations who have taken part in the survey. This discussion will be audio-taped, so that the researcher has an accurate record of what was said in your own words. The final report will be made available to the Plant Health Centre, its funders, and others with an interest in the results. The information collected will be treated, stored and analysed in line with the requirements of the General Data Protection Regulation (2016) and Forest Research's Code of Ethics. Do I have your consent for your responses of this survey to be used as described?

Yes

No

3. Business and project background

This section is about getting background details on your organisation and your role on the project.

6. What is your current job title?

7. How long have you worked in this role, either in this organisation or others?

8. How many employees does your organisation have?

- Up to 10 employees
- 11 to 50 employees
- 51 to 250 employees
- Over 250 employees

9. Does your organisation typically commission, undertake or work on any of the following types of projects? Tick all that apply

- Commercial
- Public infrastructure (e.g. major roads)
- Public or private 'campus' (e.g. schools, hospitals, university)
- Urban / suburban residential
- Other type of large scale landscaping project (please specify):

10. What term best describes the role of your organisation in this project?

- Landscape architect
- Landscape contractor
- Developer / project manager
- Local authority
- Client
- Landscape manager
- Other (please specify):

11. What was your job title at the time of this project?

12. Briefly what were your contractual responsibilities on this project? Prompt if needed• Traditional (parties contracted individually to client)• Design and build (contractor designs & builds)• Management (contractor hires and manages others)

13. We would like to speak to other people involved in the different stages of this project. Can you remember who the other organisations / businesses involved in the project were? With their permission, would you be able to introduce me to someone from that organisation who worked on this project?

	Organisation / business	Contact name
Landscape architect	<input type="text"/>	<input type="text"/>
Landscape contractor	<input type="text"/>	<input type="text"/>
Developer / project manager	<input type="text"/>	<input type="text"/>
Local authority	<input type="text"/>	<input type="text"/>
Client	<input type="text"/>	<input type="text"/>
Landscape manager	<input type="text"/>	<input type="text"/>
Other (please specify)	<input type="text"/>	<input type="text"/>

Notes:

14. Which stages of this project were you involved in? Prompt to describe using RIBA (Royal Institute of British Architects) stages if useful• 0 – Strategic Definition• 1 – Preparation and Briefing• 2 – Concept Design• 3 – Spatial Coordination• 4 – Technical Design• 5 – Manufacturing and Construction• 6 – Handover• 7 – Use (including maintenance)

15. At which stages of this project did you visit the site? Prompt to describe using RIBA stages if useful• 0 – Strategic Definition• 1 – Preparation and Briefing• 2 – Concept Design• 3 – Spatial Coordination• 4 – Technical Design• 5 – Manufacturing and Construction• 6 – Handover• 7 – Use (including maintenance)

5. Specification of plants and trees

This section is about specifying the plants and trees during the project design phase. Here we want to know how and why different species of plants were chosen to go in the plans.

16. Were you consulted or did you give advice on plant specification?

- Yes
- No

Notes:

17. Were you responsible for the plant specification decisions?

- I had sole responsibility for the decisions
- I had some responsibility for the decisions
- No

Notes:

18. Was the level of involvement you had in specifying plants on this project, typical for a project of this size & type?

- Yes
- No (record why in Notes)
- Don't know
- NA

Notes:

19. Who had the greatest influence on what plant species were specified during the design phase this project?

- Landscape architect

- Landscape contractor
- Developer / project manager
- Local authority
- Client
- Landscape manager
- Other (please specify)
- Don't know

Notes:

6. Further questions only if participant **WAS** involved in plant specification

Otherwise skip to next page

20. Can you describe the top three factors you considered when specifying which species of plants to use on project? Prompt if required• Cost• Aesthetics• Delivery of public good (e.g. Biodiversity, water quality, shade)• Longevity• Suitability to climate change• Maintenance• Survival/establishment rate• Biosecurity• Native• Availability (volume)• Availability (time)• Origin• Other

Top factor

Second factor

Third factor

Notes:

21. Were there any biosecurity actions taken when specifying plants for this project? Prompt if required• None• Discussed biosecurity with the client• Specified UK grown plants• Specified native species• Specified provenance• Avoided potentially risky species using e.g. UK Risk Register• Minimised monocultures• Minimised specification of mature plants• Other

7. Hiring contractors

This section is about choosing soft landscaping contractors and subcontractors who worked on this project. Here we want to know how and why soft landscaping contractors or subcontractors were hired for this project.

22. Were you consulted or did you give advice on which soft landscaping contractors or subcontractors were hired?

- No
- Yes

23. Were you responsible for deciding which contractors and subcontractors were used on this project?

- I had sole responsibility for the decisions
- I had some responsibility for the decisions
- No

Notes:

24. Was the level of involvement you had in selecting contractors on this project, typical for a project of this size & type?

- Yes
- No (record why in Notes)
- Don't know
- NA

Notes:

25. Who had the greatest influence on which landscaping contractors were hired for this project?

- Landscape architect
- Landscape contractor
- Developer / project manager

- Local authority
- Client
- Landscape manager
- Other (please specify)
- Don't know

Notes:

8. Further questions if participant **WAS** involved in hiring contractors

Otherwise, skip to next page

26. Can you describe the top three factors you considered when selecting a contractor or subcontractor for this project? Prompt if required• Cost• Experience on similar projects• Communication• Biosecurity awareness• Location• Availability• Ability to deliver (e.g. size of contract, specialism)• Flexibility to meet project needs• Other

Top factor

Second factor

Third factor

Notes:

27. Were there any biosecurity actions taken when choosing contractors for this project? PROMPT if required• None• Checked biosecurity policy of contractor• Tender included biosecurity requirements• Other

9. Supplier choice

This section is about choosing the suppliers for the plants and trees used on this project. Here we want to know how suppliers such as wholesalers or nurseries were chosen to supply plants for the project

28. Were you consulted or did you give advice on choosing plant suppliers?

- Yes
- No

Notes:

29. Were you responsible for the plant suppliers?

- I had sole responsibility for the decisions
- I had some responsibility for the decisions
- No

Notes:

30. Was the level of involvement you had in selecting plant suppliers on this project, typical for a project of this size & type?

- Yes
- No (record why in Notes)
- Don't know
- NA

Notes:

31. Who had the greatest influence on which plant suppliers were used for this project?

- Landscape architect
- Landscape contractor
- Developer / project manager
- Local authority
- Client
- Landscape manager

Other (please specify)

Don't know

Notes:

32. Approximately, what % of plants used came from:

Suppliers based in Scotland

Suppliers based in the rest of the UK

Suppliers based outside of the UK

Don't know

Notes:

33. Approximately, what % of plants used:

Were grown in Scotland

Were grown in the rest of the UK

Were grown outside of the UK

Don't know

Notes:

10. Further questions if participant WAS involved in choosing suppliers

Otherwise, skip to next page

34. Can you describe the top three factors you considered when selecting who supplied the plants? Prompt if required• Cost• Quality• Range• Biosecurity• Ability

to deliver (volume)• Ability to deliver (time)• Location of supplier• Flexibility of supplier to project needs• Other

Top factor

Second factor

Third factor

Notes:

35. Were there any biosecurity actions taken when choosing suppliers for? Prompt if required• None• Chose accredited supplier• Checked biosecurity policy of supplier• Inspected premises of supplier• Contacted supplier with questions about biosecurity• Chose supplier with good track record of biosecurity (personal experience / word of mouth)• Other

11. Planting

This section is about selecting the individual plants and trees which were eventually planted on this project. Here we want to know how the plants were selected from the supplier, before they were planted in the ground

36. Were you consulted or did you give advice on the individual plants and trees to be selected from the supplier?

Yes

No

Notes:

37. Were you responsible for selecting the individual plants and trees from the supplier?

I had sole responsibility for the decisions

I had some responsibility for the decisions

No

Notes:

38. Was the level of involvement you had in selecting individual plants and trees from the supplier on this project, typical for a project of this size & type?

- Yes
- No (record why in Notes)
- Don't know
- NA

Notes:

39. Who had the greatest influence on which individual plants and trees were selected from the supplier for this project?

- Landscape architect
- Landscape contractor
- Developer / project manager
- Local authority
- Client
- Landscape manager
- Other (please specify)
- Don't know

Notes:

12. Further questions if participant WAS involved in selecting individual plants and trees from the supplier

Otherwise, skip to the next page

40. How was the plant stock ordered for this project?

- Ordered directly through standard supplier

- Order directly but vary supplier according to price/specification
- Order through an agent/interim business
- Don't know

Notes:

41. Were any biosecurity actions taken when selecting individual plants for this project? Prompt if required• Checked origin• Checked paperwork• Inspected all plants for pest & disease prior to planting• Other

13. Planting specifications and plants in the ground

This section is about any differences between what plants were on the original plans, and what eventually was planted in the ground. Here we want to know if there were differences, and why they might have come about.

42. As far as you are aware, was the planting carried out as shown on plans?

- Planting matched the original plans
- Planting mostly matched original plans, with a few exceptions
- Some planting matched original plans, but most did not
- Very little or no planting matched original plans
- I don't know

Notes:

43. Is this amount of difference between plans and outcome typical for a project of this size & type?

- Yes
- No (record why)
- Don't know

NA

Notes:

44. Who checked the plants and had sign off for the soft landscaping? (can tick one or more answers)

- No one checked
- Landscape architect
- Landscape contractor
- Developer / project manager
- Local authority
- Client
- Landscape manager
- Don't know
- Other (please specify):

Notes:

45. If plants planted were different to original plans, why was this and what were the changes?

14. Establishment and maintenance

This section is about management of the plants and trees on this project, after they were planted. Here we want to know how well the plants did after being planted and if many had to be replaced.

46. Were you consulted or did you give advice on management of the plants and tree after they were planted?

- Yes
- No

Notes:

47. Were you responsible for managing the plants and trees after they were planted?

- I had sole responsibility
- I had some responsibility
- No

Notes:

48. Was the level of involvement you had in managing the plants and trees on this project, typical for a project of this size & type?

- Yes
- No (record why in Notes)
- Don't know
- NA

Notes:

49. Who had the greatest influence on managing the plants and trees after planting?

- Landscape architect
- Landscape contractor
- Developer / project manager
- Local authority
- Client
- Landscape manager
- Other (please specify)
- Don't know

Notes:

50. How long was the rectification period (or similar) in which the client could ask for problems with plants to be sorted? If "don't know" or "NA", record in box

51. Have any plants or trees required replacement?

- No
- Yes
- Don't know (who would know this? - record in Notes)

Notes:

15. Further questions if replacements HAVE been required

Otherwise, skip to next page

52. Approximately what percentage of the plants / trees have required replacement? If "don't know" record in box

53. Were you responsible for any potential or actual replacement costs?

- No
- Yes

Notes:

54. If you were responsible for any replacement costs:

What percentage of overall planting costs were allocated to potential replacements?

How much (if anything) have replacements cost you (give option not to respond)?

55. Who was most responsible for shouldering replacement costs?

- Landscape architect
- Landscape contractor
- Developer / project manager
- Local authority
- Client
- Landscape manager
- Don't know
- Other (please specify):

Notes:

16. Biosecurity awareness

This section is about biosecurity on the project. Here we want to know

56. How would you rate your level of pest and disease awareness at the time of this project?

- Low
- Medium
- High
- Don't know
- NA

Notes:

57. Which of these statements best describes how biosecurity was approached on this project in general?

- Biosecurity was not mentioned, or was rarely mentioned
- Biosecurity discussions mostly related to meeting standard requirements
- Biosecurity discussions mostly related to the unique characteristics of this project
- Biosecurity was prominent in many discussions

Notes:

58. Did you discuss biosecurity or pests and diseases with the following stakeholders on this project? Tick all that apply

- Landscape architect
- Developer / project manager
- Landscape contractor
- Local authority
- Client
- Landscape manager
- Plant supplier

Notes:

59. Did your organisation have a formal biosecurity policy for this project which covered any of the following areas? Tick all that apply

- No biosecurity policy
- Specification of plant species
- Hiring contractors
- Choosing suppliers of plants
- Choosing individual plants from the suppliers

- Establishment & maintenance of plants after planting

Notes:

60. Are you aware of any pest and disease related problems that have arisen on trees/plants at this project site?

- No
 Yes

Notes:

61. If there were problems, what was the outcome? Tick all that apply

- Plants/trees replaced like for like (same supplier)
 Plants/trees replaced like for like (different supplier)
 Plants/trees replaced with alternative species (same supplier)
 Plants/trees replaced with alternative species (different supplier)
 Plants/trees removed (not replaced)
 Plants/trees successfully treated for pest/disease
 No action
 Don't know
 Other (please specify):

Notes:

62. Who do you look to for information on tree/plant pests and diseases? Tick all that apply.

- Royal Horticultural Society
 Horticultural Trade Association
 Agriculture and Horticulture Development Board (formerly HDC)
 Universities and research agencies

- Environmental charities and trusts (e.g. Woodland Trust)
- Forestry Commission
- Other government departments and agencies (e.g. DEFRA, FERA, APHA, SASA)
- Other (please specify):

Notes:

63. Please describe any information about pests and diseases you feel you need but can't currently access.

64. How would you like to access this information?

18. Demographics and future research

This is the final summary section

65. Looking back, do you have any reflections on the role of biosecurity during the project?

66. We would really like to find out more about how the plant supply chain works in Scotland and ways in which plant biosecurity could be maintained or improved. If we needed more information about this project, would we be able to contact you again at some point in the near future?

- Yes
- No

Notes:

67. Do you have any final comments on what we've talked about today?

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