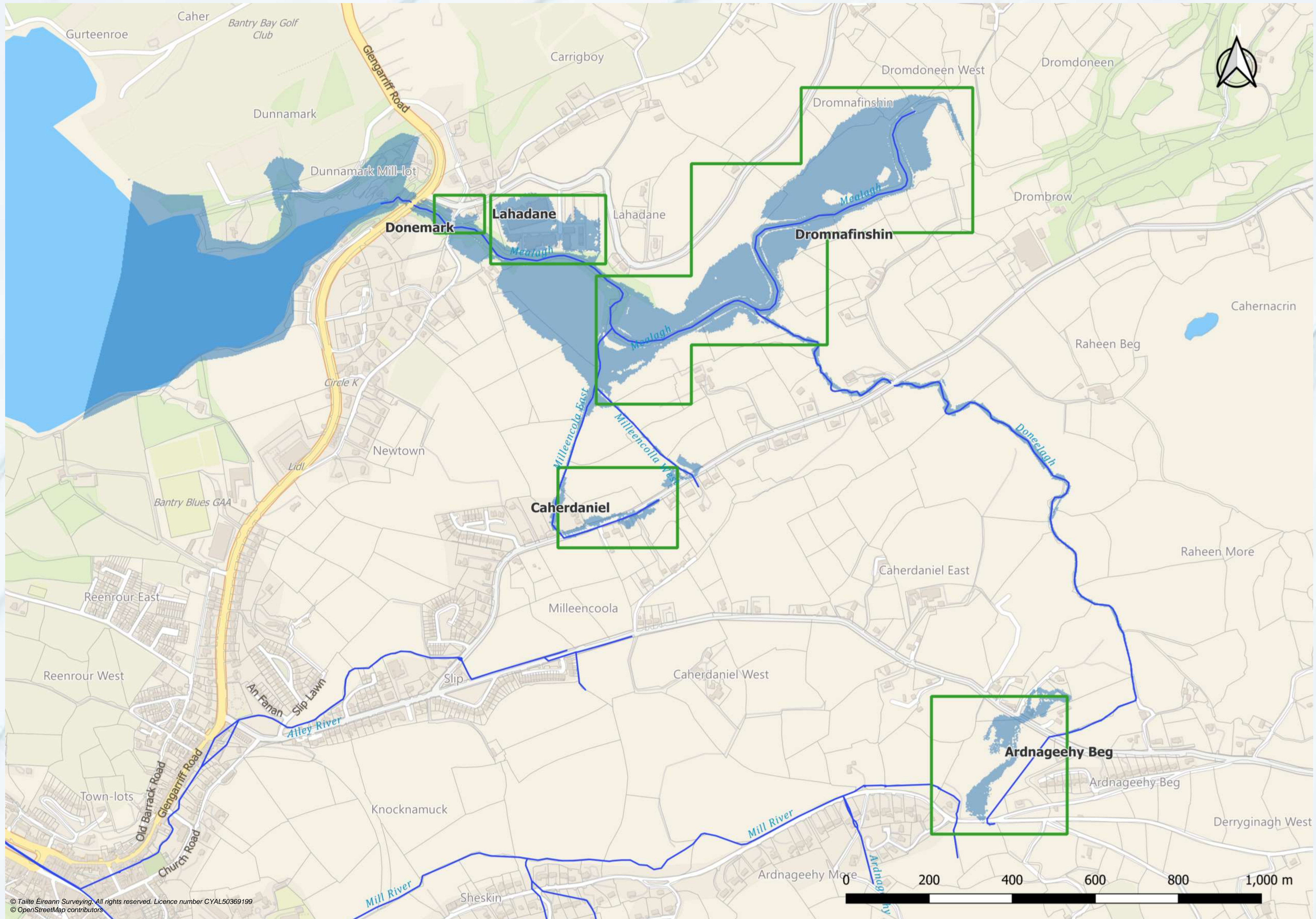


14 Mealagh River Catchment



Predicted flood risk areas in the Mealagh catchment

Potential Measures in flood risk areas

1 Donemark, Lahadane & Dromnafinshin

- | | |
|----|---|
| 1A | o New walls to protect residential properties near Old Donemark Bridge |
| 1B | o New walls to protect Lahadane Business Park |
| 1C | o Excavated flood plain in Dromnafinshin
o Measures 1A and 1B required in combination with 1C |
| 1D | o Flow control in form of 'green' bridge and storage in Dromnafinshin
o Measures 1A and 1B required in combination with 1D |

2 Caherdaniel

- | | |
|----|---|
| 2A | o New culvert (0.9m) to replace existing under-capacity pipes (0.3m) on roadside near ESB substation |
| 2B | o Upstream storage in field east of ESB substation |
| 2C | o New culvert (0.9m) across road near ESB substation to divert existing channel
o New open channel across field to north of ESB substation |

3 Ardnageehy Beg

- | | |
|----|--|
| 3A | o New embankment to prevent overland flows across road |
| 3B | o New culvert (0.9m) to replace existing under-capacity pipe (225mm)
o Localised ground raising to maintain cover over new pipe |

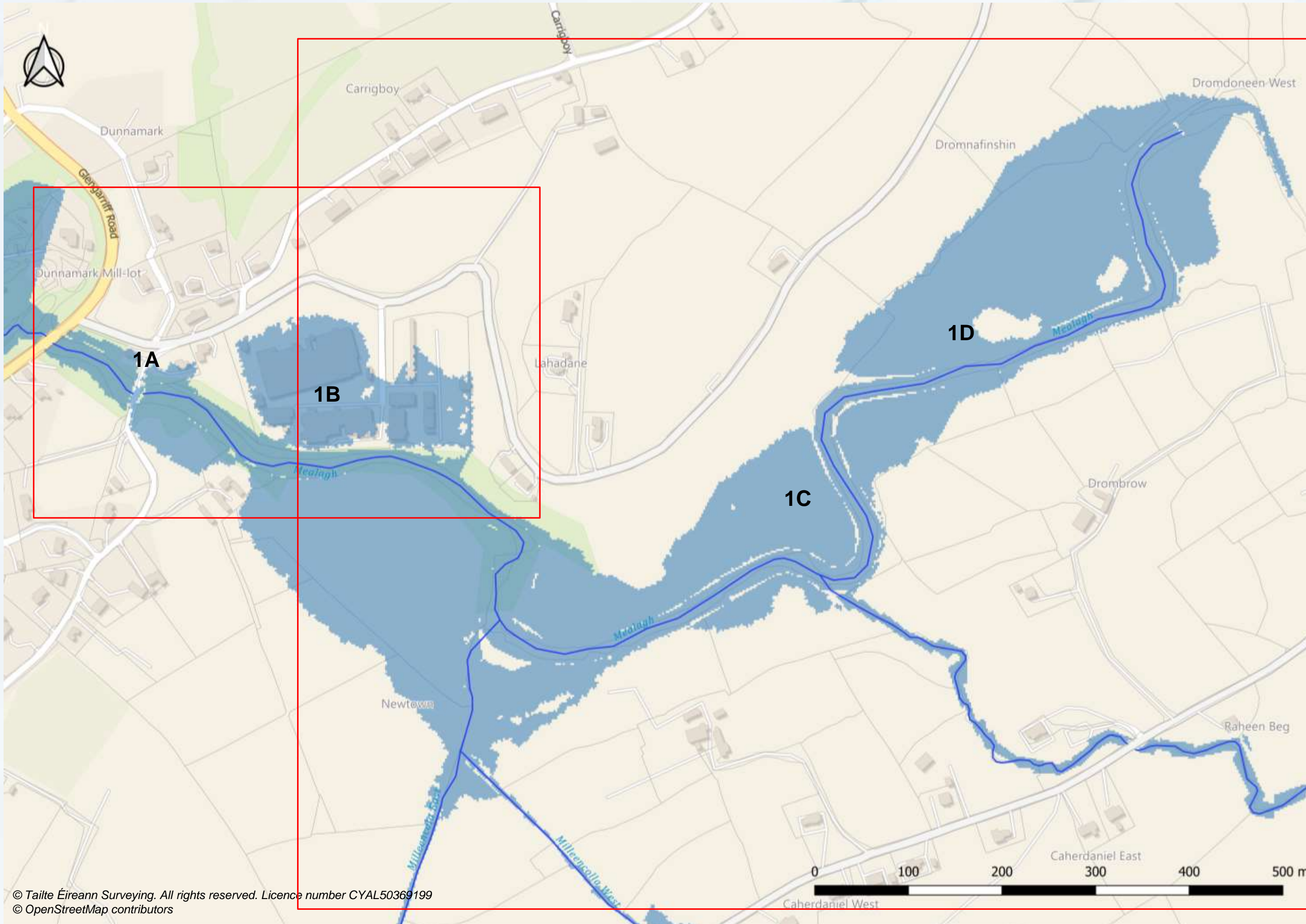


Old Donemark Bridge

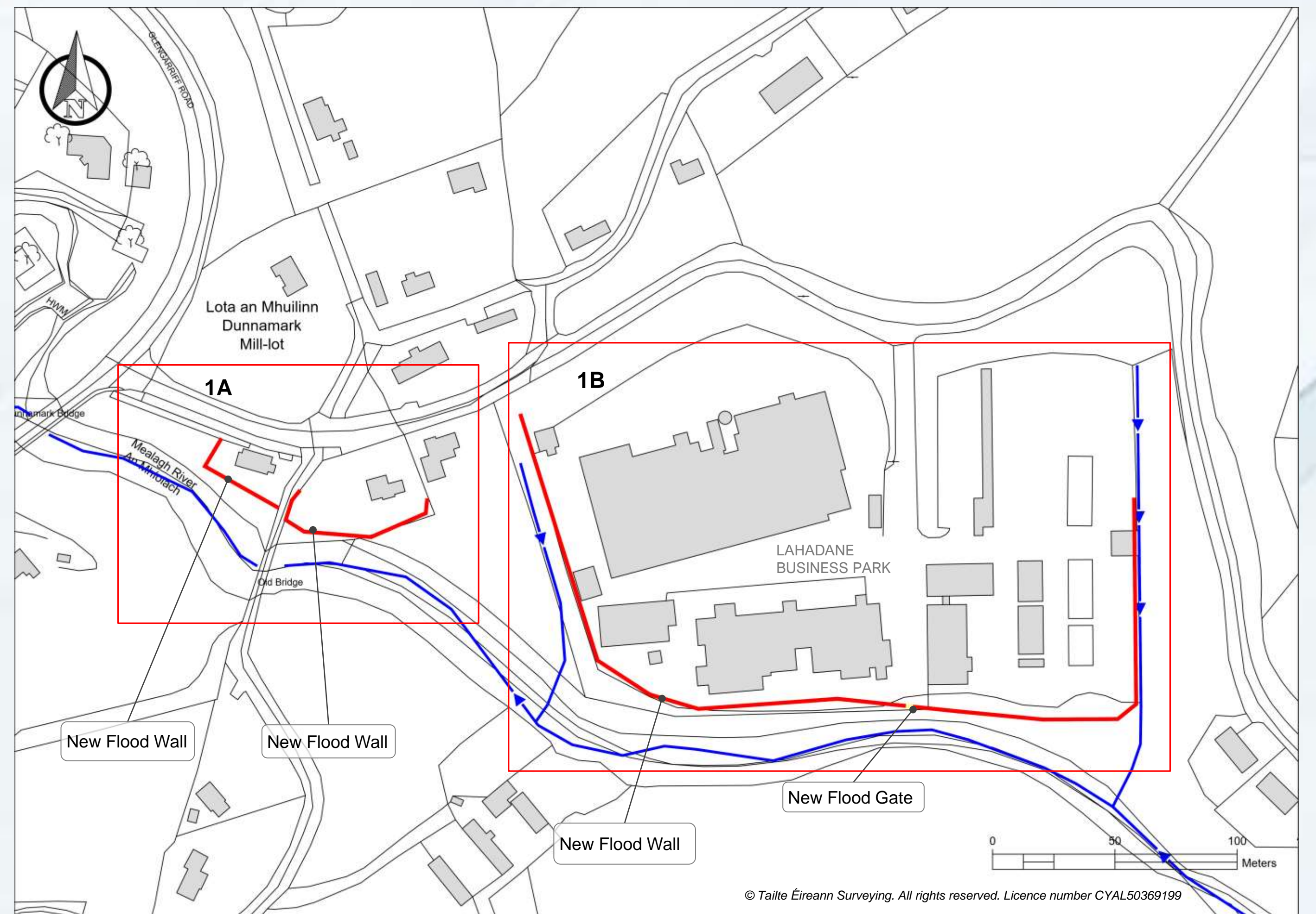


Lahadane Business Park
Image captured July 2009 © 2024 Google

15 Donemark, Lahadane, Dromnafinshin



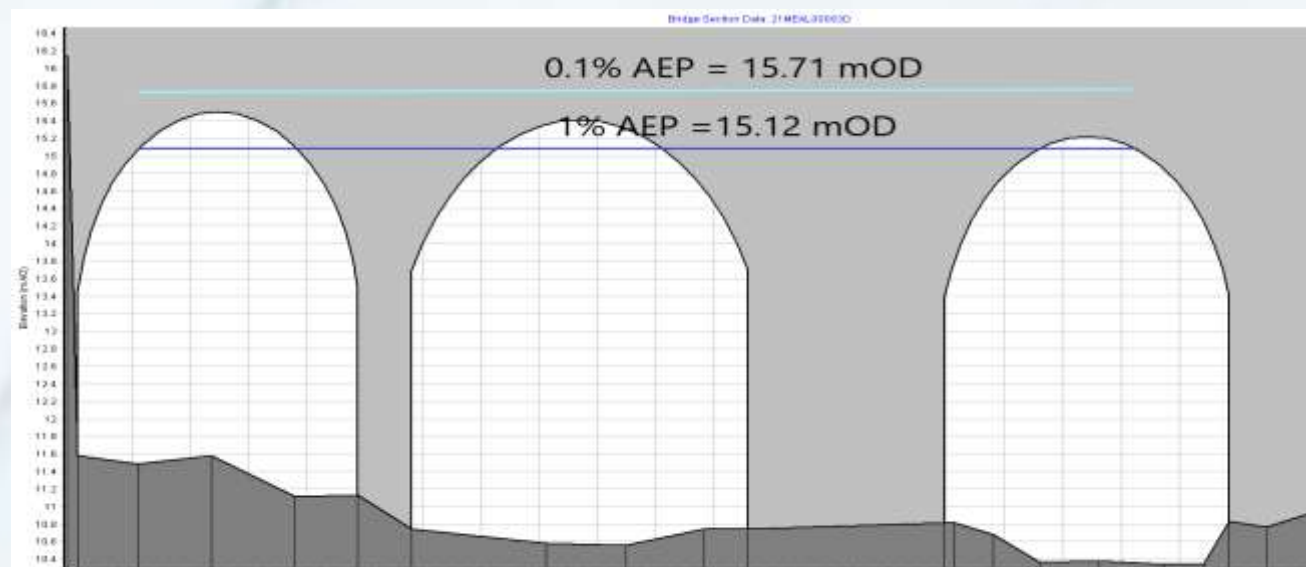
Predicted flood extents for 1% AEP



General Layout Of Potential Measures 1A and 1B



Business Park – Southern boundary, looking east



Predicted flood level at Old Donemark Bridge

Options

Measure 1A and 1B are both required in this area to protect the properties on the right bank of the Meagher River.

Measures 1C and 1D are alternative measures. Either one would work in combination with 1A and 1B and the benefit of either measure is that it would reduce the height of defences at 1A and 1B.

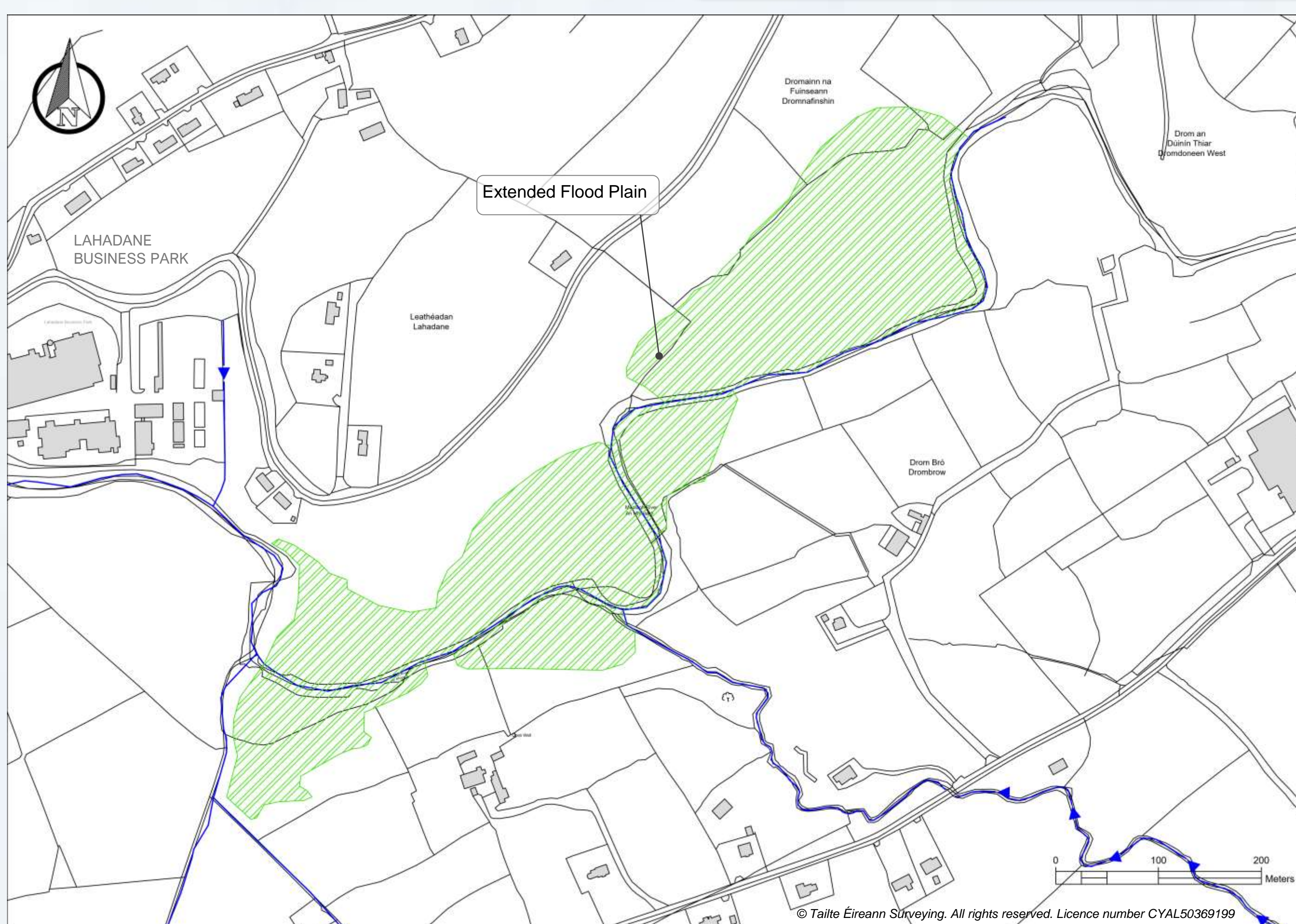
1A & 1B Potential Measure

Proposal

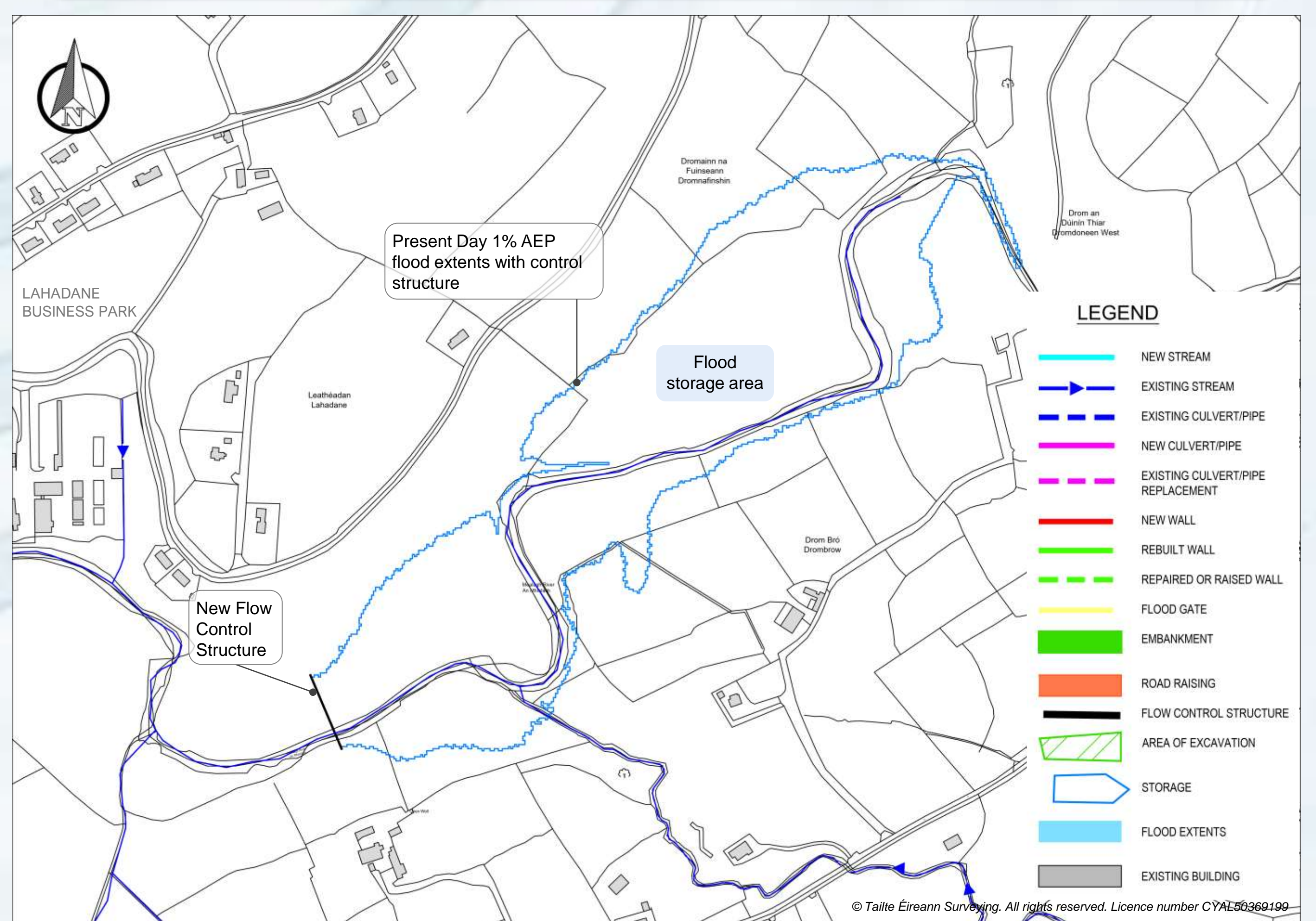
- 1A – New flood walls to protect 2 residential properties (approx. height 1.2m).
- 1B – New flood walls to protect Lahadane Business Park (approx. height near riverbank 1.5m and running into high ground to the north).

Considerations

- Biodiversity – Impact on riverine vegetation and habitats.
- Biodiversity – Opportunity to naturalise channel along eastern boundary of business park.
- Property – Existing outfalls from business park to be maintained.
- Construction – Confined working space at boundary of business park.



General Layout Of Potential Measure 1C



General Layout Of Potential Measure 1D

1C Potential Measures

Proposal

- Excavation to extend floodplain capacity.
- Measures 1A and 1B required in combination with 1C.

Considerations

- Construction – Impact on water quality due to sediment release.
- Construction – Consideration for reuse of excavated material.
- Biodiversity – Otter holts downstream of excavation area.
- Biodiversity – Invasive species at downstream end of excavation area.

1D Potential Measures

Proposal

- Flow control structure to create storage area for large events. To take the form of a green bridge (approx. height above river 3.5m).
- Measures 1A and 1B required in combination with 1D.

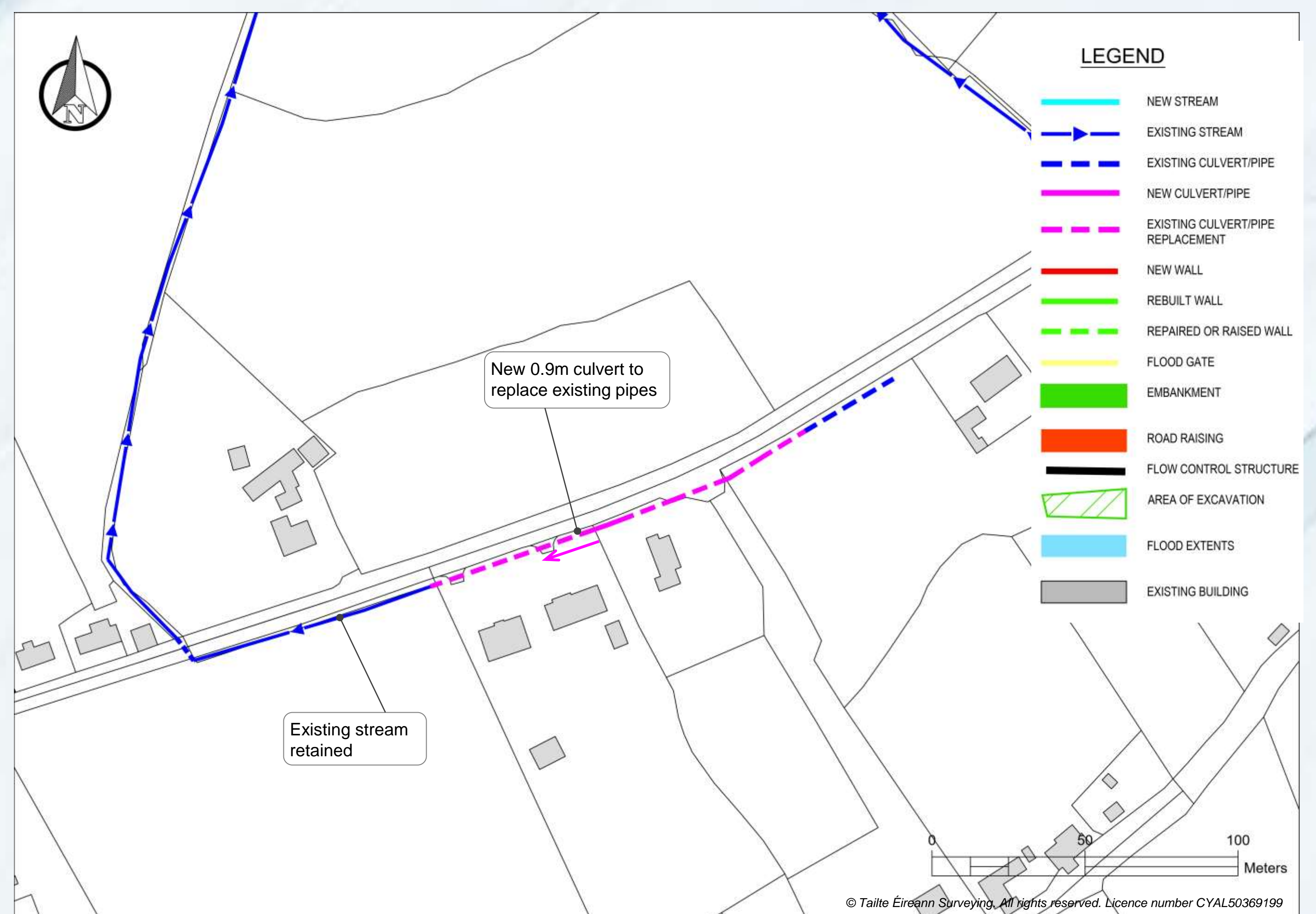
Considerations

- Biodiversity – Potential slight water improvement by providing crossing route for cattle.

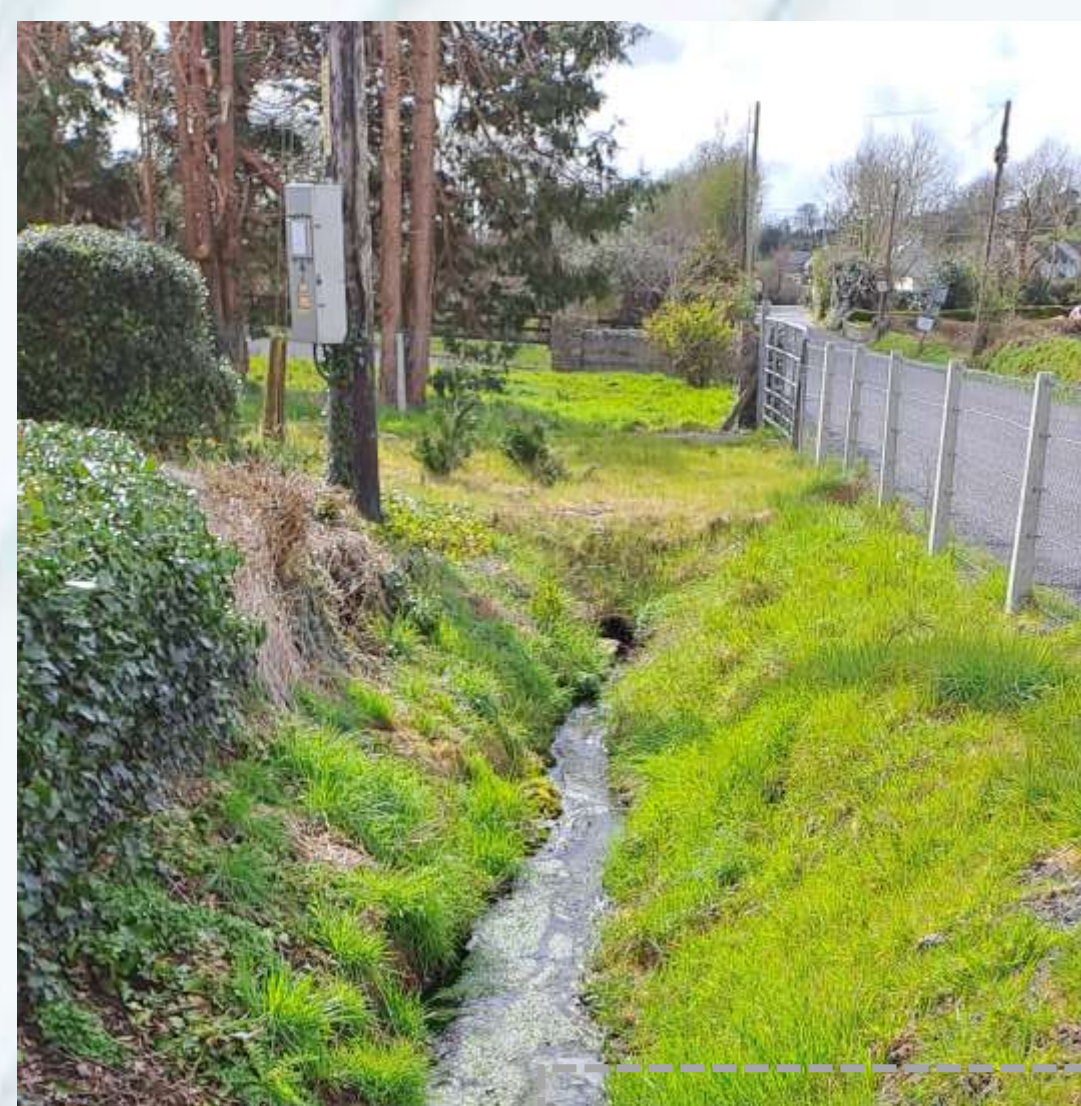
16 Caherdaniel



Predicted flood extents for 1% AEP



General Layout Of Potential Measure 2A



Channel, looking west from ESB Substation



ESB Substation

2A Potential Measures

Proposal

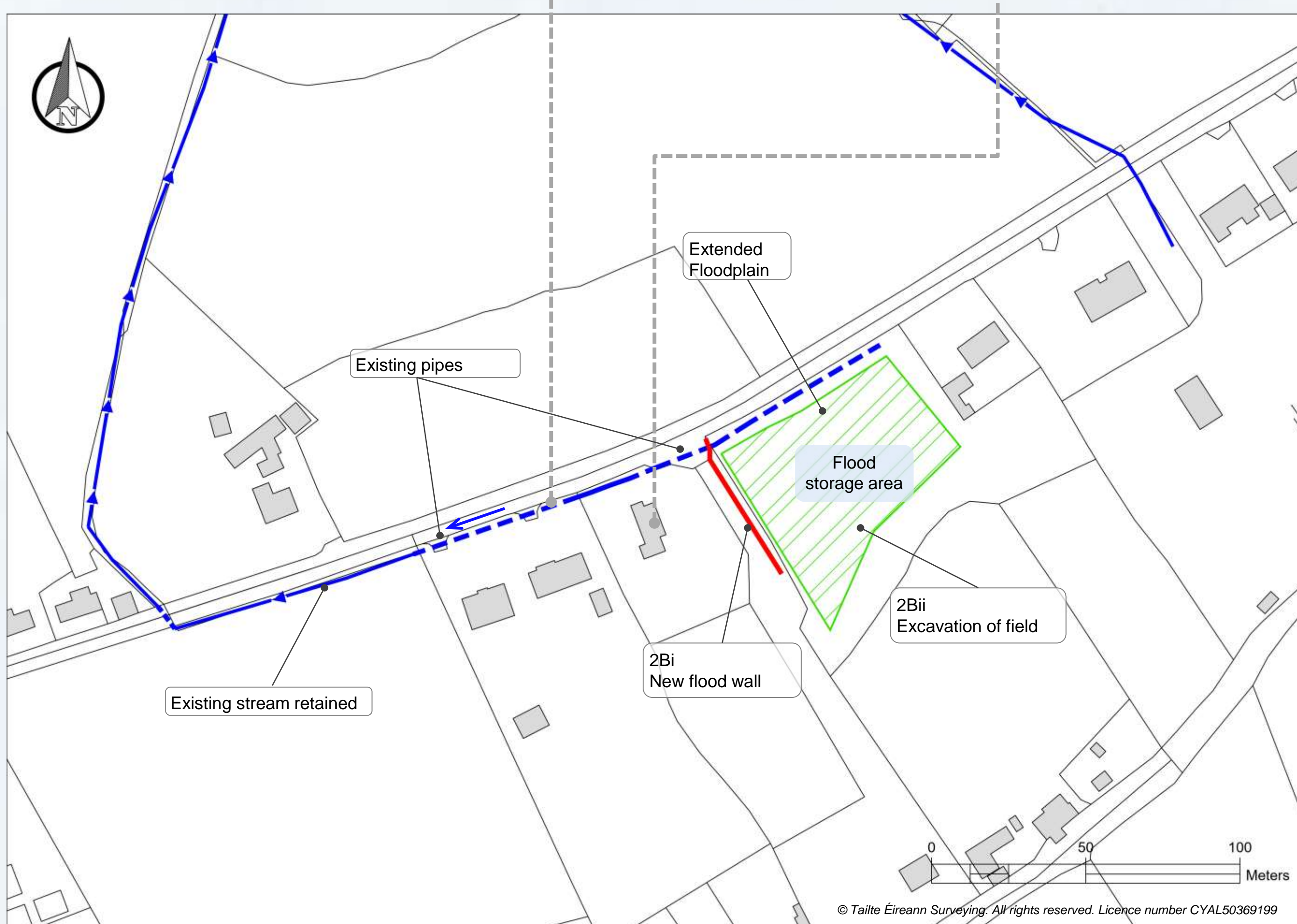
- New culvert (0.9m dia.) to replace existing undercapacity pipes along road edge.

Considerations

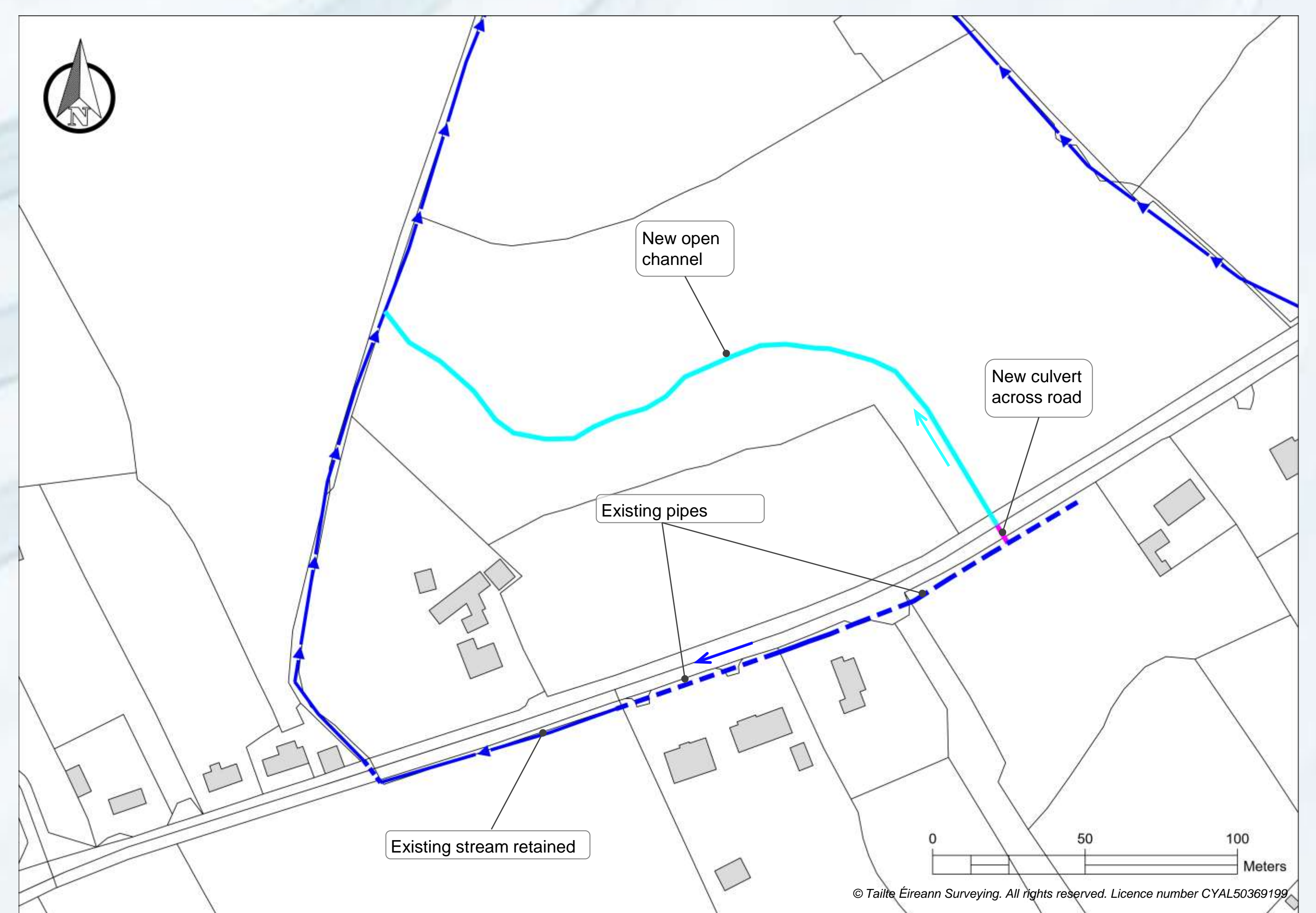
- Property – Access roads to be raised (0.3m approx.) at culvert location.

Options

Measure 2A, 2B and 2C are alternative options. Either one of these measures can manage the risk of flooding in this area. Measure 2B could be achieved in two ways as described below.



General Layout Of Potential Measure 2B



General Layout Of Potential Measure 2C

2B Potential Measure

Proposal

- Extended floodplain into field, upstream of existing pipes by:
 - 2B i. Flood wall on west side of field (approx. height 0.75m), or
 - 2B ii. Excavation of field to provide storage (approx. depth 0.75m).

Considerations

- Property – Small portion of field to be acquired.
- Biodiversity – Field has potential for good quality grassland.

2C Potential Measure

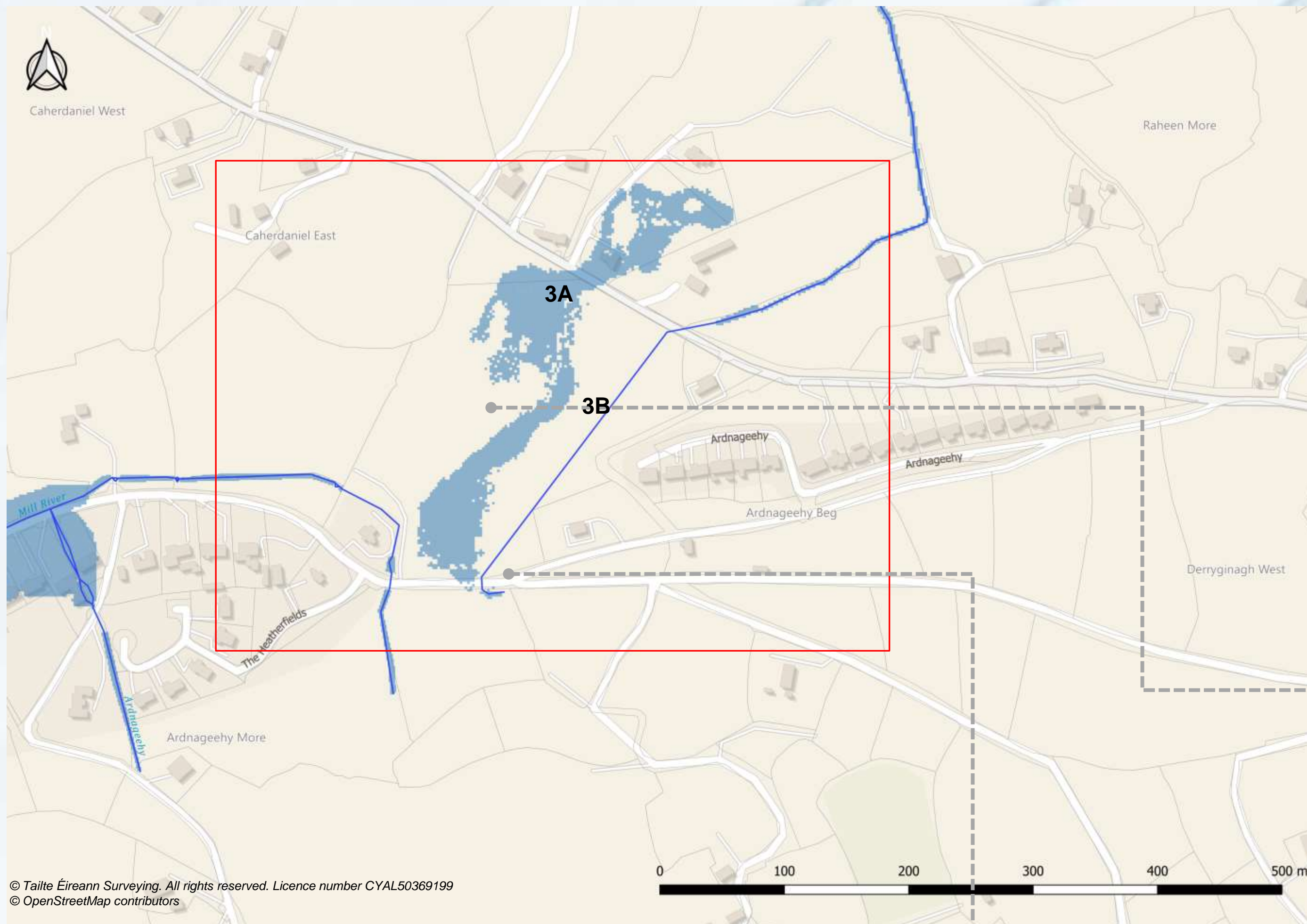
Proposal

- New culvert (0.9m dia.) across road to divert excess flows.
- New open channel across field to convey excess flows.

Considerations

- Biodiversity – Opportunity to improve natural habitat.

17 Ardnageehy Beg



Predicted flood extents for 1% AEP

Options

Measure 3A and 3B are alternative options. Either one of these measures can manage the risk of flooding in this area.

Note

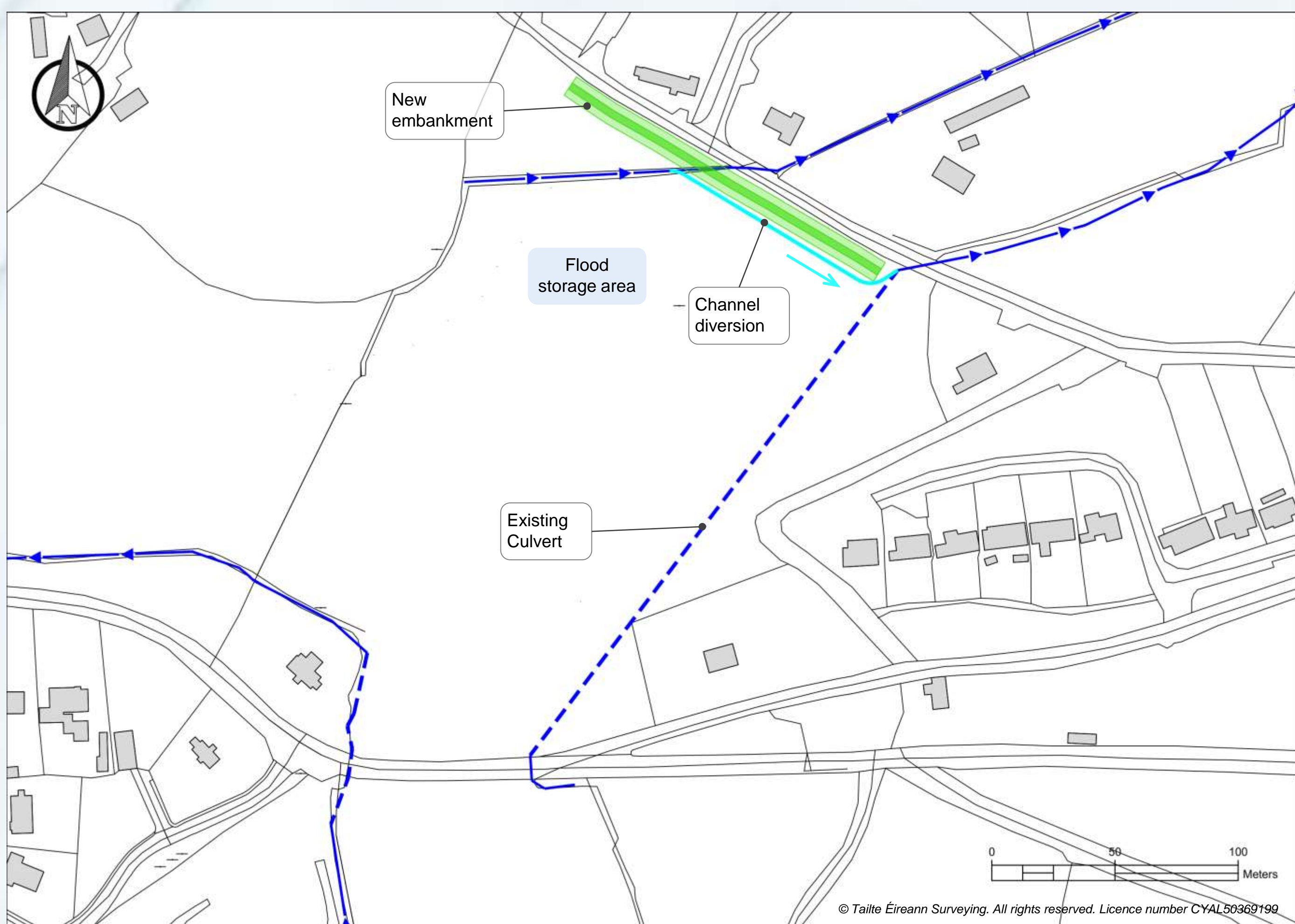
While the predicted flood extent in this area looks extensive, the model results show that it is very shallow. This means the modelled results are very sensitive to even the smallest variation in topographical levels. For this reason, the predicted extent of flooding in this area will be subject to further detailed review. It is not expected that the proposed measures will significantly change.



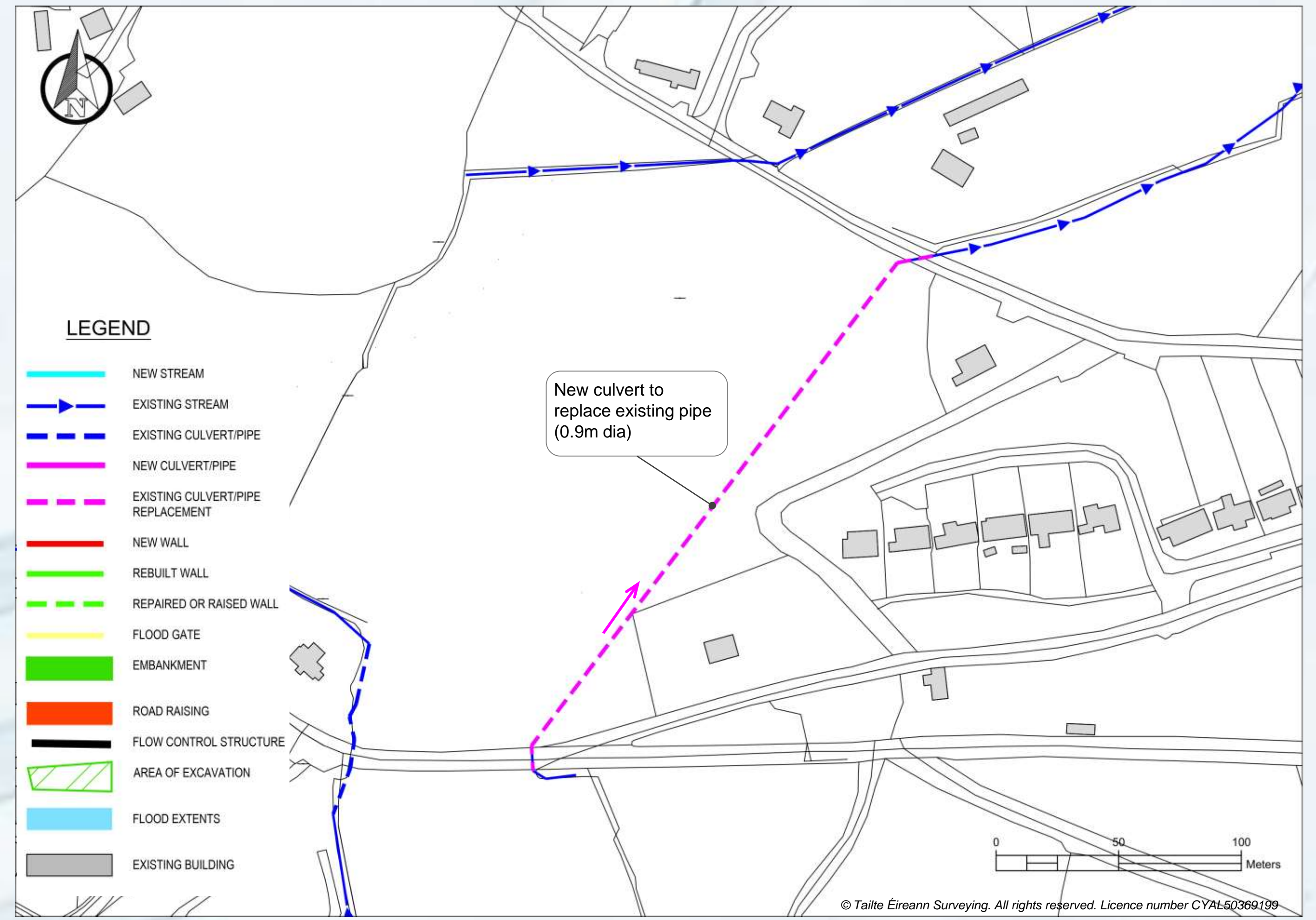
Upstream end of existing culvert



Field, looking north from upstream end of existing culvert



General Layout Of Potential Measure 3A



General Layout Of Potential Measure 3B

3A Potential Measure

Proposal

- New embankment (approx. height 0.75m) to prevent overland flows across road.
- Diversion of the existing stream (approx. length 110m) in parallel to the new embankment.

Considerations

- Property – Limited land acquisition to northern end of field.

3B Potential Measure

Proposal

- New culvert (0.9m dia.) to replace under-capacity pipe (0.225m dia.).

Considerations

- Property – Wayleave required.
- Property – Less interference with existing land use than 3A.
- Property – Local raising of ground at downstream end of pipe to provide cover.