

APPENDIX I

Reach summary sheets

Information for reach summary sheets

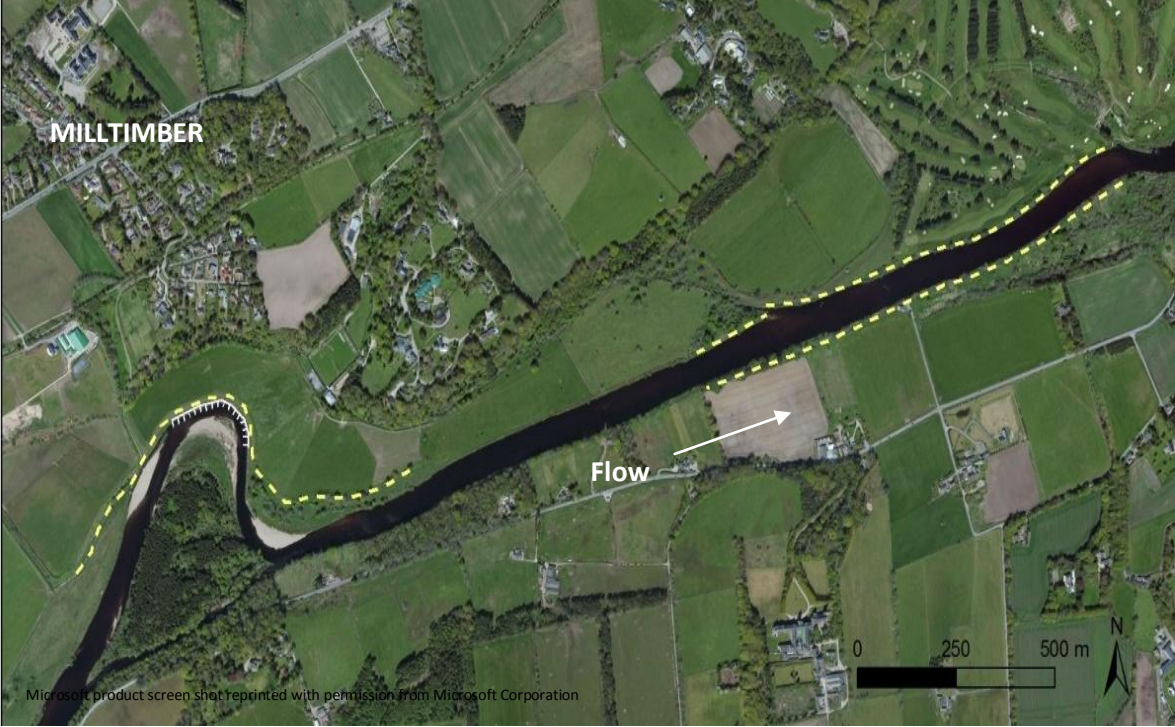
Summary sheets were produced for the ten options that were found to be most favourable following MCA and subsequent assessment

Cost bands used on summary sheets

Cost band	Cost range (£k)
1	<50
2	50-100
3	100-200
4	200-500
5	>500

Key to symbols used on maps

#	Croy
○	Weir
D	Culvert
- - - - -	Embankment
	Bank protection
□	Area for re-meandering / realignment

Water body ID	23315	Water body name	Dee - Peterculter to tidal limit	MCA rank	1	MCA score	73
Reach no.	3	Reach location	Milltimber to Ardoe House Hotel	Cost band	5		
Context							
3.9 km channel length of the lower Dee main stem, flowing through moderately high quality agricultural land and close to the Aberdeen conurbation. Embankments and bank protection limit connectivity with the floodplain, while historic straightening further limits geomorphological activity.							
Restoration opportunity and capacity released							
<ul style="list-style-type: none"> Re-meandering, removal of embankment and bank protection to allow reconnection with floodplain and increase morphological diversity. 94.4% maximum capacity released, improves status from 'bad' to 'moderate'. 							
Degree of potential NFM benefit							
<ul style="list-style-type: none"> Predicted reduction in downstream flood peak by 6% Floodplain reconnection NFM ranking: 1 							
Other benefits							
<ul style="list-style-type: none"> Potential to create recreational infrastructure and for local awareness-raising due to proximity to a significant population. Positive impact on salmon, otter, and fresh water pearl mussels (protected species within the SAC) 							
Land use/ownership							
<ul style="list-style-type: none"> Highest land capability value in reach, 3.2. Adjacent land use is mainly improved pasture and arable cultivation Golf course at the downstream end of the reach 							
Constraints							
<ul style="list-style-type: none"> Possible constraint caused by proposed development of Aberdeen western peripheral route, which will cross the Dee at the upstream end of the reach. Road adjacent to river at upstream end of reach 							
Funding and collaboration opportunities							
n/a				<p>Note: This information sheet is based on interpretation of existing data sources. It is recommended that a field reconnaissance survey is carried out to verify the information.</p>			

Water body ID	23321	Water body name	Leuchar Burn	MCA rank	2	MCA score	60
Reach no.	2	Reach location	Garlogie to Broadwater			Cost band	4

Context

3.4 km length of channel flowing through mixed farmland. Straightening has reduced morphological diversity and reduced connectivity with floodplain.

Restoration opportunity and capacity released

- Re-meandering, removal of embankments and bank protection to allow reconnection with floodplain and operation of natural physical process.
- Enhance vegetation structure and complexity throughout reach
- 49.9% MImAS capacity released; improves status from 'poor' to 'good'.

Degree of potential NFM benefit

- No significant predicted benefit.

Other benefits

- Significant potential to increase connectivity with surrounding habitats
- Potential to reduce diffuse pollution.
- Potential for local awareness raising
- Positive impact on salmon, otter, and fresh water pearl mussels (protected species within the SAC)

Land use/ownership

- Highest land capability value in reach, 3.2.

Constraints

n/a



Funding and collaboration opportunities

Potential to link with other projects. Immediately upstream, a feasibility study has been undertaken for removal of Garlogie dam and some consideration of modifying Loch of Skene weir

Note: This information sheet is based on interpretation of existing data sources. It is recommended that a field reconnaissance survey is carried out to verify the information.

Water body ID	23338	Water body name	Tarland Burn	MCA rank	3	MCA score	41
Reach no.	4	Reach location	Tarland to Bridgend Steading	Cost band	4		

Context

3.5 km reach flowing through mixed farmland. Straightening has reduced morphological diversity and reduced connectivity with floodplain.

Restoration opportunity and capacity released

- Re-meandering and removal of embankments to allow reconnection with floodplain and increase morphological diversity.
- Enhance vegetation structure and complexity throughout reach.
- 25.6% MImAS capacity released, improves status from 'bad' to 'poor'.

Degree of potential NFM benefit

- Predicted reduction in downstream flood peak by 5.41%.
- Overall floodplain reconnection NFM ranking: 2

Other benefits

- Positive impact on salmon, otter, and fresh water pearl mussels (protected species within the SAC)
- Potential for local awareness raising due to proximity to Tarland.
- Potential to reduce diffuse pollution.

Land use/ownership

- Highest land capability value in reach, 3.2.

Constraints

- Dredging likely to occur on site over summer.

Funding and collaboration opportunities

- Adjacent to 3Dee Vision WWTW wetland.



Note: This information sheet is based on interpretation of existing data sources. It is recommended that a field reconnaissance survey is carried out to verify the information.

Water body ID	23322	Water body name	Brodiach Burn / Ord Burn	MCA rank	4	MCA score	39
Reach no.	1	Reach location	Downstream Easter Ord Farm	Cost band			3

Context

2.3 km channel length. Embankments and realignment reduce connectivity with floodplain and reduce morphological diversity. Impounded online pond in downstream half of reach.

Restoration opportunity and capacity released

- Re-meandering and remove embankments to allow reconnection with floodplain
- Weir removal to improve longitudinal connectivity – however, a site visit should be undertaken to verify the nature of the weir and impoundment and assess whether impacts would be beneficial
- Enhance vegetation structure and complexity throughout reach
- 52.6% MImAS capacity released; improves status from ‘bad’ to ‘moderate’.

Degree of potential NFM benefit

- Predicted reduction in downstream flood peak by 1.66%.
- Overall floodplain reconnection NFM ranking: 5

Other benefits

- Potential for local awareness raising
- Positive impact on salmon, otter, and fresh water pearl mussels (protected species within the SAC)

Land use/ownership

- Highest land capability value in reach, 3.2.

Constraints

n/a

Funding and collaboration opportunities

n/a



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Note: This information sheet is based on interpretation of existing data sources. It is recommended that a field reconnaissance survey is carried out to verify the information.

Water body ID	23316	Water body name	Dee - Banchory to Peterculter	MCA rank	5	MCA score	40
Reach no.	4	Reach location	Park House			Cost band	4

Context

2.2 km channel length of channel on the main stem Dee, within a valuable fishery. Embankments reduce connectivity with the floodplain, while croys and bank protection further inhibit natural geomorphic processes. Bankside vegetation structure and complexity poor due to fishery management.

Restoration opportunity and capacity released

- Remove embankments to allow reconnection with floodplain.
- Remove bank protection and croys to encourage an increase in morphological diversity.
- Enhance vegetation structure and complexity throughout reach.
- 7.9% MImAS capacity released; Improves status from 'moderate to 'good'.

Degree of potential NFM benefit

- Predicted reduction in downstream flood peak by 5.1 m³/s (0.63%)
- Overall floodplain reconnection NFM ranking: 6

Other benefits

- Potential to increase connectivity with surrounding habitats
- Potential for local awareness raising
- Positive impact on salmon and fresh water pearl mussels (protected species within the SAC)

Land use/ownership

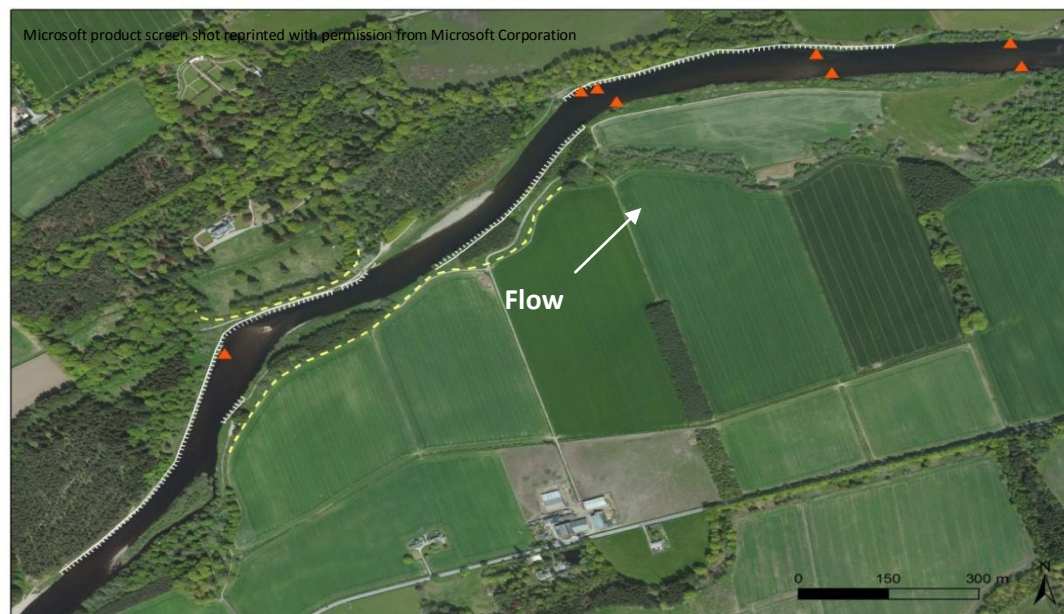
- Highest land capability value in reach, 3.1.
- High value fishery

Constraints

n/a

Funding and collaboration opportunities

n/a



Water body ID	23320	Water body name	Gormack Burn	MCA rank	6	MCA score	34
Reach no.	2	Reach location	Milton of Cullerlie to Blackhall			Cost band	4

Context

3.4 km channel length of channel flowing through mixed farmland. Straightening has reduced morphological diversity and reduced connectivity with floodplain.

Restoration opportunity and capacity released

- Re-meandering and remove embankments to allow reconnection with floodplain
 - Enhance vegetation structure and complexity throughout reach
- 33.3% MImAS capacity released; improves status from bad to poor.

Degree of potential NFM benefit

- Predicted reduction in downstream flood peak by 3.92%
- Direct input to PVA.
- Overall floodplain reconnection NFM ranking:4

Other benefits

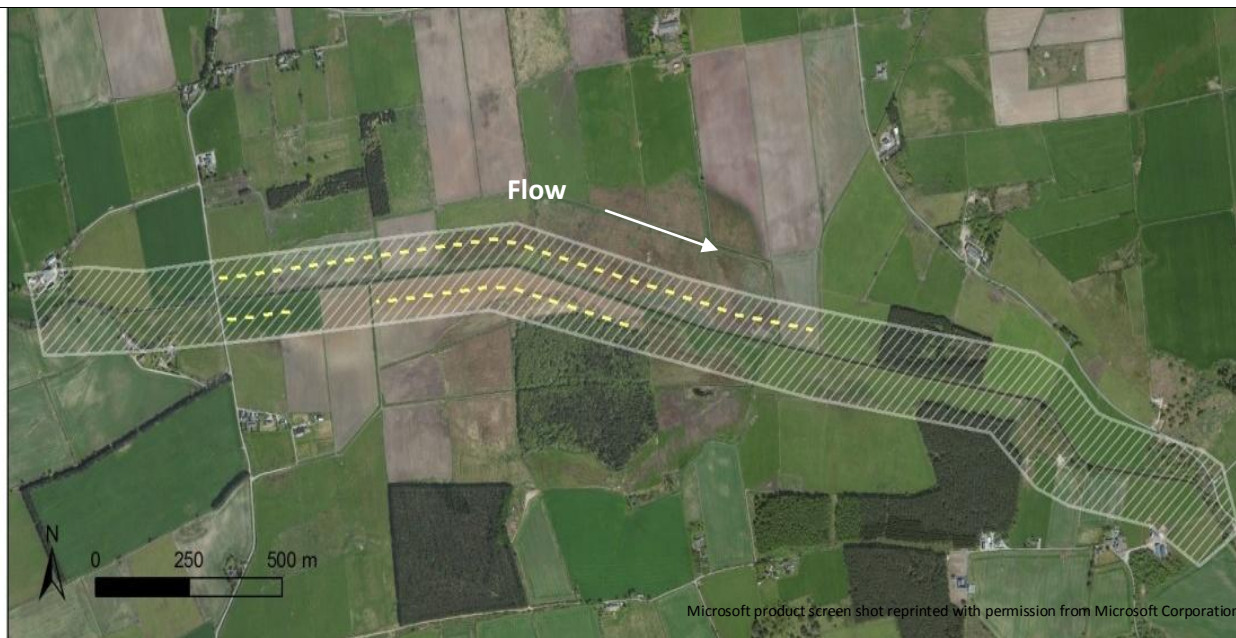
- Significant potential to increase connectivity with surrounding habitats
- Potential for local awareness raising
- Positive impact on salmon, otter, and fresh water pearl mussels (protected species within the SAC)

Land use/ownership

- Highest land capability value in reach, 3.2.

Constraints

n/a

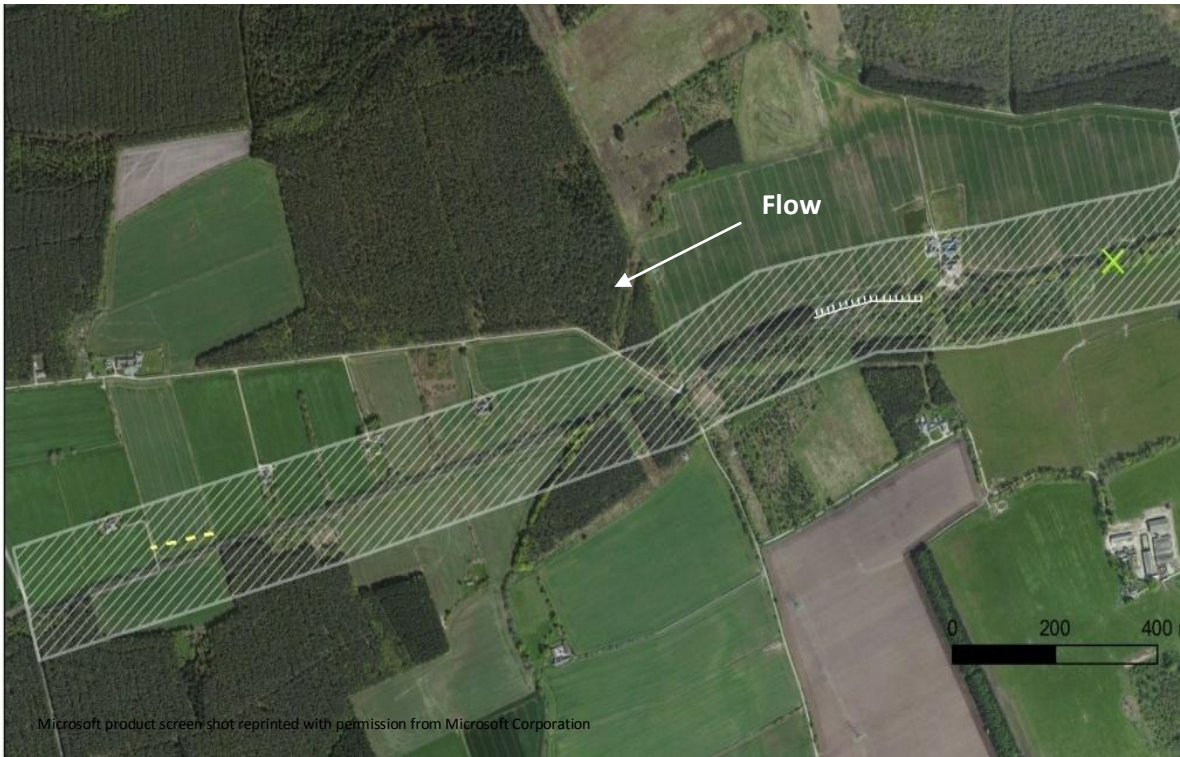


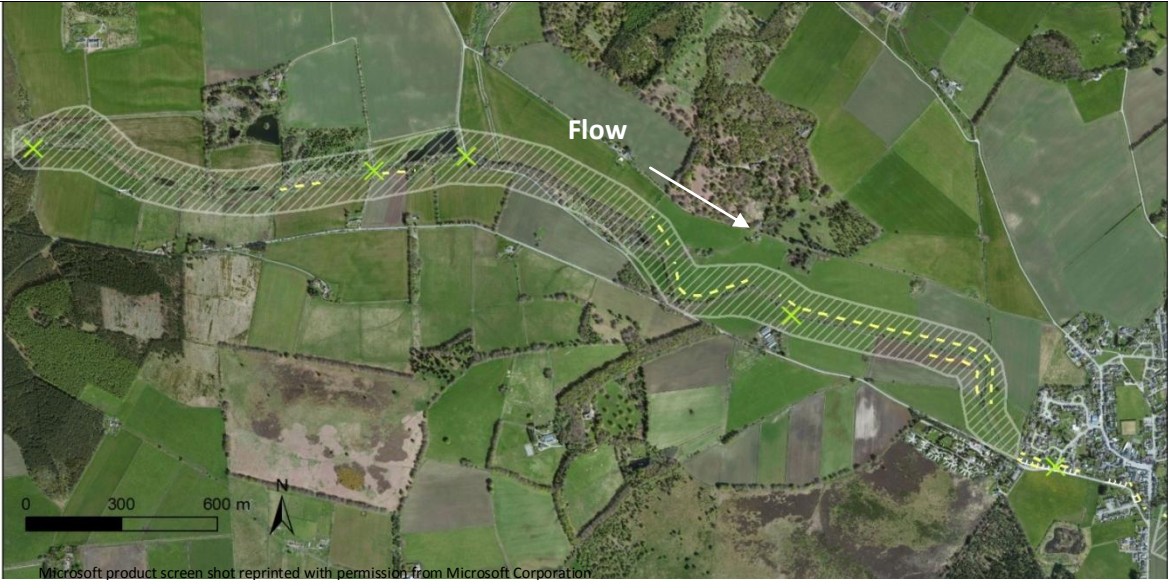
Funding and collaboration opportunities

n/a

Note: This information sheet is based on interpretation of existing data sources. It is recommended that a field reconnaissance survey is carried out to verify the information.

Water body ID	23327	Water body name	Dess Burn - upper	MCA rank	7	MCA score	32
Reach no.	1	Reach location	Downstream Mill Farm			Cost band	3
Context 1.6 km channel length flowing through mixed farmland. Straightening has reduced morphological diversity and, together with embankment has reduced connectivity with floodplain.							
Restoration opportunity and capacity released <ul style="list-style-type: none"> • Re-meandering and remove embankment to allow reconnection with floodplain. • Enhance vegetation structure and complexity throughout reach. • 66.4% MImAS capacity released; improves status from 'bad' to 'moderate'. 							
Degree of potential NFM benefit <ul style="list-style-type: none"> • No significant predicted benefit 							
Other benefits <ul style="list-style-type: none"> • Potential for local awareness raising • Positive impact on salmon, otter, and fresh water pearl mussels (protected species within the SAC). 							
Land use/ownership <ul style="list-style-type: none"> • Highest land capability value in reach, 3.2. 							
Constraints n/a							
Funding and collaboration opportunities <ul style="list-style-type: none"> • Possibility to collaborate with RSPB proposed wetland scheme. 				Note: This information sheet is based on interpretation of existing data sources. It is recommended that a field reconnaissance survey is carried out to verify the information			

Water body ID	23324	Water body name	Bo Burn	MCA rank	8	MCA score	30
Reach no.	2	Reach location	Loch of Park to Coy bridge	Cost band	4		
Context 3.1 km length of channel flowing through mixed farmland. Straightening has reduced morphological diversity and connectivity with floodplain. Culvert and bank protection further limit operation of natural physical processes							
Restoration opportunity and capacity released <ul style="list-style-type: none"> • Re-meandering, removal of embankments and bank protection to allow reconnection with floodplain and operation of natural physical process. • Enhance vegetation structure and complexity throughout reach. • 24.0% MImAS capacity released; improves status from 'bad' to 'poor'. 							
Degree of potential NFM benefit <ul style="list-style-type: none"> • No significant benefit likely 							
Other benefits <ul style="list-style-type: none"> • Significant potential to increase connectivity with surrounding habitats • Potential for local awareness raising • Positive impact on salmon, otter, and fresh water pearl mussels (protected species within the SAC). 							
Land use/ownership <ul style="list-style-type: none"> • Highest land capability value in reach, 3.2. 							
Constraints n/a							
Funding and collaboration opportunities n/a							
				Note: This information sheet is based on interpretation of existing data sources. It is recommended that a field reconnaissance survey is carried out to verify the information			

Water body ID	23338	Water body name	Tarland Burn	MCA rank	9	MCA score	30
Reach no.	5	Reach location	Hopeswell to Tarland	Cost band	4		
<p>Context 4.2 km length of channel flowing through mixed farmland. Straightening/realignment and several culverts have reduced morphological diversity, while intermittent embankments reduce connectivity with the floodplain.</p>							
<p>Restoration opportunity and capacity released</p> <ul style="list-style-type: none"> • Re-meandering, removal of embankments, bank protection and culverts to allow reconnection with floodplain and increase morphological diversity. • Enhance vegetation structure and complexity throughout reach. • 17.0% MImAS capacity released; improves status from 'bad' to 'poor'. 							
<p>Degree of potential NFM benefit</p> <ul style="list-style-type: none"> • No significant predicted benefit. 							
<p>Other benefits</p> <ul style="list-style-type: none"> • Significant potential to increase connectivity with surrounding habitats. • Potential for local awareness raising due to proximity to Tarland • Potential to reduce diffuse pollution. • Positive impact on salmon, otter, and fresh water pearl mussels (protected species within the SAC). 							
<p>Land use/ownership</p> <ul style="list-style-type: none"> • Highest land capability value in reach, 3.1. 							
<p>Constraints</p> <ul style="list-style-type: none"> • Downstream end of reach is within Tarland, which may limit the scope and extent of works. 							
<p>Funding and collaboration opportunities</p>				<p>Note: This information sheet is based on interpretation of existing data sources. It is recommended that a field reconnaissance survey is carried out to verify the information.</p>			

Water body ID	23320	Water body name	Gormack Burn	MCA rank	10	MCA score	30
Reach no.	1	Reach location	Blackhall to Mid-Anguston	Cost band	4		

Context

2.4km length of channel flowing through mixed farmland. Straightening and embankments have reduced morphological diversity and connectivity with floodplain.

Restoration opportunity and capacity released

- Re-meandering and remove embankments to allow reconnection with floodplain
- Enhance vegetation structure and complexity throughout reach
- 26.0% MImAS capacity released; improves status from 'bad' to 'poor'.

Degree of potential NFM benefit

- Predicted reduction in downstream flood peak by 1.46%.
- Direct input to PVA.
- Overall floodplain reconnection NFM ranking: 7

Other benefits

- Potential for local awareness raising.
- Potential to create recreational infrastructure.
- Positive impact on salmon, otter, and fresh water pearl mussels (protected species within the SAC).

Land use/ownership

- Highest land capability value in reach, 3.2.

Constraints

- Road and farm adjacent to reach may limit extent of works

Funding and collaboration opportunities

n/a



Note: This information sheet is based on interpretation of existing data sources. It is recommended that a field reconnaissance survey is carried out to verify the information