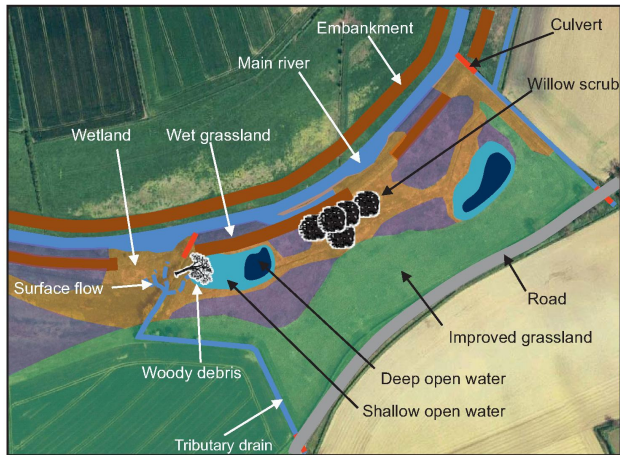


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Note: The limits, including the height and depths of the Works, shown in the drawing, are not to be taken as limiting the obligations of the contractor under Contract

1a. Restoration plan overview



Notes

Further details are provided in the Method Statement and Safety in Design documents

Safety Health and Environmental information

In addition to the hazards/risk normally associated with the types of work detailed on this drawing, note the following

Construction

1. Underground services are present (gas and sewer – refer to service plans) and the contractor should follow HSG47 (Avoiding danger from underground services); private or uncharted services must be anticipated.
2. Public access on north (right) bank will be maintained throughout works; low risk of unauthorised public access on south bank – use of temporary fencing or barriers is recommended.
3. Risk of plant slipping or overturning into watercourse if working on wet or weak ground and when crossing the river; refer to EA Operational instruction 867 11 (Managing and working safely on machine mats).
4. Site personnel to be aware of Lymes Disease and Leptospirosis; causes and treatment.
5. Working in and adjacent to watercourse could release sediment and pollute river – adopt suitable controls such as heather bale dams and silt booms.
6. Protected species may be present – refer to surveys.
7. Non-native invasive species (such as Japanese Knotweed) may be present – refer to survey.

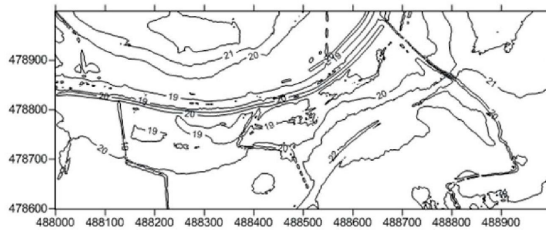
Maintenance/cleaning/operation

1. Riverbanks may become unstable following construction with potential to cause injury to public and livestock; banks should be inspected by a competent engineer following construction and working areas should be fenced off until vegetation is established.
2. Livestock could become trapped in wetland zone, therefore fencing should be maintained.

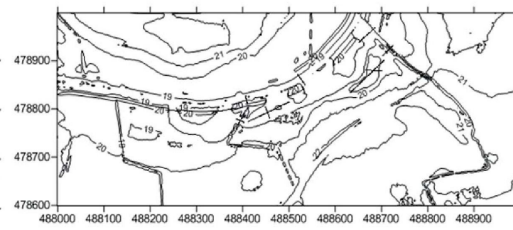
Decommissioning/demolition

Not applicable

1b. Baseline topography before restoration



1c. Topography after restoration



Client: Environment Agency
Project: Derwent Straightening
Title: Restoration plan and expected changes in bed topography

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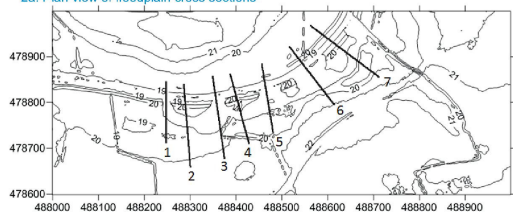
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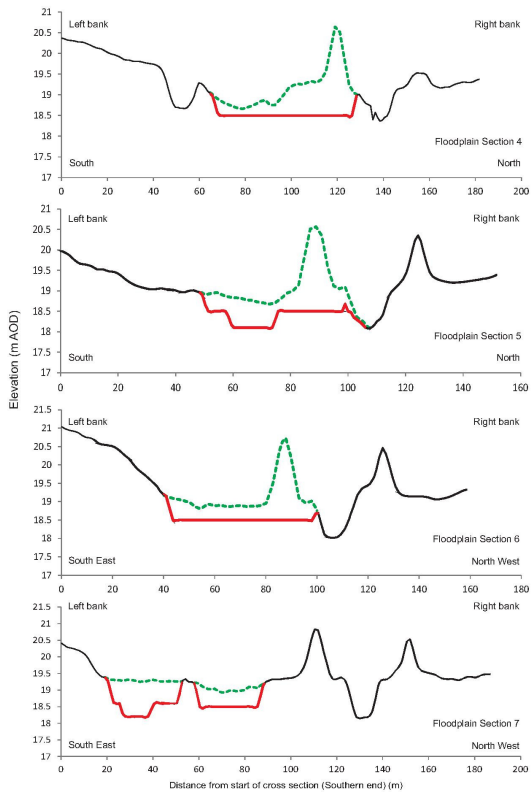
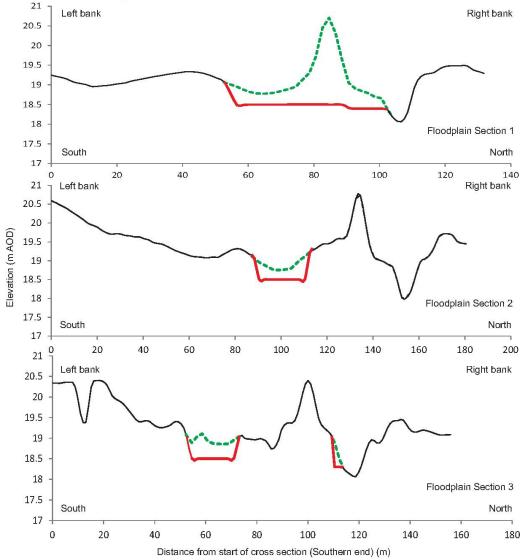
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## 2a. Plan view of floodplain cross sections



## 2b. Derwent floodplain cross sections



Note: The limits, including the height and depths of the Works, shown in the drawing, are not to be taken as limiting the obligations of the contractor under Contract

**Legend**  
— Unmodified  
--- Existing section (pre-restoration)  
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**Notes**  
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### Safety Health and Environmental information

In addition to the hazards/risk normally associated with the types of work detailed on this drawing, note the following

#### Construction

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7. Non-native invasive species (such as Japanese Knotweed) may be present - refer to survey.

#### Maintenance/cleaning/operation

1. Riverbanks may become unstable following construction with potential to cause injury to public and livestock; banks should be inspected by a competent engineer following construction and working areas should be fenced off until vegetation is established.
2. Livestock could become trapped in wetland zone, therefore fencing should be maintained.

#### Decommissioning/demolition

Not applicable

Client: Environment Agency

Project: Derwent Straightening

Title: Floodplain cross sections

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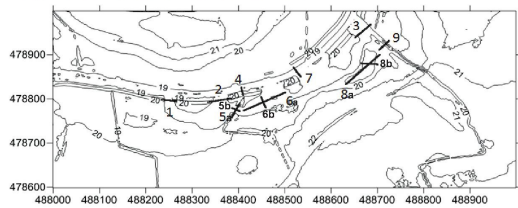
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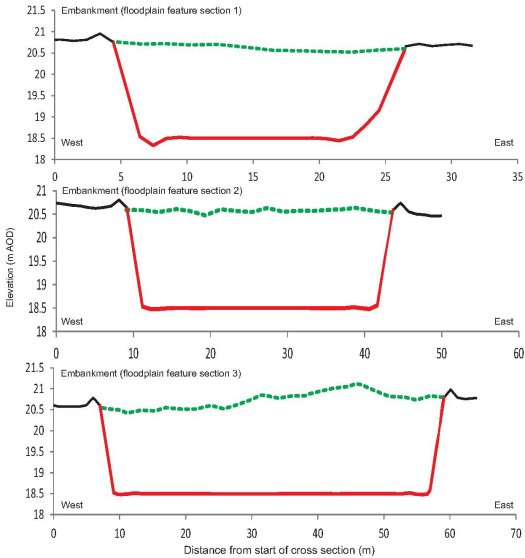
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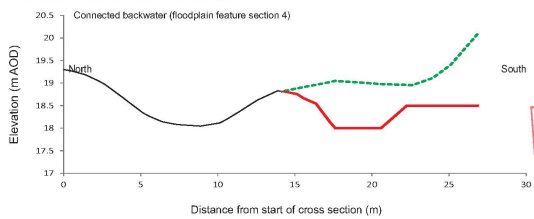
### 3a. Plan view of floodplain features cross sections



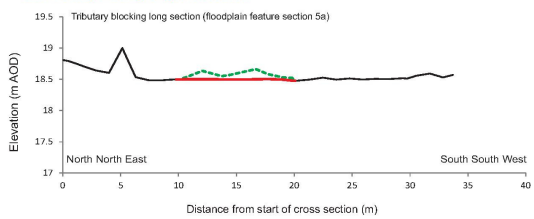
### 3b. Embankment breaches cross sections



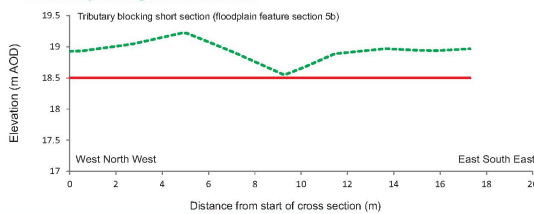
### 3c. Connected backwater cross section



### 3d. Tributary blocking long cross section



### 3e. Tributary blocking short cross section



Note: The limits, including the height and depths of the Works, shown in the drawing, are not to be taken as limiting the obligations of the contractor under Contract.

**Legend**  
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**Notes**  
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### Safety Health and Environmental information

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- Construction**
1. Underground services are present (gas and sewer - refer to service plans) and the contractor should follow HSG47 (Avoiding danger from underground services); private or uncharted services must be anticipated.
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  4. Site personnel to be aware of Lyme Disease and Leptospirosis; causes and treatment.
  5. Working in and adjacent to watercourse could release sediment and pollute river - adopt suitable controls such as heather bales dams and silt booms.
  6. Protected species may be present - refer to surveys.
  7. Non-native invasive species (such as Japanese Knotweed) may be present - refer to survey.
- Maintenance/cleaning/operation**
1. Riverbanks may become unstable following construction with potential to cause injury to public and livestock; banks should be inspected by a competent engineer following construction and working areas should be fenced off until vegetation is established.
  2. Livestock could become trapped in wetland zone, therefore fencing should be maintained.

**Decommissioning/demolition**  
Not applicable

Client: Environment Agency
Project: Derwent Straightening
Title: Floodplain features cross sections

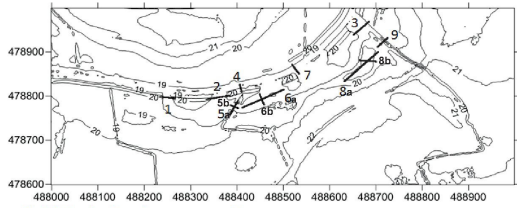
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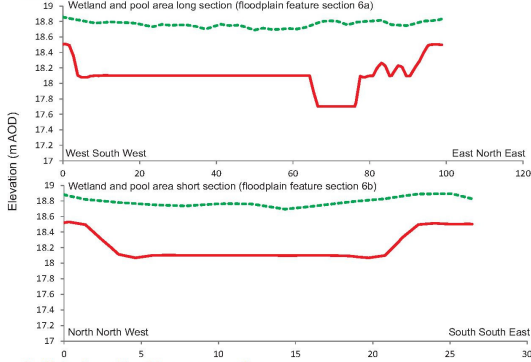
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Check: KS	App'd: OS
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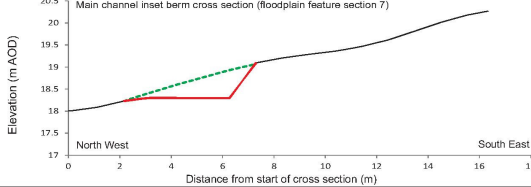
#### 4a. Plan view of floodplain features cross sections



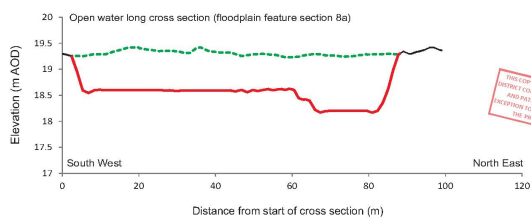
#### 4b. Wetland and pool area cross sections



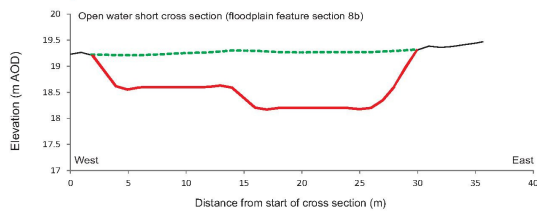
#### 4c. Main channel inset berm cross section



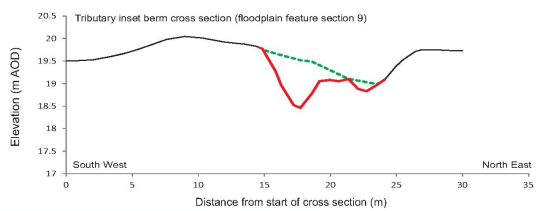
#### 4d. Open water long cross section



#### 4e. Open water short cross section



#### 4f. Tributary inset berm cross section



Note: The limits, including the height and depths of the Works, shown in the drawing, are not to be taken as limiting the obligations of the contractor under Contract

#### Legend

- Unmodified
- - - Existing section (pre-restoration)
- Modified section (post-restoration)

#### Notes

Further details are provided in the Method Statement and Safety in Design documents.

#### Safety Health and Environmental information

In addition to the hazards/risk normally associated with the types of work detailed on this drawing, note the following

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#### Maintenance/cleaning/operation

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- Livestock could become trapped in wetland zone, therefore fencing should be maintained.

#### Decommissioning/demolition

Not applicable

Client: Environment Agency  
Project: Derwent Straightening

Title: Floodplain features cross sections 6 - 9

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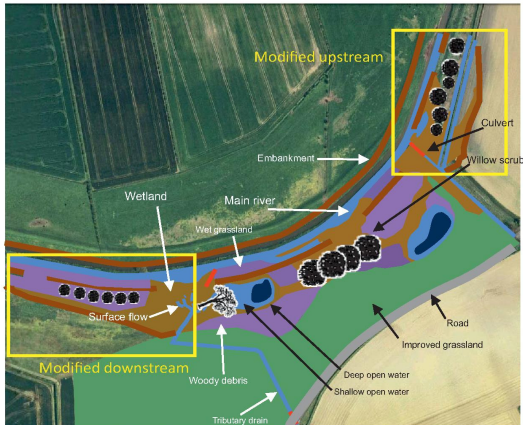
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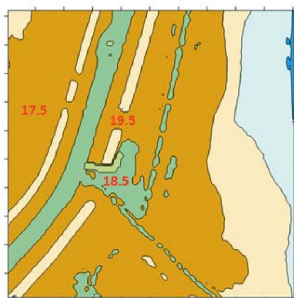
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#### 5a. Restoration plan overview

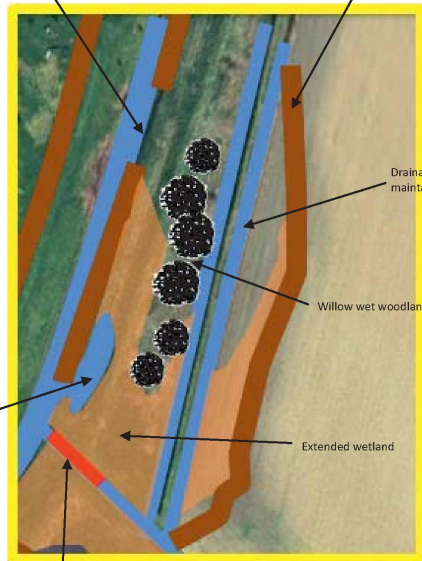


#### 5b. Topography changes for upstream restoration



#### 5c. Upstream restoration overview

Embankment breached to allow flood water rapidly back into the Derwent after a flood



Connected backwater (piped to allow access)

Existing culvert to be retained

Note: The limits, including the height and depths of the Works, shown in the drawing, are not to be taken as limiting the obligations of the contractor under Contract

#### Notes

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#### Safety Health and Environmental information

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##### Construction

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5. Working in and adjacent to watercourse could release sediment and pollute river - adopt suitable controls such as heather bale dams and silt booms.
6. Protected species may be present - refer to surveys.
7. Non-native invasive species (such as Japanese Knotweed) may be present - refer to survey.

##### Maintenance/cleaning/operation

1. Riverbanks may become unstable following construction with potential to cause injury to public and livestock; banks should be inspected by a competent engineer following construction and working areas should be fenced off until vegetation is established.
2. Livestock could become trapped in wetland zone, therefore fencing should be maintained.

##### Decommissioning/demolition

Not applicable

Client: Environment Agency  
Project: Derwent Straightening

Title: Upstream restoration overview

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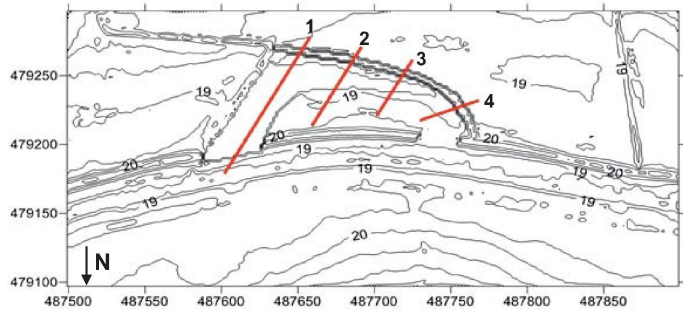
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6a. Plan view of downstream floodplain features cross sections

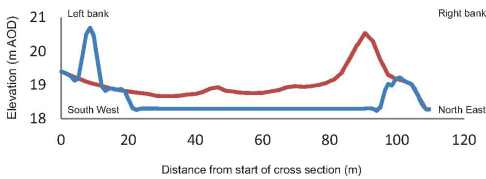


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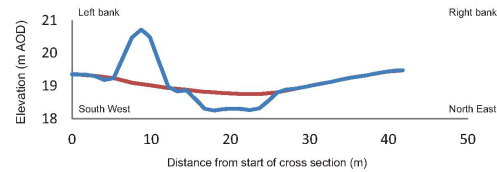
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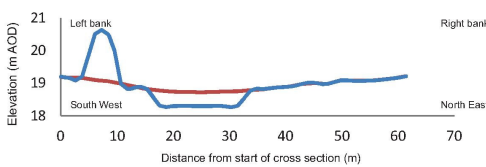
6b. Floodplain features cross section 1



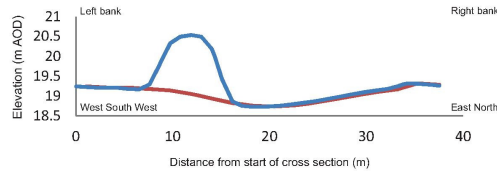
6d. Floodplain features cross section 3



6c. Floodplain features cross section 2



6e. Floodplain features cross section 4



Safety Health and Environmental information

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Maintenance/cleaning/operation

1. Riverbanks may become unstable following construction with potential to cause injury to public and livestock; banks should be inspected by a competent engineer following construction and working areas should be fenced off until vegetation is established.
2. Livestock could become trapped in wetland zone, therefore fencing should be maintained.

Decommissioning/demolition

Not applicable

Client: Environment Agency  
Project: Derwent Straightening  
Title: Downstream floodplain features cross sections

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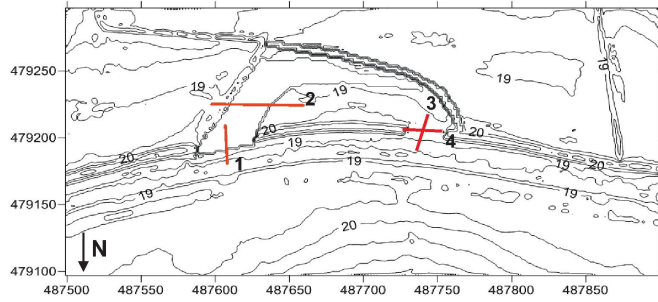
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7a. Plan view of downstream floodplain features cross sections

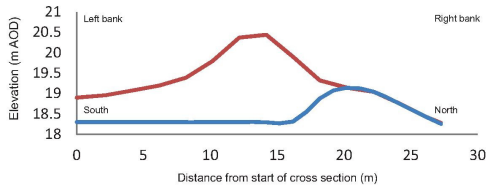


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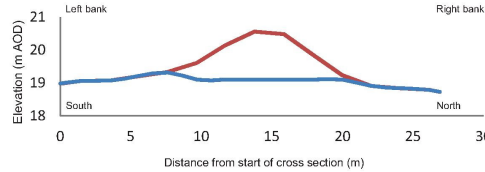
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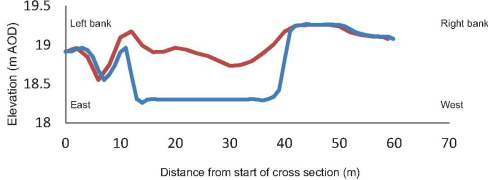
7b. Floodplain features cross section 1



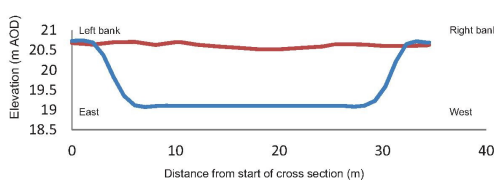
7d. Floodplain features cross section 3



7c. Floodplain features cross section 2



7e. Floodplain features cross section 4



Safety Health and Environmental information

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4. Site personnel to be aware of Lyme Disease and Leptospirosis; causes and treatment.
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6. Protected species may be present – refer to surveys.
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1. Riverbanks may become unstable following construction with potential to cause injury to public and livestock; banks should be inspected by a competent engineer following construction and working areas should be fenced off until vegetation is established.
2. Livestock could become trapped in wetland zone, therefore fencing should be maintained.

Decommissioning/demolition

Not applicable

Client: Environment Agency
Project: Derwent Straightening
Title: Downstream floodplain features cross sections (2)

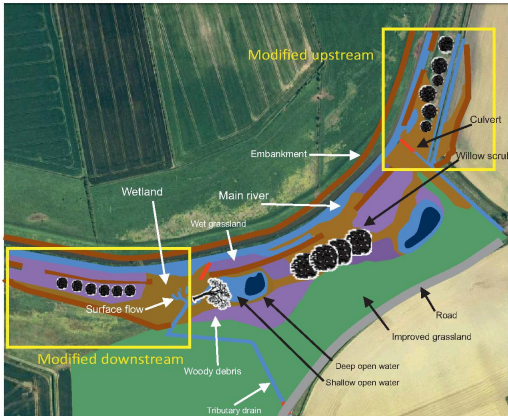
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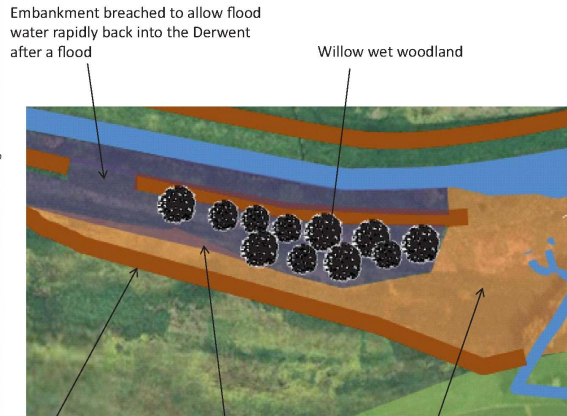
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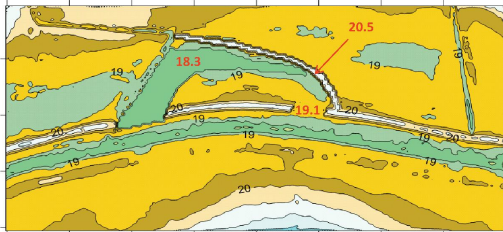
#### 8a. Restoration plan overview



#### 8b. Downstream restoration overview



#### 8c. Topography changes for downstream restoration



Note: This image has been rotated 180 degrees.

New embankment using arisings to limit flood extent  
Extended wet grassland(similar to present)  
Extended wetland

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#### Notes

Further details are provided in the Method Statement and Safety in Design documents.

#### Safety Health and Environmental information

In addition to the hazards/risk normally associated with the types of work detailed on this drawing, note the following

- Construction**
1. Underground services are present (gas and sewer - refer to service plans) and the contractor should follow HSG47 (Avoiding danger from underground services); private or uncharted services must be anticipated.
  2. Public access on north (right) bank will be maintained throughout works; low risk of unauthorised public access on south bank - use of temporary fencing or bankmen is recommended.
  3. Risk of plant slipping or overturning into watercourse if working on wet or weak ground and when crossing the river: refer to EA Operational instruction 867 11 (Managing and working safely on machine mats).
  4. Site personnel to be aware of Lyme Disease and Leptospirosis; causes and treatment.
  5. Working in and adjacent to watercourse could release sediment and pollute river - adopt suitable controls such as heather baffle dams and silt booms.
  6. Protected species may be present - refer to surveys.
  7. Non-native invasive species (such as Japanese Knotweed) may be present - refer to survey.

#### Maintenance/cleaning/operation

1. Riverbanks may become unstable following construction with potential to cause injury to public and livestock: banks should be inspected by a competent engineer following construction and working areas should be fenced off until vegetation is established.
2. Livestock could become trapped in wetland zone, therefore fencing should be maintained.

#### Decommissioning/demolition

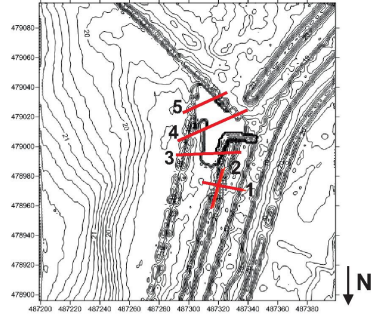
Not applicable

Client: Environment Agency	<p>AECOM House 179 Moss Lane Altrincham WA15 8FH</p> <p><b>AECOM</b></p> <p>Tel: +44 (0) 161 927 8200 Fax: +44 (0) 161 927 8299 www.aecom.com</p>	Design: GH	Drawn: GH
Project: Derwent Straightening		Check: KS	App'd: OS
Title: Downstream restoration overview		Drawing Number: 8	Version Number: 1

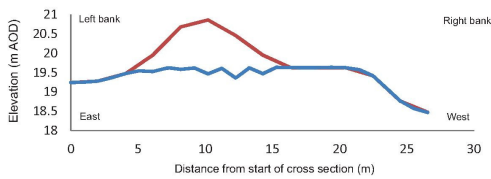
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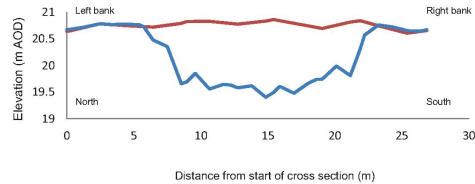
#### 9a. Plan view of upstream floodplain features cross sections



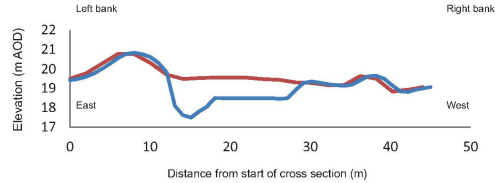
#### 9b. Floodplain features cross section 1



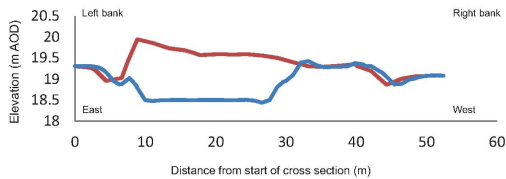
#### 9c. Floodplain features cross section 2



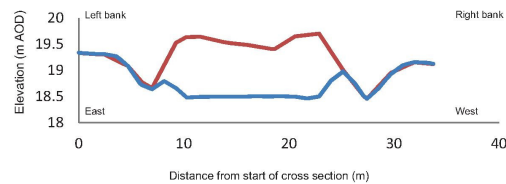
#### 9d. Floodplain features cross section 3



#### 9e. Floodplain features cross section 4



#### 9f. Floodplain features cross section 5



Note: The limits, including the height and depths of the Works, shown in the drawing, are not to be taken as limiting the obligations of the contractor under Contract

#### Notes

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#### Safety Health and Environmental information

In addition to the hazards/risk normally associated with the types of work detailed on this drawing, note the following

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- Decommissioning/demolition
- Not applicable.

Client: Environment Agency  
Project: Derwent Straightening

Title: Upstream floodplain features cross sections

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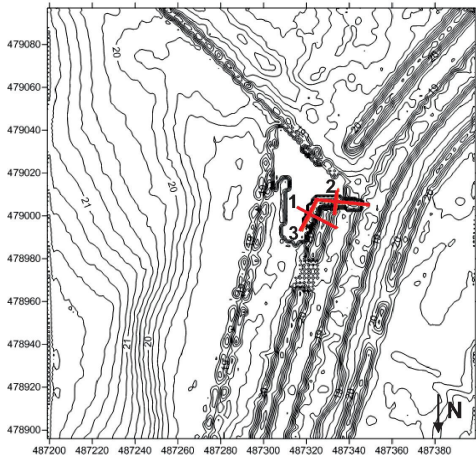
Note: The limits, including the height and depths of the Works, shown in the drawing, are not to be taken as limiting the obligations of the contractor under Contract

Notes

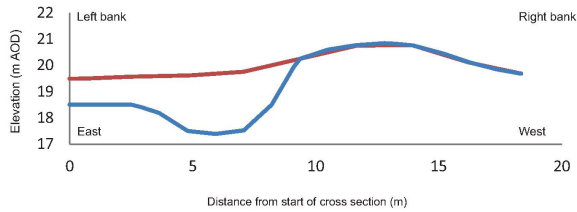
Further details are provided in the Method Statement and Safety in Design documents

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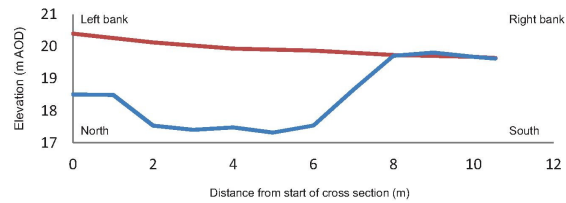
10a. Plan view of upstream floodplain features cross sections



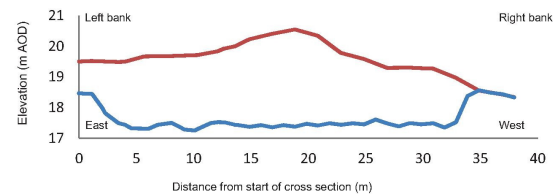
10b. Floodplain features cross section 1



10b. Floodplain features cross section 2



10c. Floodplain features cross section 3



Safety Health and Environmental information

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- Decommissioning/demolition
- Not applicable.

Client: Environment Agency  
Project: Derwent Straightening

Title: Upstream floodplain features cross sections (2)

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