


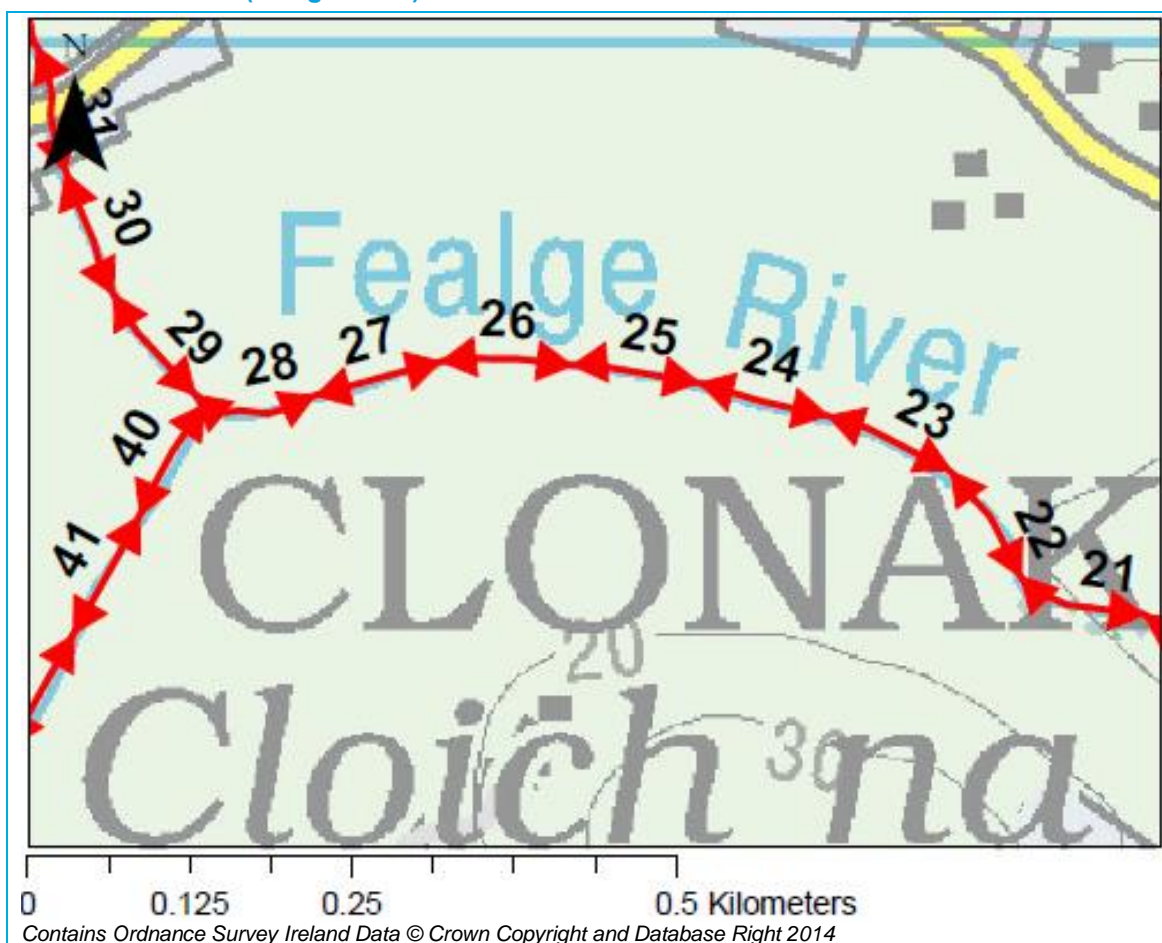







Reach 18		<p>Reach Description - Heavily vegetated banks and shaded river reach.</p> <p>Gravel Condition - Potential for some clean gravels in higher flows, but large amounts of fines and gravels contained within the channel during summer conditions.</p> <p>Difficult to determine quality of habitat, gravels may well be cleaner during elevated flows during the autumn spawning season.</p>
Reach 19		<p>Reach Description - Heavily vegetated banks and shaded river reach.</p> <p>Gravel Condition - Cobbles dominate this section of channel with limited areas of gravel deposition. Accumulations of sand were noted beneath of the top cobble layer.</p> <p>Limited spawning habitat as reach dominated by cobbles and sand.</p>
Reach 20		<p>Reach Description - Vegetated banks which afford some shade to the river reach. Some evidence of historic rock armour to provide bank protection.</p> <p>Gravel Condition - Cobbles dominate this section of channel with limited areas of gravel deposition. Accumulations of sand were noted beneath of the top cobble layer.</p> <p>Limited spawning habitat as reach dominated by cobbles and sand.</p>




### 3.2.3 Reaches 21 to 30 (Fealge River)



Reach 21		<p>Reach Description - Vegetated banks provide some shade to the channel. The reach is deep in places and contains some in channel vegetation.</p> <p>Gravel Condition - The reach contains a mixture of cobbles, gravels, sands and fines. Fine sediment is prevalent in areas of reduced flow and is mixed with gravels throughout the reach.</p> <p>The gravels present within this reach have not formed a functional coherent structure which could be used by spawning fish.</p>
Reach 22		<p>Reach Description - Vegetated banks provide some shade to the channel. The reach is deep in places and contains some in channel vegetation and woody debris.</p> <p>Gravel Condition - The reach contains a mixture of cobbles, gravels, sands and fines. Fine sediment is prevalent in areas of reduced flow and is mixed with gravels throughout the reach. Some small patches of cleaner gravels exist in areas of higher flow.</p> <p>Difficult to confidently determine quality of spawning habitat, but the cleanliness of the gravels under the higher velocities suggests that under higher autumn discharges a greater proportion of the gravels may be kept clear of fine sediment.</p>

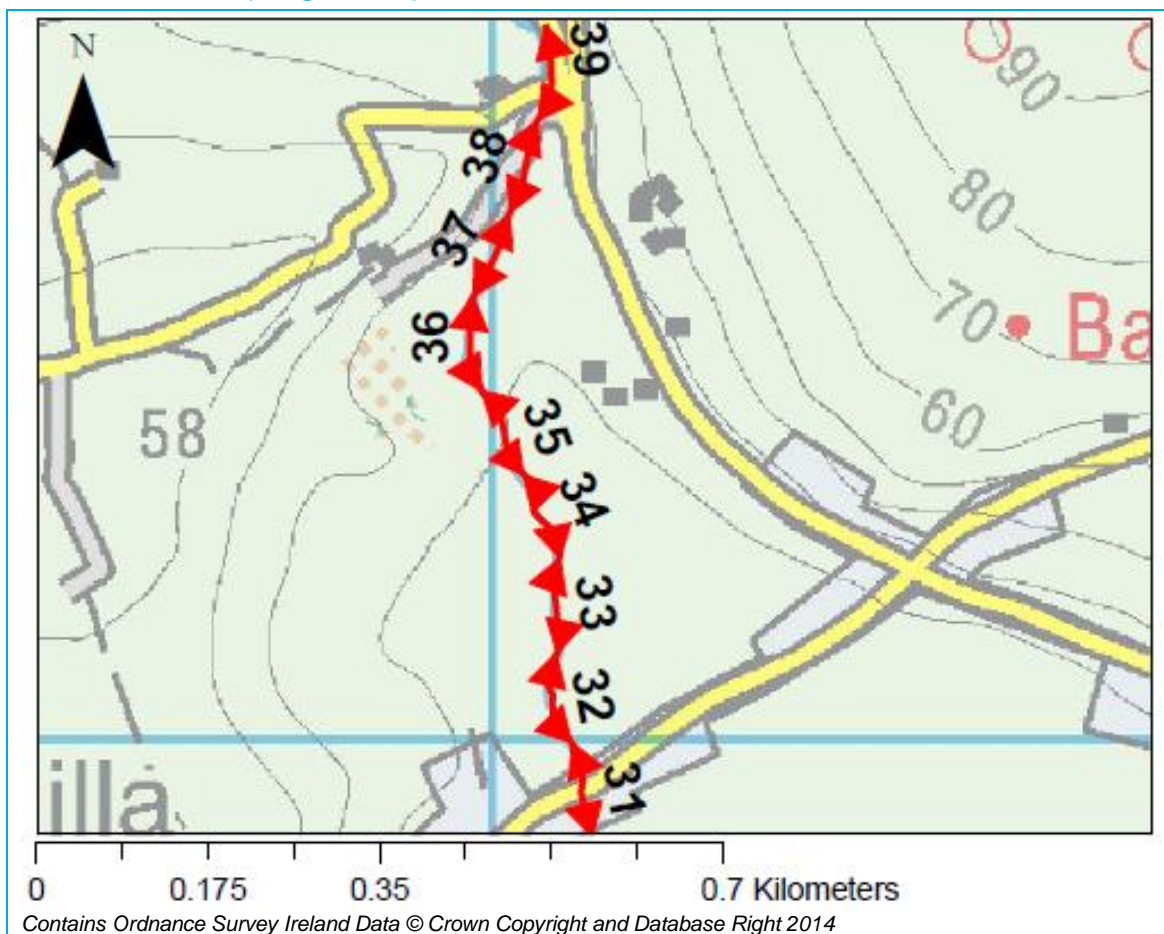


Reach 23		<p>Reach Description - Vegetated banks provide some shade to the channel. The reach is generally shallow but deepens towards its downstream extent.</p> <p>Gravel Condition - The bed is dominated by gravels and sands, and limited areas of clean gravels exist.</p> <p>Difficult to confidently determine quality of spawning habitat, but the cleanliness of the gravels under the higher velocities suggests that under higher autumn discharges a greater proportion of the gravels may be kept clear of fine sediment.</p>
Reach 24		<p>Reach Description - A generally shallow reach. Heavily vegetated banks and channel (invasive species) act to reduce flows and encourage fine sediment deposition.</p> <p>Gravel Condition - Pockets of gravels exist mixed with sands, however the dense in channel vegetation has encouraged the deposition of silts over the gravels and sands.</p> <p>Whilst suitably sized gravels are present in this reach, the heavily vegetated nature of the reach makes determination of spawning habitat difficult.</p>
Reach 25		<p>Reach Description - Heavily vegetated steep banks with some in channel vegetation act to reduce flows and encourage fine sediment deposition. Where the channel deepens there is a smaller abundance of in channel vegetation.</p> <p>Gravel Condition - Pockets of gravels exist mixed with sands, however the gravels are rarely clean.</p> <p>Difficult to confidently determine quality of spawning habitat, but the cleanliness of the gravels under the higher velocities suggests that under higher autumn discharges a greater proportion of the gravels may be kept clear of fine sediment.</p>
Reach 26		<p>Reach Description - Heavily vegetated steep banks. Some in channel vegetation encourages fine sediment deposition.</p> <p>Gravel Condition - Pockets of gravels exist (including exposed gravel bars) mixed with sands, however the gravels are rarely clean.</p> <p>Difficult to confidently determine quality of spawning habitat, but the cleanliness of the gravels under the higher velocities suggests that under higher autumn discharges a greater proportion of the gravels may be kept clear of fine sediment.</p>
Reach 27		<p>Reach Description - Heavily vegetated steep banks. Some in channel vegetation encourages fine sediment deposition, particularly along the lateral extents.</p> <p>Gravel Condition - Some small pockets of clean gravels exist where flows are higher but these are large in size and mixed with some small cobbles.</p> <p>The areas of exposed gravels are small and generally larger than ideal spawning habitat.</p>

Reach 28		<p>Reach Description - Bankside vegetation provides shade to this reach, however there is little in channel vegetation.</p> <p>Gravel Condition - There is a strong supply of gravels at the tributary confluence point, however, gravels remain mixed with sands</p> <p>Gravels abundant and of a size suitable for salmonid spawning. The sands present may be removed by elevated winter flows.</p>
Reach 29		<p>Reach Description - Bankside vegetation provides shade to this reach, however there is little in channel vegetation.</p> <p>Gravel Condition - There is a strong supply of gravels along this tributary confluence point, however, gravels remain mixed with sands</p> <p>Gravels abundant and of a size suitable for salmonid spawning. The sands present may be removed by elevated winter flows.</p>
Reach 30		<p>Reach Description - Bankside vegetation provides shade to this reach, however there is little in channel vegetation. The reach is generally steep.</p> <p>Gravel Condition - This reach is dominated by large gravels and cobbles. Fines and sands dominate the pool areas. Few clean gravels exist and are generally mixed with sand.</p> <p>Limited spawning habitat available in this reach, as gravel availability limited.</p>



### 3.2.4 Reaches 31 to 39 (Feagle River)



Reach 31 - 37  
(photo depicts a  
typical section)



**Reach Description** - The channel along these reaches contains vegetated banks and a channel of varied widths with some in channel islands.

**Gravel Condition** - The reaches contain a mixture of cobbles, gravels and sands distributed over several pool and riffle sequences. Gravels occur in abundance in some locations, however these are rarely clean and are generally mixed with sands.

Access to this section of river was limited, as such it was difficult to pinpoint particular habitat,


Reach 38 - 39  
(photo depicts a  
typical section)



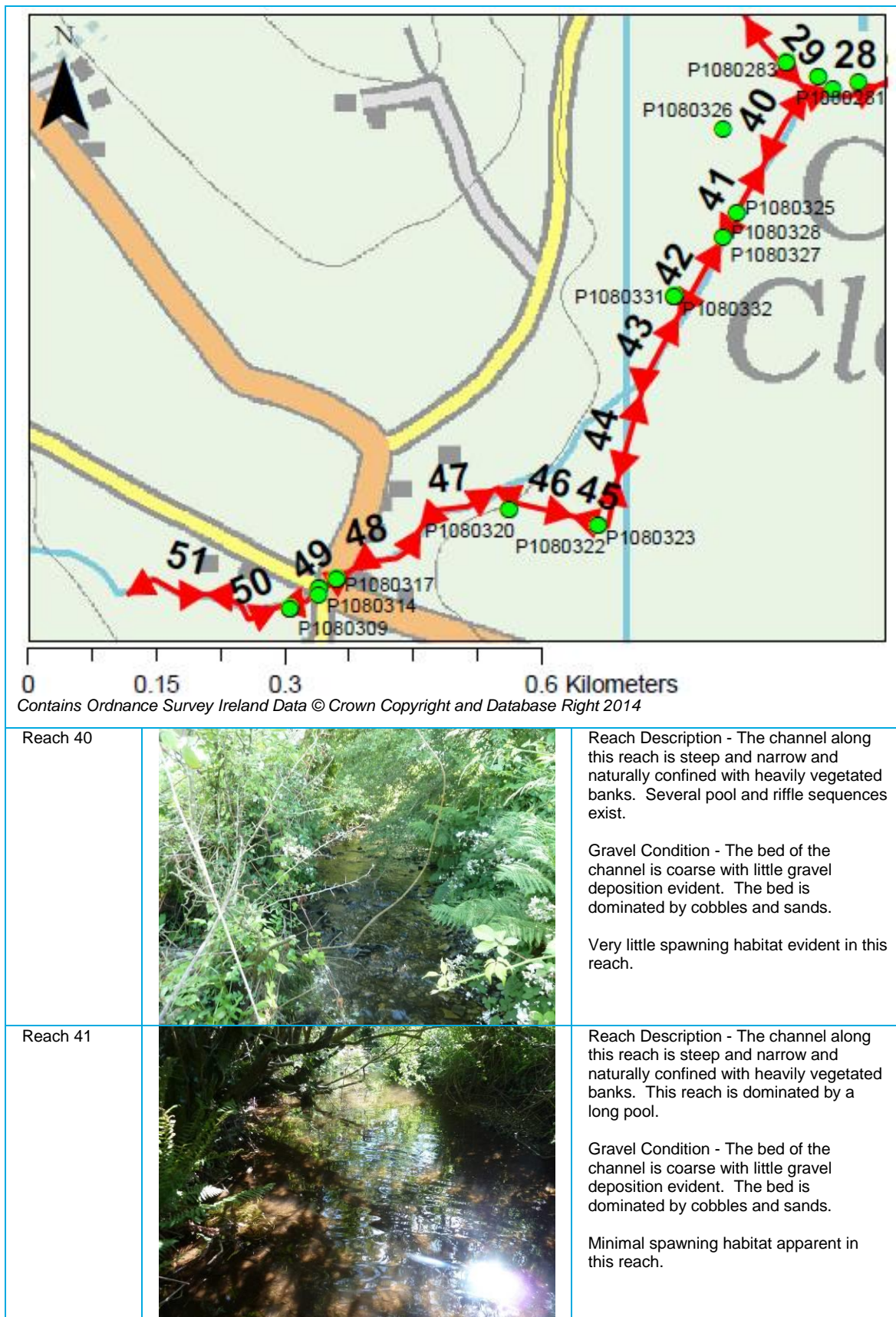
**Reach Description** - The channel along these reaches contains vegetated banks and a channel of varied widths with some in channel islands.

**Gravel Condition** - The reaches contain a mixture of cobbles, gravels and sands distributed over several pool and riffle sequences. Gravels occur in abundance in some locations, however these are rarely clean and are generally mixed with sands.

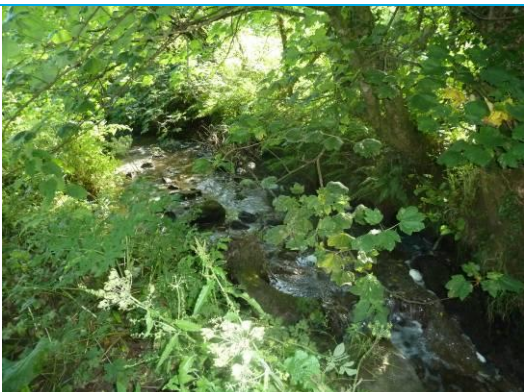



In particular extensive gravels were observed

<p>Reach 38 - 39 (photo depicts a typical section)</p>		<p>around the bridges. Although the observed gravels contained sands and gravels during the summer, they may well be kept clean by higher flows in the winter months.</p>
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### 3.2.5 Reaches 40 to 51 (tributary)



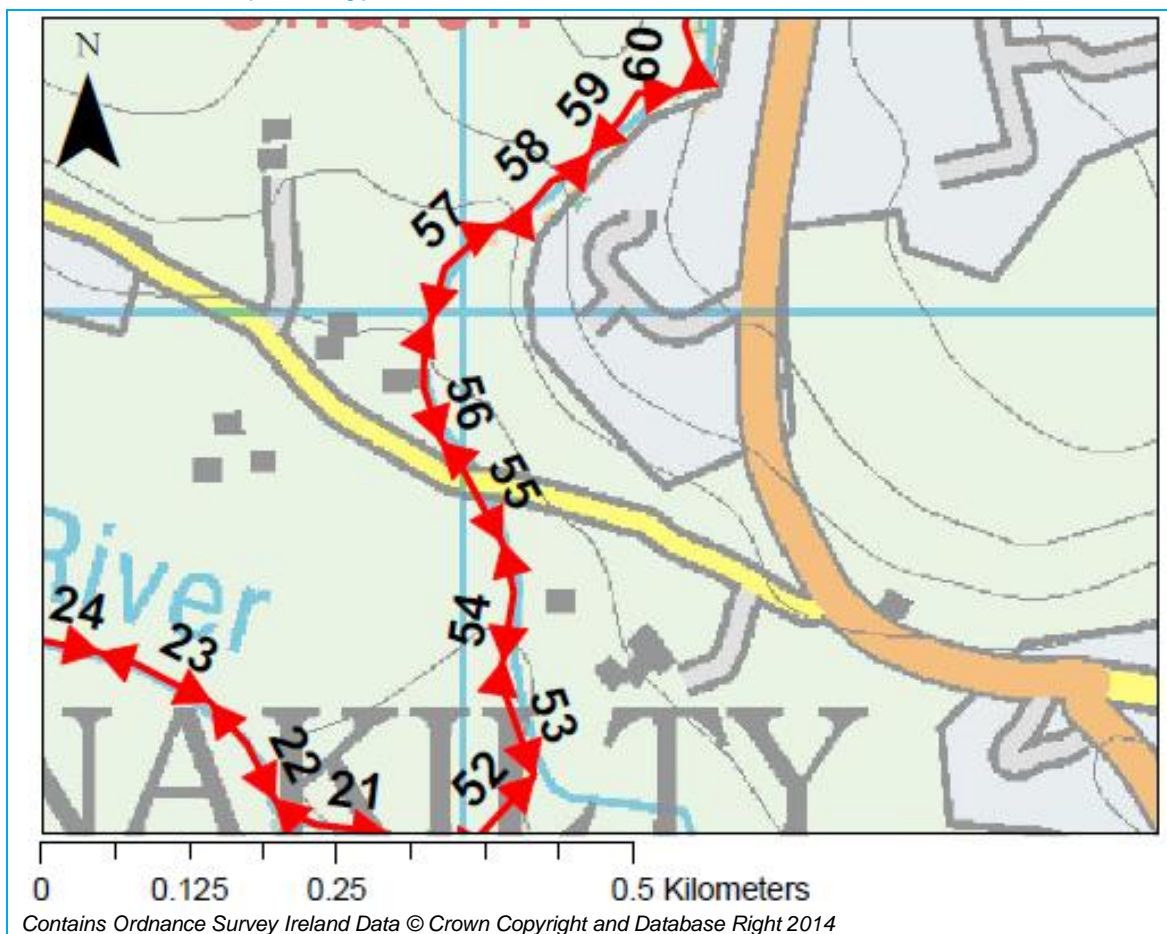




Reach 42		<p>Reach Description - The channel along this reach is steep and narrow and naturally confined with heavily vegetated banks. Several pool and riffle sequences exist.</p> <p>Gravel Condition - The bed of the channel is coarse with little gravel deposition evident. The bed is dominated by cobbles and sands.</p> <p>Despite the pool riffle sequence, there is little evidence of gravel deposition in this reach. Limited spawning habitat.</p>
Reach 43		<p>Reach Description - The channel along this reach is steep and narrow and artificially confined due to a sports ground development. Several pool and riffle sequences exist.</p> <p>Gravel Condition - The bed of the channel is coarse with little gravel deposition evident. The bed is dominated by cobbles and sands.</p> <p>Limited spawning habitat present in this reach.</p>
Reach 44		<p>Reach Description - The channel along this reach is steep and narrow and artificially confined due to a sports ground development. Several pool and riffle sequences exist.</p> <p>Gravel Condition - The bed of the channel is coarse with little gravel deposition evident. The bed is dominated by cobbles and sands. Gravel may just be flushed through during high flow events due to the confined nature of the channel.</p> <p>Limited spawning habitat available.</p>
Reach 45		<p>Reach Description - The channel along this reach is steep and narrow and artificially confined due to a sports ground development. Several pool and riffle sequences exist.</p> <p>Gravel Condition - The bed of the channel is coarse with little gravel deposition evident. The bed is dominated by cobbles and sands.</p> <p>Limited spawning habitat.</p>



Reach 46		<p>Reach Description - The channel along this reach is steep and narrow and artificially confined due to a sports ground development. Several pool and riffle sequences exist.</p> <p>Gravel Condition - The bed of the channel is coarse with little gravel deposition evident. The bed is dominated by cobbles and sands.</p> <p>Limited spawning habitat.</p>
Reach 47 Reach 48	No access 	<p>Reach Description - The channel along this reach is impacted by a small bridge constricting flows and causing excessive gravel deposition.</p> <p>Gravel Condition - The bed of the channel is dominated by gravel deposition, which is mixed with sands and some small cobbles.</p> <p>Some potential as spawning habitat, if the gravels can be kept clean of fine sediment during higher autumn flows.</p>
Reach 49		<p>Reach Description - Upstream of the bridge several pool and riffles exist which are dominated by gravels. The banks are vegetated, but limited in channel vegetation occurs.</p> <p>Gravel Condition - The bed of the channel is dominated by gravel, which is mixed with sands and some small cobbles. Sands remain mixed with gravels over higher flowing sections.</p> <p>Excellent potential as spawning habitat.</p>
Reach 50	No access	
Reach 51	No access	

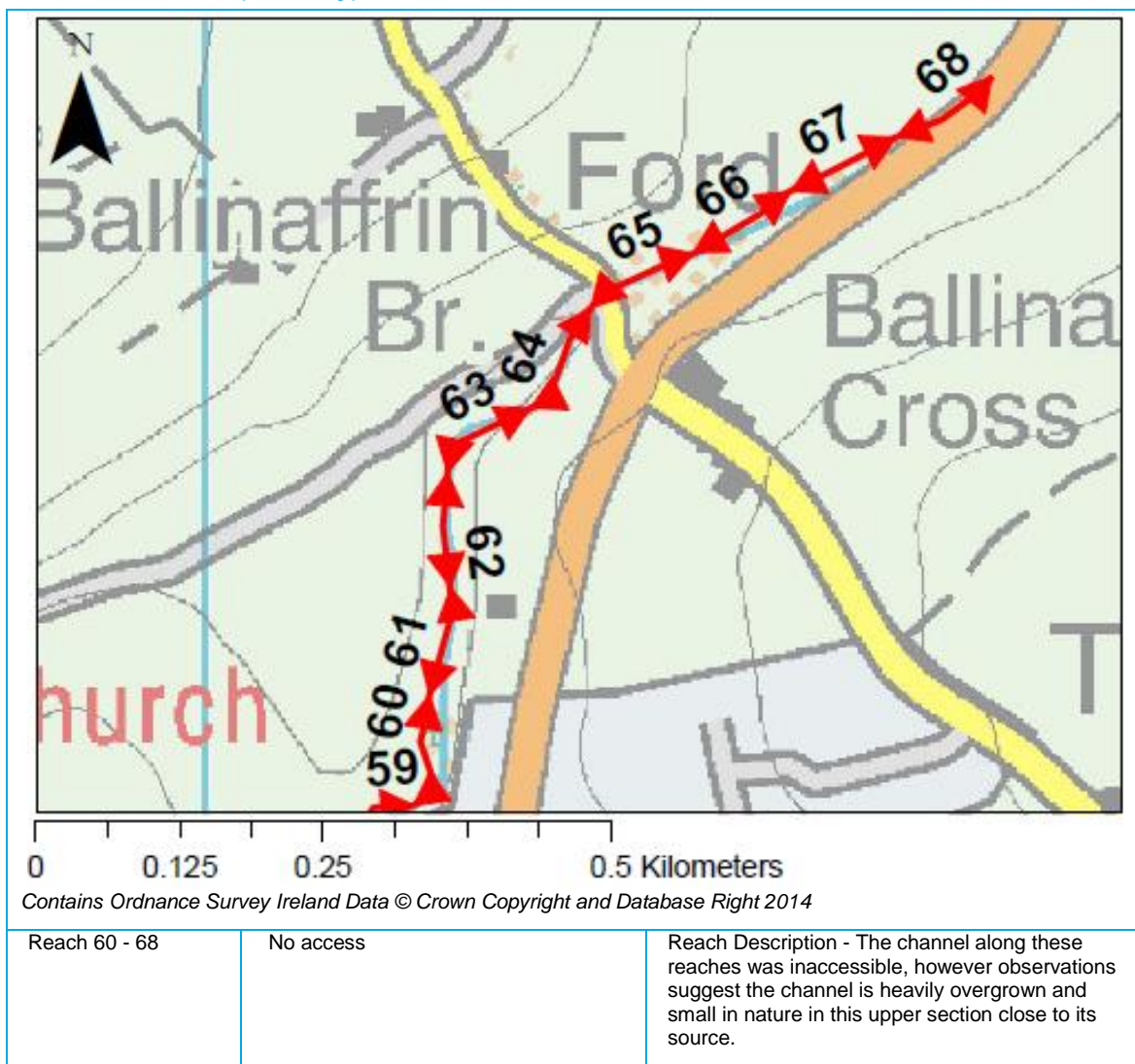
### 3.2.6 Reaches 52 to 60 (tributary)



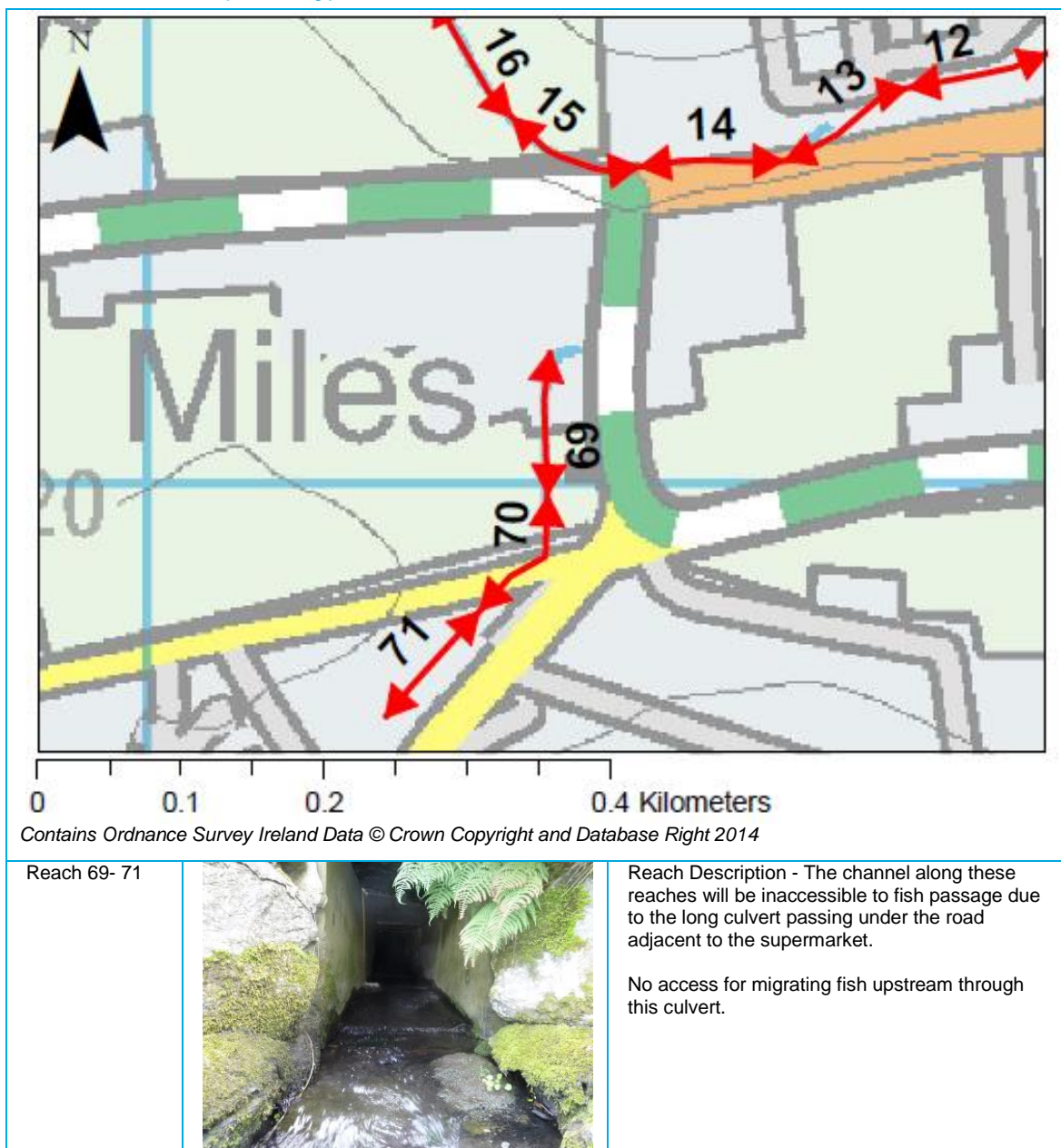
Reach 52		<p>Reach Description - The channel along this reach is very steep and narrow and naturally confined with heavily vegetated banks. Several step - pool sequences exist.</p> <p>Gravel Condition - The bed of the channel is coarse with little gravel deposition evident, except in protected pockets. The bed is dominated by large cobble, boulders and bed rock.</p> <p>Limited spawning habitat.</p>
Reach 53	No access	
Reach 54	No access	
Reach 55		<p>Reach Description - The channel along this reach is very steep and narrow and naturally confined with heavily vegetated banks. Several step - pool sequences exist.</p> <p>Gravel Condition - The bed of the channel is coarse with little gravel deposition evident, except in protected pockets. The bed is dominated by large cobble, boulders and bed rock.</p> <p>Little spawning habitat.</p>
Reach 56	Inaccessible	
Reach 57	Inaccessible	
Reach 58	Inaccessible	
Reach 59	Inaccessible	
Reach 60	Inaccessible	



### 3.2.7 Reaches 60 to 68 (tributary)



### 3.2.8 Reaches 60 to 68 (tributary)





## 4 Conclusions and Recommendations

### 4.1 Conclusions

- The river throughout contains a good gravel substrate which can provide in some locations good places for fish spawning and a diverse hydromorphology characteristic of this river type. In particular, the tributary at reach 30 appears to be integral to gravel supply to the lower reaches. Any in channel works or permanent modifications to the channel bed or banks could have an adverse impact upon in channel habitats and morphological features / processes.
- Spawning habitat availability in the lower reaches of the Feagle is limited, with low velocities due the tidal influence and the presence of weirs. Gravel retention during high flow events may also be limited due to the canalised nature of the river in the urban area.
- Many of the areas of gravel identified contained sand or silt which would limit the effectiveness of the substrate as spawning habitat. However, the survey was conducted after a period of low flows, and under elevated autumn flows, these gravels may well be cleaned. In-channel vegetation also modified preferential flow paths and obscured the view of areas of the river bed. Any in channel works should not seek to act as a barrier to sediment transportation as this could create future erosion and / or deposition issues locally and downstream through sediment starvation.

### 4.2 Recommendations

- Any future scheme should not alter the morphology of the river or estuary in a way that means it is unable to achieve the WFD objectives by 2021
- Improved upstream storage and flood plain reconnection would be beneficial in areas where the channel is currently disconnected from its floodplain, as this will act to reduce fine sediment within the channel and also benefit spawning habitats.
- Further investigation is required to assess the scheme proposals against any impact on flow, channel dimensions and existing morphology. Any change of these factors risks impacting existing depositional processes and good gravel morphology / habitat.
- It may valuable to undertake a walkover survey of key areas in January 2015, after the salmonid spawning season. The results of the current study could be used to pinpoint reaches of interest and gain a better understanding of spawning habitat quality under elevated autumn flows.

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## Appendix 14A - Dust Monitoring



Patrick Power  
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Cuil Greine House  
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Link Road  
Ballincollig  
Co. Cork  
Ireland

*Certificate No.:* 1590567  
*Job Ref:* 14K12101  
*Sample Ref No.:* LSN 89/49447  
*Page No.:* 1 of 5  
*Date Received:* 19/11/2014  
*Date Reported:* 02/12/2014

## TEST REPORT

*Sample Description* Dustjar - D1 - Clonakilty  
Flood Defence E13  
*Date Testing Initiated:* 01/12/2014  
*Category:* ENVIRONMENTAL  
*Sample Condition:* Satisfactory

Test	Test Result	Unit	Method
* Dustfall Value (bergerhoff)	0.0648	g/m2/day	ET2811

Tests marked \* are not accredited.

Comments, opinions, grades and interpretations expressed herein are outside this current scope of INAB accreditation.  
The Laboratory has tested the material/items supplied by the customer as sampled in accordance with the customers own requirements

Signed for and on behalf of Exova (Ireland) Ltd.

**Owen Frahill**

B.Sc (ACQUA)

Environmental Laboratory Supervisor







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Certificate No.: 1590567  
Job Ref: 14K12101  
Sample Ref No.: LSN 89/49448  
Page No.: 2 of 5  
Date Received: 19/11/2014  
Date Reported: 02/12/2014

## TEST REPORT

*Sample Description* Dustjar - D2 - Clonakilty  
Flood Defence E13  
*Date Testing Initiated:* 01/12/2014  
*Category:* ENVIRONMENTAL  
*Sample Condition:* Satisfactory

Test	Test Result	Unit	Method
* Dustfall Value (bergerhoff)	0.0845	g/m2/day	ET2811

Tests marked \* are not accredited.

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*Certificate No.:* 1590567  
*Job Ref:* 14K12101  
*Sample Ref No.:* LSN 89/49449  
*Page No.:* 3 of 5  
*Date Received:* 19/11/2014  
*Date Reported:* 02/12/2014

## TEST REPORT

*Sample Description* Dustjar - D3 - Clonakilty  
Flood Defence E13  
*Date Testing Initiated:* 01/12/2014  
*Category:* ENVIRONMENTAL  
*Sample Condition:* Satisfactory

Test	Test Result	Unit	Method
* Dustfall Value (bergerhoff)	0.0934	g/m2/day	ET2811

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*Certificate No.:* 1590567  
*Job Ref:* 14K12101  
*Sample Ref No.:* LSN 89/49450  
*Page No.:* 4 of 5  
*Date Received:* 19/11/2014  
*Date Reported:* 02/12/2014

## TEST REPORT

*Sample Description* Dustjar - D4 - Clonakilty  
Flood Defence E13

*Date Testing Initiated:* 01/12/2014  
*Category:* ENVIRONMENTAL  
*Sample Condition:* Satisfactory

Test	Test Result	Unit	Method
* Dustfall Value (bergerhoff)	0.1477	g/m2/day	ET2811

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*Certificate No.:* 1590567  
*Job Ref:* 14K12101  
*Sample Ref No.:* LSN 89/49451  
*Page No.:* 5 of 5  
*Date Received:* 19/11/2014  
*Date Reported:* 02/12/2014

## TEST REPORT

*Sample Description* Dustjar - D5 - Clonakilty  
Flood Defence E13

*Date Testing Initiated:* 01/12/2014  
*Category:* ENVIRONMENTAL  
*Sample Condition:* Satisfactory

Test	Test Result	Unit	Method
* Dustfall Value (bergerhoff)	0.0612	g/m2/day	ET2811

Tests marked \* are not accredited.

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## **Appendix 15A - Inventory of Identified Sites of Cultural Heritage Significance within the Study Area**

## Appendix 1 – Inventory of identified sites of cultural heritage significance and/or potential within study area

CH No.	Category	Baseline Value	Description	Townland	NGR-E	NGR-N
CH# 001	RMP	Very High	Historic Town		138400	41400
CH# 002	RMP	Very High	Brewery	YOUGHALS	138178.65	41424.01
CH# 003	RMP	Very High	Ritual site - holy well	MILES	136960.4	41440.01
CH# 004	RMP	Very High	Mill - unclassified	MILES	137015.41	41426.01
CH# 005	RMP	Very High	Prison	YOUGHALS	138405.7	41312.99
CH# 006	RMP	Very High	Graveyard	DESERT (Carbery East (E.D.) By.)	140108.06	40335.78
CH# 007	RMP	Very High	Church	DESERT (Carbery East (E.D.) By.)	140090.06	40329.78
CH# 008	RMP	Medium/Low	Redundant Record	DESERT (Carbery East (E.D.) By.)	140033.05	40320.77
CH# 009	RMP	Very High	Enclosure	DESERT (Carbery East (E.D.) By.)	139151.86	41538.04
CH# 010	RMP	Very High	<i>Fulacht fia</i>	MILES	137206.45	41308.98
CH# 011	RMP	Very High	<i>Fulacht fia</i>	MILES	137142.44	41310.98
CH# 012	RMP	Very High	<i>Fulacht fia</i>	MILES	137163.44	41282.98
CH# 013	PS (20000100)	Very High	School	TAWNIES UPPER	138118	41454
CH# 014	NIAH	High	House	TAWNIES UPPER	138131	41490
CH# 015	PS (20000199)	Very High	House	TAWNIES UPPER	138160	41471
CH# 016	NIAH	High	Cobbles/flags/paving/ kerbing	TAWNIES UPPER	138177	41504
CH# 017	PS (20000101)	Very High	Post Box	TAWNIES UPPER	138183	41489
CH# 018	PS (20000076)	Very High	Brewery	YOUGHALS	138186	41430
CH# 019	PS (20000075)	Very High	House	YOUGHALS	138241	41411
CH# 020	PS (20000074)	Very High	House	YOUGHALS	138239	41389
CH# 021	PS (20000092)	Very High	Church/Chapel	TAWNIES UPPER	138278	41473
CH# 022	PS (20000182)	Very High	Bridge	YOUGHALS	138312	41418
CH# 023	PS (20000043)	Very High	Store/Warehouse	TAWNIES UPPER	138346	41448
CH# 024	PS (20000042)	Very High	Church/Chapel	TAWNIES UPPER	138338	41430
CH# 025	PS (20000188)	Very High	Office	YOUGHALS	138335	41395
CH# 026	PS (20000057)	Very High	House	YOUGHALS	138336	41381



CH No.	Category	Baseline Value	Description	Townland	NGR-E	NGR-N
CH# 027	PS (20000058)	Very High	House	YOUGHALS	138328	41368
CH# 028	PS (20000059)	Very High	House	YOUGHALS	138328	41356
CH# 029	NIAH	High	House	DESERT (Carbery East (E.D.) By.)	139015	41517
CH# 030	NIAH	High	Store/warehouse	SCARTAGH	138677	41398
CH# 031	NIAH	High	Water pump	DESERT (Carbery East (E.D.) By.)	139007	41514
CH# 032	PS (20000139)	Very High	Hotel	TAWNIES UPPER	138417	41475
CH# 033	PS (20000140)	Very High	House	TAWNIES UPPER	138448	41466
CH# 034	PS (20000141)	Very High	House	TAWNIES UPPER	138454	41463
CH# 035	PS (20000142)	Very High	House	TAWNIES UPPER	138460	41458
CH# 036	PS (20000143)	Very High	House	TAWNIES UPPER	138466	41466
CH# 037	PS (20000144)	Very High	House	TAWNIES UPPER	138469	41467
CH# 038	PS (20000145)	Very High	House	TAWNIES UPPER	138473	41466
CH# 039	PS (20000146)	Very High	House	TAWNIES UPPER	138476	41465
CH# 040	PS (20000147)	Very High	House	TAWNIES UPPER	138480	41456
CH# 041	PS (20000148)	Very High	House	TAWNIES UPPER	138486	41462
CH# 042	PS (20000149)	Very High	House	TAWNIES UPPER	138492	41454
CH# 043	PS (20000150)	Very High	House	TAWNIES UPPER	138504	41462
CH# 044	PS (20000151)	Very High	House	TAWNIES UPPER	138509	41462
CH# 045	PS (20000152)	Very High	House	TAWNIES UPPER	138516	41463
CH# 046	PS (20000155)	Very High	House	SCARTAGH	138542	41446
CH# 047	PS (20000156)	Very High	House	SCARTAGH	138548	41434
CH# 048	PS (20000157)	Very High	House	SCARTAGH	138543	41422
CH# 049	PS (20000158)	Very High	House	SCARTAGH	138541	41408
CH# 050	PS (20000159)	Very High	House	SCARTAGH	138535	41407
CH# 051	PS (20000160)	Very High	House	SCARTAGH	138541	41400
CH# 052	PS (20000163)	Very High	House	YOUGHALS	138525	41392
CH# 053	PS (20000165)	Very High	House	TAWNIES UPPER	138514	41438
CH# 054	PS (20000166)	Very High	House	TAWNIES UPPER	138518	41442

CH No.	Category	Baseline Value	Description	Townland	NGR-E	NGR-N
CH# 055	PS (20000167)	Very High	House	TAWNIES UPPER	138518	41448
CH# 056	PS (20000168)	Very High	House	TAWNIES UPPER	138521	41454
CH# 057	NIAH	High	Post box	TAWNIES UPPER	138529	41457
CH# 058	PS (20000053)	Very High	House	YOUGHALS	138483	41382
CH# 059	PS (20000078)	Very High	Mill (water)	YOUGHALS	138435	41408
CH# 060	PS (20000079)	Very High	House	YOUGHALS	138426	41385
CH# 061	PS (20000080)	Very High	House	YOUGHALS	138419	41383
CH# 062	PS (20000081)	Very High	Church/chapel	YOUGHALS	138404	41377
CH# 063	PS (20000191)	Very High	Bridge	YOUGHALS	138413	41405
CH# 064	NIAH	High	House	YOUGHALS	138459	41405
CH# 065	PS (20000193)	Very High	House	YOUGHALS	138388	41388
CH# 066	PS (20000194)	Very High	House	YOUGHALS	138380	41390
CH# 067	PS (20000205)	Very High	Bridge	YOUGHALS	138520	41400
CH# 068	PS (20000207)	Very High	House	SCARTAGH	138544	41429
CH# 069	PS	High	School		138295	41560.8
CH# 070	PS	High	Ecclesiastical Building		138291	41554.8
CH# 071	PS	High	House		138300	41554.8
CH# 072	PS	High	National School		138285	41549.8
CH# 073	PS	High	House		138385.5	41482.95
CH# 074	PS	High	House		138394.7	41480.49
CH# 075	PS	High	House		138400.2	41481.04
CH# 076	PS	High	House		138417.4	41473.59
CH# 077	PS	High	House		138518.41	41463.21
CH# 078	PS	High	House		138520.4	41436.18
CH# 079	PS	High	Warehouse		138511.3	41411.96
CH# 080	PS	High	House		138510.8	41376.7
CH# 081	PS	High	House		138507.8	41364.11
CH# 082	PS	High	House		138530.5	41398.36

CH No.	Category	Baseline Value	Description	Townland	NGR-E	NGR-N
CH# 083	PS	High	House		138651.4	41384.27
CH# 084	PS	High	Warehouse		138665.2	41391.85
CH# 085	Boundary	Medium/Low	Killgarraff/Miles Townland Boundary		136704.3	41707.07
CH# 086	Boundary	Medium/Low	Killgarraff/Tawnies Lower Townland Boundary		137042.8	41650.66
CH# 087	Boundary	Medium/Low	Miles/Tawnies Lower Townland Boundary		137206.6	41334
CH# 088	Boundary	Medium/Low	Miles/Maulnaskehy Townland Boundary		137854.5	41246.65
CH# 089	Boundary	Medium/Low	Maulnaskehy/Tawnies Lower Townland Boundary		137987.3	41344.92
CH# 090	Boundary	Medium/Low	Tawnies Lower/Tawnies Upper Townland Boundary		138100.1	41445
CH# 091	Boundary	Medium/Low	Maulnaskehy/Youghals Townland Boundary		138134.7	41403.16
CH# 092	Boundary	Medium/Low	Tawnies Lower/Youghals Townland Boundary		138105.4	41417.72
CH# 093	Boundary	Medium/Low	Tawnies Upper/Youghals Townland Boundary		138311.3	41419.07
CH# 094	Boundary	Medium/Low	Tawnies Upper/Scartagh Townland Boundary		138527.8	41439.55
CH# 095	Boundary	Medium/Low	Youghals/Scartagh Townland Boundary		138600.6	41364.94
CH# 096	Boundary	Medium/Low	Scartagh/Desert Townland Boundary		139048.3	41546.93
CH# 097	Survey	Medium/Low	Metal Detecting License	UNKNOWN	Unknown	Unknown
CH# 098	Test Excavation	Medium/Low	Pre-Development Testing	KILGARIFF	Unknown	Unknown
CH# 099	Test Excavation	Medium/Low	Pre-Development Testing	KILGARIFF	Unknown	Unknown
CH# 100	Test Excavation	Medium/Low	Pre-Development Testing	CARHOO	Unknown	Unknown
CH# 101	Test Excavation	Medium/Low	Pre-Development Testing	CARHOO	Unknown	Unknown
CH# 102	ZAP	Very High	Zone of Archaeological Potential		138518.7	41481.41
CH# 103	ACA	Very High	Architectural Protection Area		138518.7	41481.41
CH# 104	AAP	Medium/High	Discovery of human remains recorded in topographic files	DESERT (Carbery East (E.D.) By.)	139242.3	41527.44
CH# 105	UCH (1)	High	Former Shipyard/Drydock	DESERT (Carbery East (E.D.) By.)	139012.2	41372.23
CH# 106	UCH (1)	Medium/Low	Regulating Weir	TAWNIES LOWER	137835.6	41299.75
CH# 107	UCH (1)	Medium/Low	Culvert	TAWNIES LOWER/MILES	137857.9	41261.73
CH# 108	UCH (1)	Medium/Low	Bridge	TAWNIES LOWER/MILES	137846.5	41286.57
CH# 109	UCH (2)	Medium/Low	Millrace (site of )	TAWNIES LOWER	137198.8	41506.07



CH No.	Category	Baseline Value	Description	Townland	NGR-E	NGR-N
CH# 110	UCH (1)	Medium/High	Walling/revetment	VARIOUS	138323.8	41419.8
CH# 111	UCH (2)	Medium/Low	Footbridge (site of) crossing river Feagle	TAWNIES LOWER/MILES	137283.2	41389.3
CH# 112	UCH (2)	Medium/Low	Footbridge (site of) crossing former millrace	TAWNIES LOWER	137283.2	41389.3
CH# 113	AAP	Medium/High	Feagle River and Estuary	VARIOUS		

**Note:** The abbreviations that have been used for the ‘Category’ section are as follows:

RMP:	Recorded archaeological monument
PS:	Protected Structure
NIAH:	Site recorded in NIAH
ACA:	Architectural Conservation Area
UBH:	Unregistered built heritage site
UCH (1):	Unregistered cultural heritage site that comprises extant remains
UCH (2):	Unregistered cultural heritage site that does not comprise extant remains
TB:	Townland boundary
ZAP:	Zone of Archaeological Potential
AAP:	Area/feature of archaeological potential

## **Appendix 15B - Previous Archaeological Investigations**

## **Appendix 2    Previous archaeological investigations**

An examination of previous excavations carried out within and around the area proposed for development provides a useful framework for assessment of the study area in terms of its archaeological significance as well as its archaeological potential. The Archaeological Excavations Bulletin is an annual fieldwork gazetteer for Irish Archaeology; it was checked for a record of any licensed archaeological investigations carried out in the vicinity of the development area between 1970 and 2007.

**Bulletin No.:** 2008:195

**Site Location:** Clonakilty, Co. Cork

**Metal detecting Licence No.:** 08R99

**Probe Survey Licence No.:** 08D35

The proposed development is located in Clonakilty Harbour, Clonakilty, Co. Cork. Clonakilty Town Council is proposing to construct a tidal barrage across the harbour to protect the town from tidal and freshwater flooding. A cultural heritage assessment for the proposal recommended pre-construction metal-detection survey, pre-construction probing survey and monitoring of construction works. A metal-detection and probe survey was undertaken of the foreshore in the area of the proposed car-park area on the east side of Clonakilty Harbour. No finds or features of archaeological significance were noted during the metal detection and probe survey. Testing will take place in advance of further development works.

*Sheila Lane, Deanrock Business Park, Togher, Cork*

**Bulletin No.:** 2004:0284

**Site Location:** Kilgarriff, Co. Cork

**Site Type:** No archaeological significance

**SMR:** 135:122

**Licence No.:** 04E1666

Pre-development testing was carried out on this site at Kilgarriff, Clonakilty, which lies c. 600m east of a ringfort. No finds or features of an archaeological nature were noted.

*Sheila Lane, AE House, Monahan Road, Cork*

**Bulletin No.:** 2005:261

**Site Location:** Kilgarriff, Co. Cork

**Site Type:** No archaeological significance

**Licence No.:** 04E1666

Six test-trenches were machine-excavated along the footprint of a proposed development at Kilgarriff, Clonakilty. Topsoil was removed to a depth of c. 0.35–0.4m. Beneath the topsoil, light mid-brown/orange stony clay occurred throughout with occasional large stones. Evidence for former field boundaries was present in the eastern section of Trench 1 and the mid-section of Trench 2. No finds or features of an archaeological nature were noted.

*Sheila Lane, Deanrock Business Park, Togher, Cork*

**Bulletin No.:** 2002:0244

**Site Location:** Carhoo, Cork

**Site Type:** No archaeological significance

**SMR:** 135:48

**Licence No.:** 02E1343

An assessment with testing was undertaken on the site of a house at Carhoo, Clonakilty. The site was to the immediate north of the zone of potential of a *gallán*. Test-trenches were excavated on the



footprint of the proposed development and the percolation area. No archaeological stratigraphy, features or artefacts were recorded.

*Jacinta Kiely, Eachtra Archaeological Projects, 3 Canal Place, Tralee, Co. Kerry*

**Bulletin No.:** 2004:0206

**Site Location:** Carhoo, Co. Cork

**Site Type:** No archaeological significance

**SMR:** 136:5

**Licence No.:** 04E1613

An assessment was undertaken in support of a planning application for permission to construct a private dwelling. The proposed house was near a circular enclosure. Three test-trenches (totalling 120m) were excavated. No features of archaeological significance were identified.

*Linda Hegarty, Headland Archaeology Ltd, Unit 4b, Europa Business Park, Midleton, Co. Cork*

## **Appendix 15C - Extracts from Archaeological Survey of Ireland Archive**

### Appendix 3 Extracts from the Archaeological Survey of Ireland Archive Files

**CH No** 1  
**RMP No** CO135-052001-  
**Townland** Youghals/Scartagh/Upper Tawnies  
**Classification** Historic Town  
**NGR-E** 13843 **NGR-N** 04140

#### Description

The town of Clonakilty is located on the Feale River at the head of Clonakilty Bay and first appears in 1378 as *Clogh na Kylte* (Kylte Castle) as a holding of William de Barry (Urban Survey). The generally accepted location for the castle is on the site of the extant Church of Ireland (CO135-019002). The 17<sup>th</sup> century market town was founded by the Early of Cork and was well-established by 1605. In 1613 the town received a charter from James I. It probably replaced Kilgarraiff when 100 English families were settled there by the Earl of Cork. It is recorded as being built in the shape of a cross, the full extent of which is unknown. The intersection of the cross may be represented by Asna Square, where the Kilty Stone stands; the origin of the latter is believed to have been Arundel Castle, to the east of Clonakilty Harbour (Urban Survey). Seventeenth century sites within the town comprise the Church (CO135-019002) and Graveyard (CO135-019001) and the Market House (CO135-133).

The present Church of Ireland is located in the north-western side of Clonakilty and is on a hill overlooking the town. It probably replaced the 17<sup>th</sup> century church constructed by the Early of Cork. The graveyard is still used and comprises inscribed headstones, chest-tombs and uninscribed markers. The earliest visible headstone dates to the 18<sup>th</sup> century (Urban Survey).

**CH No** 2  
**RMP No** CO135-052002-  
**Townland** Youghals  
**Classification** Brewery  
**NGR-E** 13819 **NGR-N** 04142

#### Description

The brewery is located on level ground to the south of a stream to the west of Clonakilty town. The ground plan at the time of recording was similar to that of the First Edition Ordnance Survey of 1829-41. It comprises fifteen two-storey buildings built around a central courtyard with four associated brick chimneys dating to the late 19<sup>th</sup> and early 20<sup>th</sup> centuries. It is likely that the buildings located in the northeast functioned alongside the chimneys as the powerhouses. At the time of recording, Structure 7 in the north was used as a hatchery, while 9, 9a, 9b and 10 were not accessible. The rest of the buildings were used for storage or were simply abandoned.



**CH No** 3  
**RMP No** CO135-050001-  
**Townland** Miles  
**Classification** Holy Well  
**NGR-E** 13696 **NGR-N** 04145

**Description**

Situated in a pasture field on a northeast-facing slope, at a height of 50m above sea level. It is known locally as Killeen well and local traditions do not record it as a holy well. It is associated with a mass-rock (CO135-136), which is depicted on the 3<sup>rd</sup> Edition Ordnance Survey of 1829-41, although not on the 2<sup>nd</sup> Edition of 1897-1913. Both sites were covered in 2 m high brambles at the time of the visit and no additional information could be gathered.

**CH No** 4  
**RMP No** CO135-050002-  
**Townland** Miles  
**Classification** Mill  
**NGR-E** 13702 **NGR-N** 04143

**Description**

Nothing remains of this site. It was depicted on the 1<sup>st</sup> Edition Ordnance Survey of 1829-41 as lying to the southeast of Killeen well (CO135-050001); however, by the 3<sup>rd</sup> Edition Ordnance Survey, the site had disappeared.

**CH No** 5  
**RMP No** CO135-052003-  
**Townland** Youghals  
**Classification** Bridewell prison  
**NGR-E** 13841 **NGR-N** 04132

**Description**

The Bridewell prison is located in the southern side of Clonakilty and dates to the early/mid 19<sup>th</sup> century. It is partially destroyed. It was in use at the time of recording as yards and stores for a bakery. The remains comprise a one-storey four-bay section of the east wall which was constructed with random rubble of shelly sandstone. Cut stone was visible. The roof had been removed. The main door survived and consisted of a stone lintelled ope with a relieving arch; a remaining window also consisted of a lintel stone with a relieving arch with large iron bars still present. The high enclosing walls also survived and were connected to the east-enclosing wall of the courtyard. These east-enclosing walls consisted of coarse ashlar with blocked windows and doors. The Bridewell was also formerly used as a power station until the 1930's.

**CH No** 09  
**RMP No** CO135-132-  
**Townland** Desert  
**Classification** Levelled circular enclosure  
**NGR-E** 13915 **NGR-N** 04144

**Description**

The enclosure is located on pastureland on the east side of the estuary behind terraced houses outside the town of Clonakilty. It was identified in an aerial survey as an enclosure and is known locally as a 'fort'. It comprises a levelled internal bank and external fosse which may have both been ploughed out. It measures c. 76 m from bank top to bank top and is c. 3 m high. The fosse measures c. 0.40 x 4 m in depth and the north-south diameter is 58 m.

## **Appendix 15D - National Museum of Ireland Topographical Files**

#### Appendix 4 National Museum of Ireland (NMI) topographical files

The topographical files of the National Museum of Ireland (NMI) contain a record of stray artefacts found in Ireland. Each artefact has an individual file where it gives locational information, description of the artefact and relevant references.

NMI Register No.	Material	Type	Townland	Find Place	Description
N/A	Human bones	Human bones	DESERT	Close to ancient church of Desert	Bones were found during road-widening works on land between Clonakilty and Ring. Noted a few yards from church of Desert. Local tradition maintains that this was a site where lepers visited. The bones were re-buried in the churchyard.



## **Appendix 15E - Lewis Topographical Dictionary of Ireland 1937 (Volume 2)**

**Appendix 5     Lewis Topographical Dictionary of Ireland, 1837 (Volume 2)**

CLONAKILTY, or CLOUGHNAKILTY, an incorporated sea-port, market and post-town (formerly a parliamentary borough), in the parish of KILGARIFF, East Division of the barony of EAST CARBERY, county of CORK, and province of MUNSTER, 25 1/2 miles (S. W. by S.) from Cork, and 151 1/2 miles (S. W.) from Dublin; containing 3807 inhabitants. The town is situated on the Gorar or Farla River, which falls into the bay close to the principal street, and in a pleasant fertile valley environed by hills of moderate elevation, which descend to the harbour. It consists of four principal streets diverging at right angles from the centre, and is well supplied with water from two public pumps erected by the Earl of Shannon. It has been much improved recently by the erection of several good houses and a spacious square, the centre of which is planted and laid out in walks, so as to form an agreeable promenade. Some excellent roads have also been made in the neighbourhood. A public library was established by a body of shareholders, in 1825: there are also three news-rooms and a lending library for the poor. Balls are occasionally given in the rooms over the market-house, during the sessions week. There are commodious infantry barracks for 4 officers and 68 privates. The staple trade of the town is the linen manufacture, which furnishes employment to 400 looms and 1000 persons, who manufacture to the amount of £250 or £300 weekly, but when the trade was in the height of its prosperity, the weekly sales were frequently £1000. The cotton-manufacture also employs about 40 looms. A spacious linen-hall was built some years since by the Earl of Shannon: it is attended by a sworn salesman and three deputies, by whom all the cloth brought to the hall is measured and marked. The corn trade is carried on chiefly by agents for the Cork merchants, who ship it here and receive coal as a return cargo. There are 14 lighters of 17 tons burden each regularly employed in raising and conveying sand to be used in the neighbourhood as manure. The harbour is only fit for small vessels, the channel being extremely narrow and dangerous, and having at the entrance a bar, over which vessels above 100 tons can only pass at high spring tides: large vessels, therefore, discharge their cargoes at Ring, about a mile below the town. It is much used as a safety harbour by the small craft for several miles along the coast. The market is held on Friday, and is amply supplied with good and cheap provisions; and three fairs are held under the charter on April 5th, Oct. 10th, and Nov. 12th, and two subsequently established on June 1st and Aug. 1st, all for cattle, sheep, and pigs; the Oct. and Nov. fairs are noted for a large supply of turkeys and fowls. A spacious market-house has been built, at an expense of £600; and shambles were erected in 1833, by the corporation, on ground let rent-free by the Earl of Shannon, who is proprietor of the borough. A chief constabulary police force has been stationed here.

By the charter of Jas. I. the inhabitants were incorporated under the designation of the "Sovereign, Free Burgesses, and Commonalty of the Borough of Cloughnakilty;" and Sir Richard Boyle was constituted lord of the town, with power to appoint several of the officers, and to a certain extent to superintend the affairs of the corporation, which was to consist of a sovereign and not less than 13 nor more than 24 burgesses, assisted by a serjeant-at-mace, three constables, a toll-collector, and weighmaster. The sovereign is annually elected by the lord of the town out of three burgesses chosen by the corporation, and the recorder is also appointed by him. Vacancies among the burgesses are filled up by themselves from among the freemen, who are admitted solely by favour of the corporation. The sovereign and recorder are justices of the peace within the borough, the limits of which extend for a mile and a half in every direction from a point nearly in the centre of the town, called the Old Chapel. The charter conferred the right of sending two members to the Irish parliament, which it continued to exercise till the Union, when the £15,000 awarded as compensation for its disfranchisement was paid to the Earl of Shannon, a descendant of Sir Richard Boyle. The sovereign and recorder were empowered to hold a court of record, for the recovery of debts and the determination of all pleas to the amount of £20 late currency; but since the passing of the act limiting the power of arrest to sums exceeding £20, it has been discontinued. A manorial court is held every third Wednesday by a seneschal appointed by the Earl of Shannon, which takes cognizance of debts and pleas not exceeding 40s.; and the sovereign and recorder hold courts of petty session in the

market-house, every Monday. Petty sessions are also held every Thursday by the county magistrates; and the general quarter sessions for the West Riding of the county are held here in July. The county court-house is a neat edifice of hewn stone, ornamented with a pediment and cornice supported by two broad pilasters, between which is a handsome Venetian window. Connected with it is a bridewell, and both were erected at the expense of the county.

The parish church of Kilgariff is situated in the town, on an eminence to the north of the main street: it is a plain edifice, with a square tower at the west end, and was rebuilt in 1818, at an expense of £1300, of which £500 was a loan from the late Board of First Fruits, and the remainder was contributed by the Earl of Shannon and the Rev. H. Townsend (Rev Horatio Townsend [5D00]). A classical school was established in 1808, under the patronage of the Earl of Shannon, who has assigned a large and handsome house, with land, for the residence of the master: there are more than 60 boys on the establishment. A dispensary, a house of industry, and a benevolent society have been established, which have been found highly beneficial, and are liberally supported by the Earl of Shannon and the inhabitants generally. The late Michael Collins, D. D., R. C. Bishop of Cloyne and Ross, who was author of several tracts on the state of Ireland, and was examined before a committee of the House of Commons, in 1825, was a native of this place. About a mile north of the town is a tolerably perfect druidical temple, some of the stones of which are nearly as large as those of Stonehenge; the centre stone of the circle is very large, and is composed of one mass of white quartz.

## Appendix 15F - Legislative Framework

## **Appendix 6     Legislative Framework**

### ***EIA Legislation***

EIA Directive 85/337/EEC as amended by 97/11/EC and 2003/35/EC requires that certain developments be assessed for likely environmental effects before planning permission can be granted. The EIA Amendment Regulations, SI 93 OF 1999 specifies in Section 2(b) of the Second Schedule, 'Information to be contained in an Environmental Impact Statement', that among other factors, information is to be provided on:

'Material assets, including the architectural and archaeological heritage, and the cultural heritage'

Each of these assets is addressed within this assessment report.

### ***Cultural Heritage Legislation***

#### *Archaeological Monuments/Sites*

Archaeological heritage is protected primarily under the National Monuments Acts 1930-2004. Section 2 of the 1930 National Monuments Act defines the word 'monument' as including:

'any artificial or partly artificial building, structure, or erection whether above or below the surface of the ground and whether affixed or not affixed to the ground and any cave, stone, or other natural product whether forming part of or attached to or not attached to the ground which has been artificially carved, sculptured or worked upon or which (where it does not form part of the ground) appears to have been purposely put or arranged in position and any prehistoric or ancient tomb, grave or burial deposit, but does not include any building which is for the time being habitually used for ecclesiastical purposes'

Under the 1994 Act, provision was made for a Record of Monuments & Places (RMP). The RMP is a revised set of SMR (Sites and Monuments Record) maps, on which newly-discovered sites have been added and locations which proved not to be of antiquity have been de-listed by the National Monuments Service.

In effect, the National Monuments Acts 1930-2004 provide a statutory basis for:

- Protection of sites and monuments (RMPs)
- Sites with Preservation Orders
- Ownership and Guardianship of National Monuments
- Register of Historic Monuments (pre-dating 1700AD)
- Licensing of archaeological excavations
- Licensing of Detection Devices
- Protection of archaeological objects
- Protection of wrecks and underwater heritage (more than 100 years old)

In relation to proposed works at or in the vicinity of a recorded archaeological monument, Section 12 (3) of the National Monuments (Amendment) Act 1994 states:

'When the owner or occupier (not being the Commissioners) of a monument or place which has been recorded [in the Record of Monuments and Places] or any person proposes to carry out, or to cause or permit the carrying out of any work at or in relation to such monument or place, he shall give notice



in writing of his proposal to carry out the work to the Commissioners and shall not, except in the case of urgent necessity and with the consent of the Commissioners, commence the work for a period of two months after having given the notice.'

#### *Archaeological artefacts*

Section 2 of the 1930 National Monuments Act (amended) defines an archaeological object as (in summary) any chattel in a manufactured or partly manufactured state or an unmanufactured state but with an archaeological or historical association. This includes ancient human, animal or plant remains.

Section 9 (1) of the National Monuments (Amendment) Act 1994 states that any such artefact recovered during archaeological investigations should be taken into possession by the licensed archaeological director and held on behalf of the state until such a time as they are deposited accordingly subsequent to consultation with the National Museum of Ireland.

#### *Architectural Sites*

In 1997 Ireland ratified the Granada Convention on architectural heritage. This provided the basis for a national commitment to the protection of the architectural heritage throughout the country. The Architectural Heritage (National Inventory) and Historic Monuments (Miscellaneous Provisions) Act 1999 and Local Government (Planning and Development) Act 2000 made the legislative changes necessary to provide for a strengthening of the protection of architectural heritage. The former Act has helped to provide for a forum for the strengthening of architectural heritage protection as it called for the creation of a National Inventory of Architectural Heritage which is used by local authorities for compiling the Record of Protected Structures (RPS). The Record of Protected Structures (RPS) is set out in each respective county's Development Plan and provides statutory protection for these monuments.

Section 1 (1) of the Architectural Heritage (National Inventory) and Historic Monuments (Miscellaneous Provisions) Act, 1999 states:

'architectural heritage means all –

- (a) structures and buildings together with their settings and attendant grounds, fixtures and fittings,
- (b) groups of such structures and buildings, and
- (c) sites, which are of architectural, historical, archaeological, artistic, cultural, scientific, social or technical interest"

The 1999 Act was replaced by the Local Government (Planning and Development) Act 2000 where the conditions relating to the protection of architectural heritage are set out in Part IV of the Act. Section 57 (1) of the 2000 Act states that:

'...the carrying out of works to a protected structure, or a proposed protected structure, shall be exempted development only if those works would not materially affect the character of –

- (a) the structure, or
- (b) any element of the structure which contributes to its special architectural, historical, archaeological, artistic, cultural, scientific, social or technical interest'

## **Appendix 15G - Glossary and Definition of Archaeological Terms**

## Appendix 7 Glossary and definition of archaeological terms

**Barracks** A building or group of buildings used to house members of the police or armed forces. These date from the late 17th century AD onwards.

**Brewery** A commercial complex of buildings for the brewing of beer. These date from the 19th century AD onwards.

**Bridge** A structure of wood, stone, iron, brick or concrete, etc., built to span a river or ravine in order to facilitate the crossing of pedestrians or vehicles. These date from the medieval period (5th - 12th centuries AD) onwards.

**Burial ground** An area of ground, set apart for the burial of the dead, not associated with a church. These date from the medieval period (5th - 16th centuries AD) onwards. See also Children's burial ground and Graveyard.

**Castle (unclassified)** A castle that cannot be more precisely classified. They can date from the late 12th to the 16th century AD. See also Castle - Anglo-Norman masonry castle; Castle - hall-house; Castle - motte; Castle - motte and bailey; Castle - ringwork; Castle - ringwork and bailey; Castle - tower house.

**Chapel** A free-standing building which is used for private worship. These date from the late medieval period (c. 1400 to the 16th century AD) onwards.

**Church** A building used for public Christian worship. These can be of any date from c. 500 AD onwards.

**Corn store** A large building used for the storage of grain. These date to the 18th and 19th centuries AD.

**Country house** The rural residence of the landed gentry. These houses date from the late 17th century to the first half of the 19th century AD.

**Courthouse** A building in which a judicial court is held. These date from the 16th century AD onwards.

**Culvery** A culvert is a structure that allows water to flow under a road, railroad, trail, or similar obstruction. Typically embedded so as to be surrounded by soil, a culvert may be made from a pipe, reinforced concrete or other material

**Drydock** A narrow basin or vessel that can be flooded to allow a load to be floated in, then drained to allow that load to come to rest on a dry platform. Dry docks are used for the construction, maintenance, and repair of ships, boats, and other water craft.

**Enclosure** An area defined by an enclosing element (e.g. bank, wall, fosse, scarp), or indicated as such cartographically, and occurring in a variety of shapes and sizes, possessing no diagnostic features which would allow classification within another monument category. These may date to any period from prehistory onwards.

**Fulacht fiadh** Prehistoric site potentially used for a variety of purposes such as cooking, brewing, bathing, textile dying etc. Characterised by a crescentic mound of burnt stone; usually located in

damp areas, where the trench (trough) for cooking would fill with water; usually found in groups (plural: *fulachta fiadh*).

**Graveyard** The burial area around a church. These date from the medieval period (5th-16th centuries) onwards.

**Headstone** An upright stone placed over the head of a grave. These date from 17th century AD onwards.

**Hermitage** A secluded place, either a man-made structure or a natural feature, such as a cave, where a hermit lived. These date from the medieval period (5th-16th centuries AD).

**Historic town** A settlement of pre-AD 1700 date that occupied a central position in the communications network, functioned as a market centre and had an organised layout of streets with a significant density of houses and associated land plots. In addition, examples of one of the following monument classes should be present: town defences; castle/tower house; house (which functioned as a manor house); parish church/cathedral; religious house(s); administrative institution (e.g. town hall, market-house); judicial institution (e.g. courthouse, prison); monuments indicating specialised technological production (e.g. mill, kiln, tannery, ironworking site); bridge; hospital; school; quays. Where only documentary evidence survives to suggest a town was present then the term 'Historic town possible' applies.

**Holy well** A natural spring or well associated with a saint or a tradition of cures.

**Hospital** A building for the care of the sick, aged, infirm and poor. These date from the medieval period (5th-16th centuries AD) onwards.

**House (18<sup>th</sup>/19<sup>th</sup> century)** A building for human habitation which dates to the 18th/19th century and which is not classifiable as either a country house or a vernacular house.

**House (20<sup>th</sup> century)** A building for human habitation which dates to the 20th century and which is not classifiable as either a country house or a vernacular house.

**Library** A building, room or suite of rooms where books, or other materials, are classified by subject and stored for use by the library's members. These date from the 17th century AD onwards.

**Market-house** A market building incorporating other function rooms, e.g. theatres, courtrooms, schoolrooms. In Ireland market-houses are sometimes colloquially referred to as tholsels. These date from the later medieval period (12th-16th centuries AD) onwards.

**Mass-rock** A rock or earthfast boulder used as an altar or a stone-built altar used when Mass was being celebrated during Penal times (1690s to 1750s AD), though there are some examples which appear to have been used during the Cromwellian Period (1650s AD). Some of these rocks/boulders may bear an inscribed cross. See also Penal Mass station.

**Milling complex** A series of post-1700 AD structures associated with milling, including any of the following: mill, millpond, millrace, engine house, industrial chimney, administrative buildings and workers' factory.

**Mill (unclassified)** A mill, including where present the millrace and millpond, where corn is ground or where raw material is processed. This classification is used, in the context of this database, when it

is unclear whether the mill in question is a water mill or a windmill. These may date from the late medieval period (c. 1400 to the 16th century AD) onwards.

**Millrace** The the current of water that turns a water wheel, or the channel (sluice) conducting water to or from a water wheel.

**Pier/jetty** A structure, extending out into the water, built of iron, wood or stone, for docking or accessing ships or boats. They may also serve to protect a harbour, influence the current or tide and are sometimes used as promenades. These may date to any period from prehistory onwards.

**Prison** An establishment where offenders are confined. These date from the late medieval period (c. 1400 to the 16th century AD) onwards.

**Quay** A stone or timber landing-place built parallel to, or projecting out from, the shoreline, to serve in the loading and unloading of vessels. These date from the Iron Age (c. 500 BC - AD 400) onwards.

**Redundant record** Records classed as 'Redundant record' are those that fulfil one or more of the following criteria: (1) a record identifying a location where, according to documentary sources (e.g., published reference, cartographic sources) or personal communication, a monument might have existed, but which, on inspection, was found not to be an archaeological monument (e.g. a natural feature); (2) a record classified using a term which is now obsolete (e.g. ecclesiastical remains); (3) a record created in error, a duplicate record or one which has no supporting evidence recorded on file or in the database; (4) an archaeological object (i.e. an artefact), e.g. a quernstone; (5) a record entered as a 'Shipwreck'. Shipwrecks are recorded in a separate database.

**Ringfort** Early medieval Christian (c. 500 AD to 1100) defended secular settlement consisting of a bank and external ditch defining a central circular area that contained dwelling structures of occupants; also called fairy fort, rath, lios, or cashel (the latter constructed of stone as opposed to earth).

**School** An establishment in which people, usually children, are taught. These date from the late medieval period (c. 1400 to the 16th century AD) onwards.

**Shambles** Structure/structures where animals were slaughtered and/or where meat and fish were sold. These date from the medieval period (5th-16th centuries AD) onwards.

**Souterrain** An underground structure consisting of one or more chambers connected by narrow passages or creepways, usually constructed of drystone-walling with a lintelled roof over the passages and a corbelled roof over the chambers. Most souterrains appear to have been built in the early medieval period by ringfort inhabitants (c. 500 - 1000 AD) as a defensive feature and/or for storage.

**Standing Stone** A stone which has been deliberately set upright in the ground, usually orientated on a north-east-south-west axis, although other orientations do occur, and varying in height from 0.5m up to 6m. They functioned as prehistoric burial markers, commemorative monuments, indicators of routeways or boundaries and date from the Bronze and Iron Ages (c. 2400 BC - AD 500), with some associated with early medieval ecclesiastical and burial contexts (c. 5th-12th centuries).

**Tomb (chest tomb)** A free standing, box-like funerary monument. These date from the 13th century AD onwards. Examples that are incorporated in a wall are classified as Wall monument. Examples with an effigy are classified as Tomb – effigial.



**Town hall** A large building used for the transaction of the public business of a historic town (pre-1700 AD), the holding of courts of justice, entertainments and other activities. In Ireland, town halls are sometimes colloquially referred to as tholsels.

**Weir – regulating** A dam constructed on the reaches of a canal or navigable river designed to retain the water and to regulate its flow. These date from the late medieval period (c. 1400 to the 16th century AD) onwards.

## Appendix 15H - Archaeology Figures

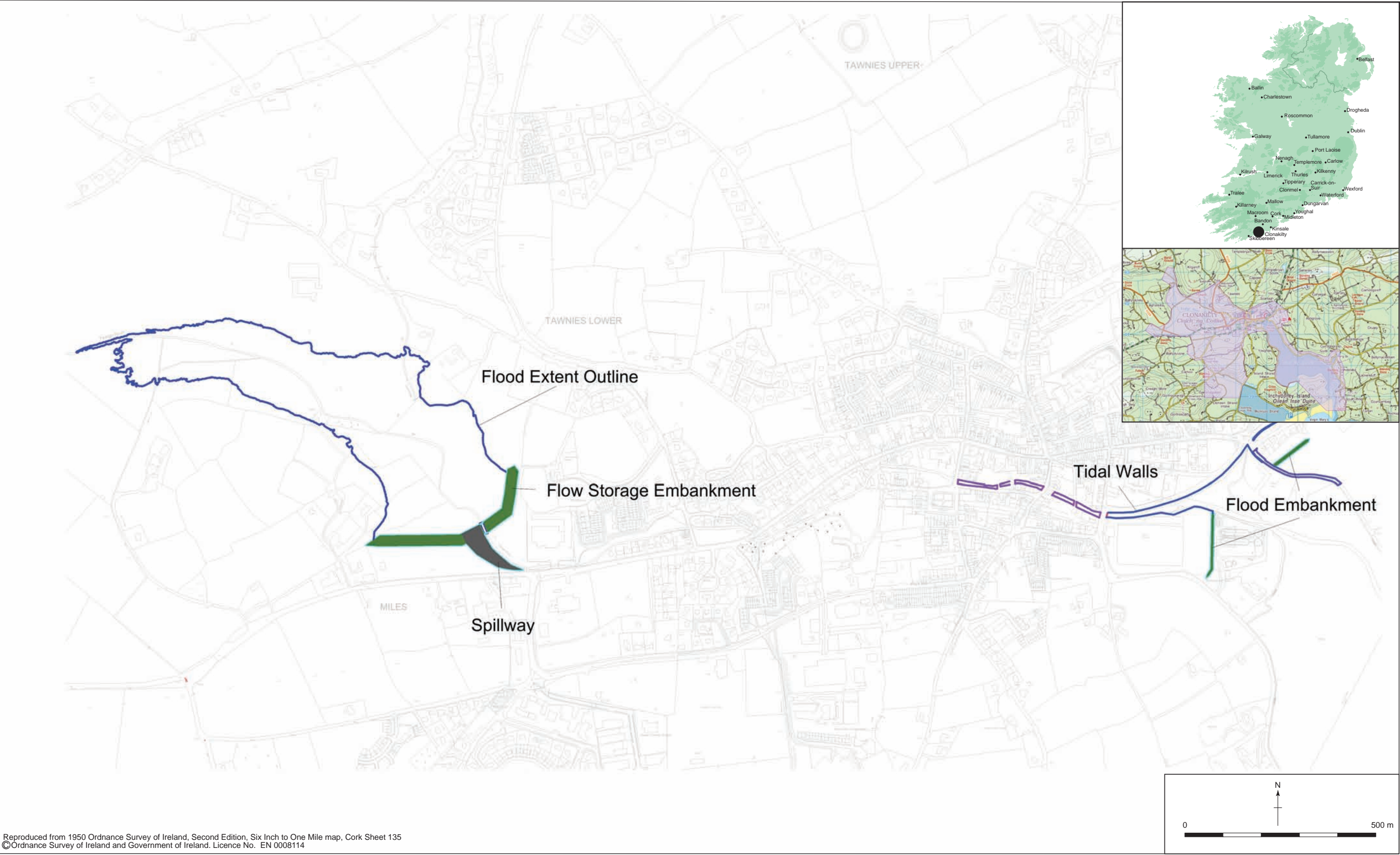
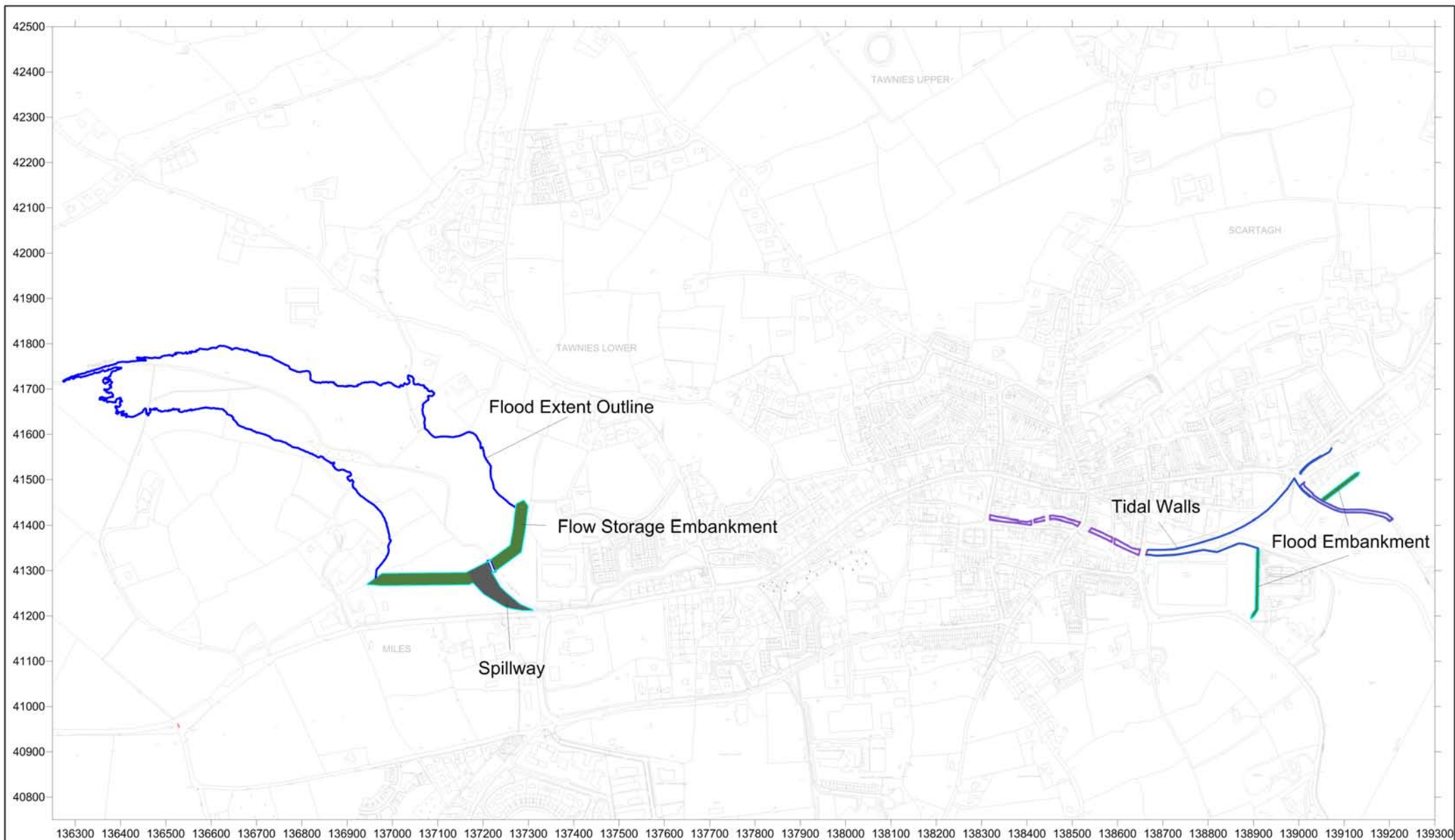


Figure 1 - Site location and RMP extract



## Key



Project Name: Clonakilty Flood Relief Scheme EIA

Project Code: CFR114



0m 100m 200m

Figure 2 - Clonakilty Flood Relief Scheme Design

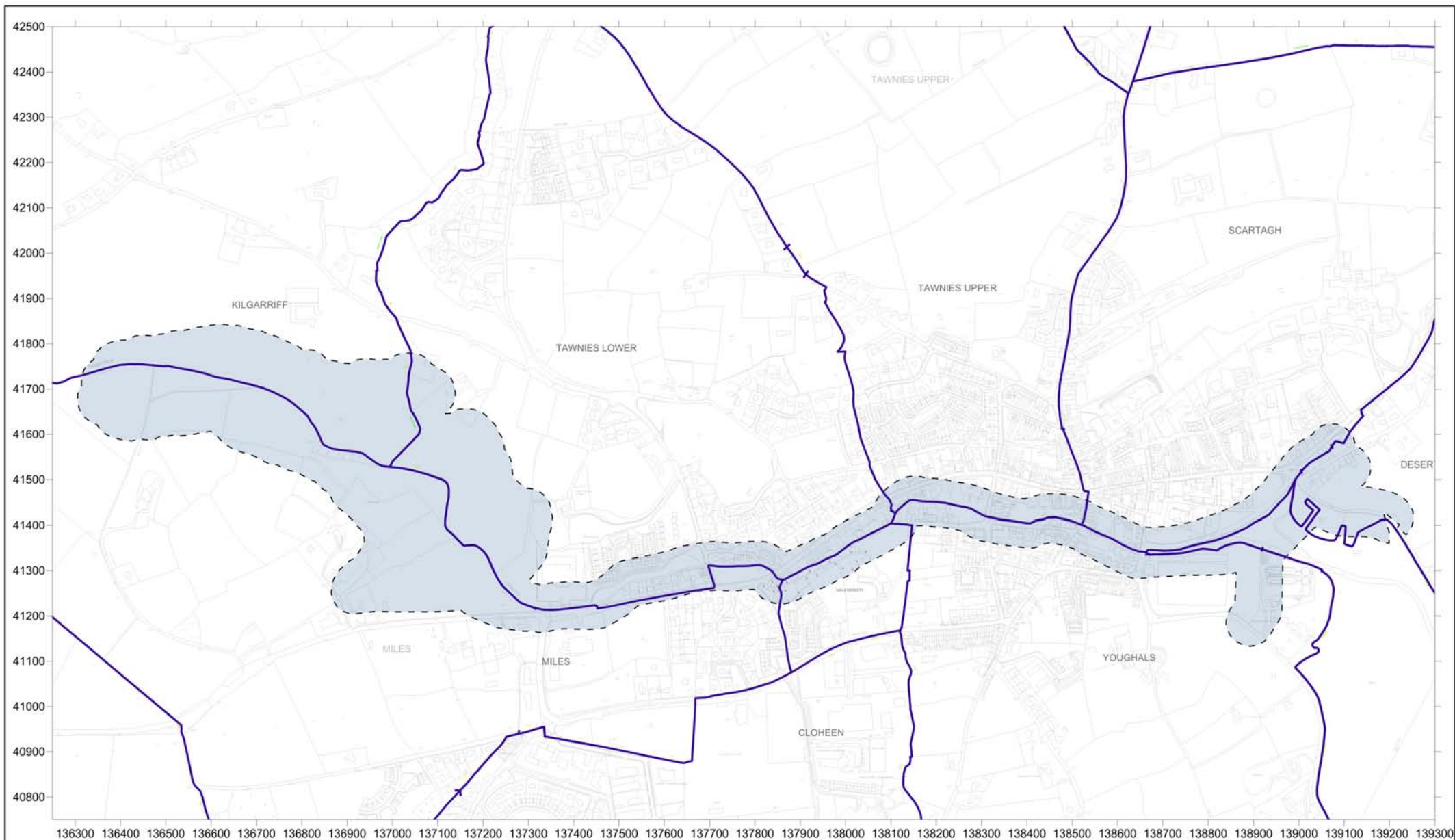
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1st edit by:

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## Key

Townland Boundary	
Cultural Heritage Buffer Zone	



Project Name: Clonakilty Flood Relief Scheme EIA

Project Code: CFRJ14



Figure 3 - Outline of the Study Area for EIA

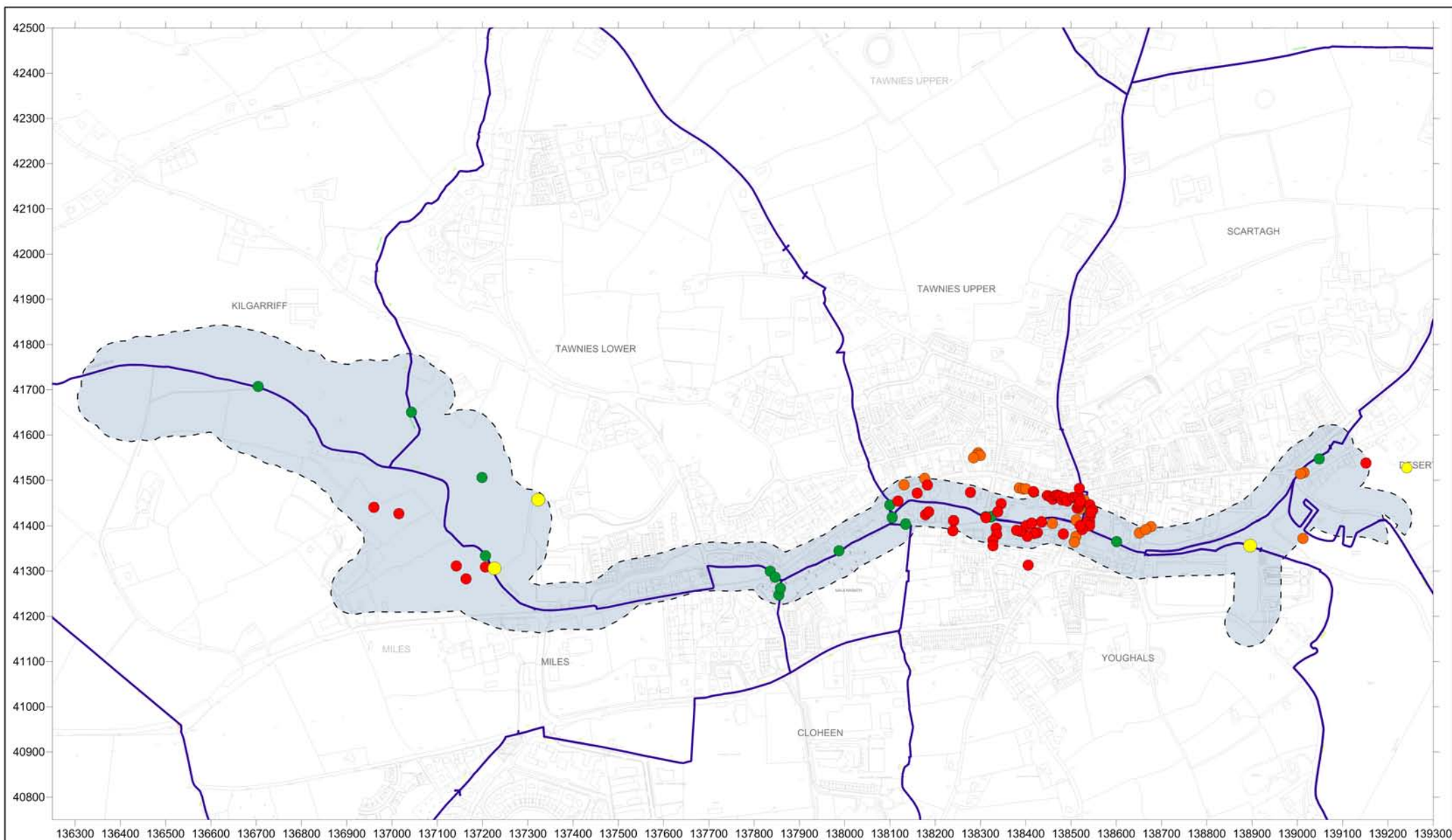
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## Key

Cultural Heritage Buffer Zone	
Very High	Red dot
High	Orange dot
Medium/High	Yellow dot
Medium/Low	Green dot



Project Name: Clonakilty Flood Relief Scheme EIA

Project Code: CFR14



0m 100m 200m

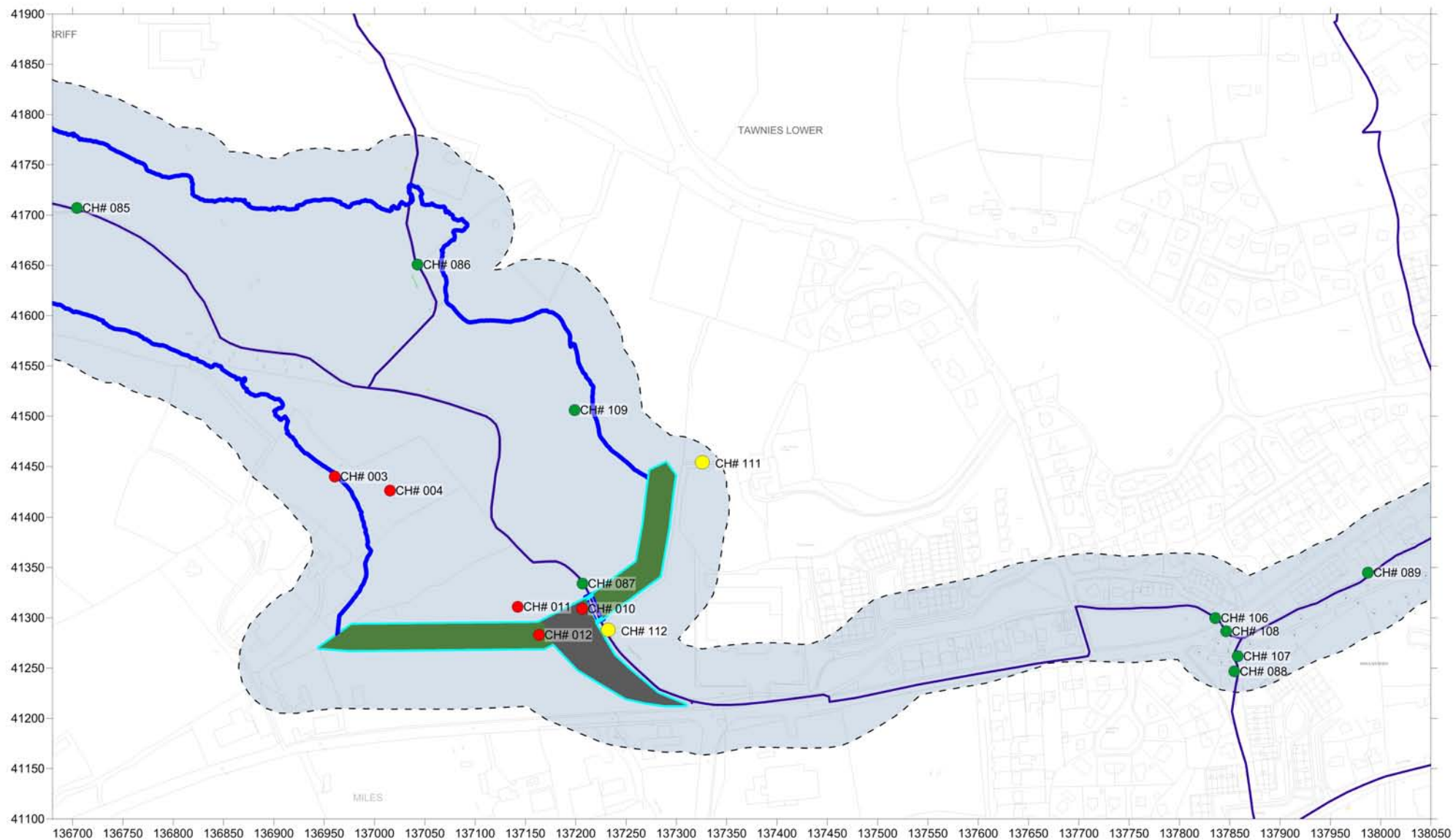
Figure 4 - Sites impacted on by the development

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## Key

Cultural Heritage Buffer Zone	
Very High	Red dot
High	Orange dot
Medium/High	Yellow dot
Medium/Low	Green dot



Project Name: Clonakilty Flood Relief Scheme EIA

Project Code: CFR114



0m 50m 100m

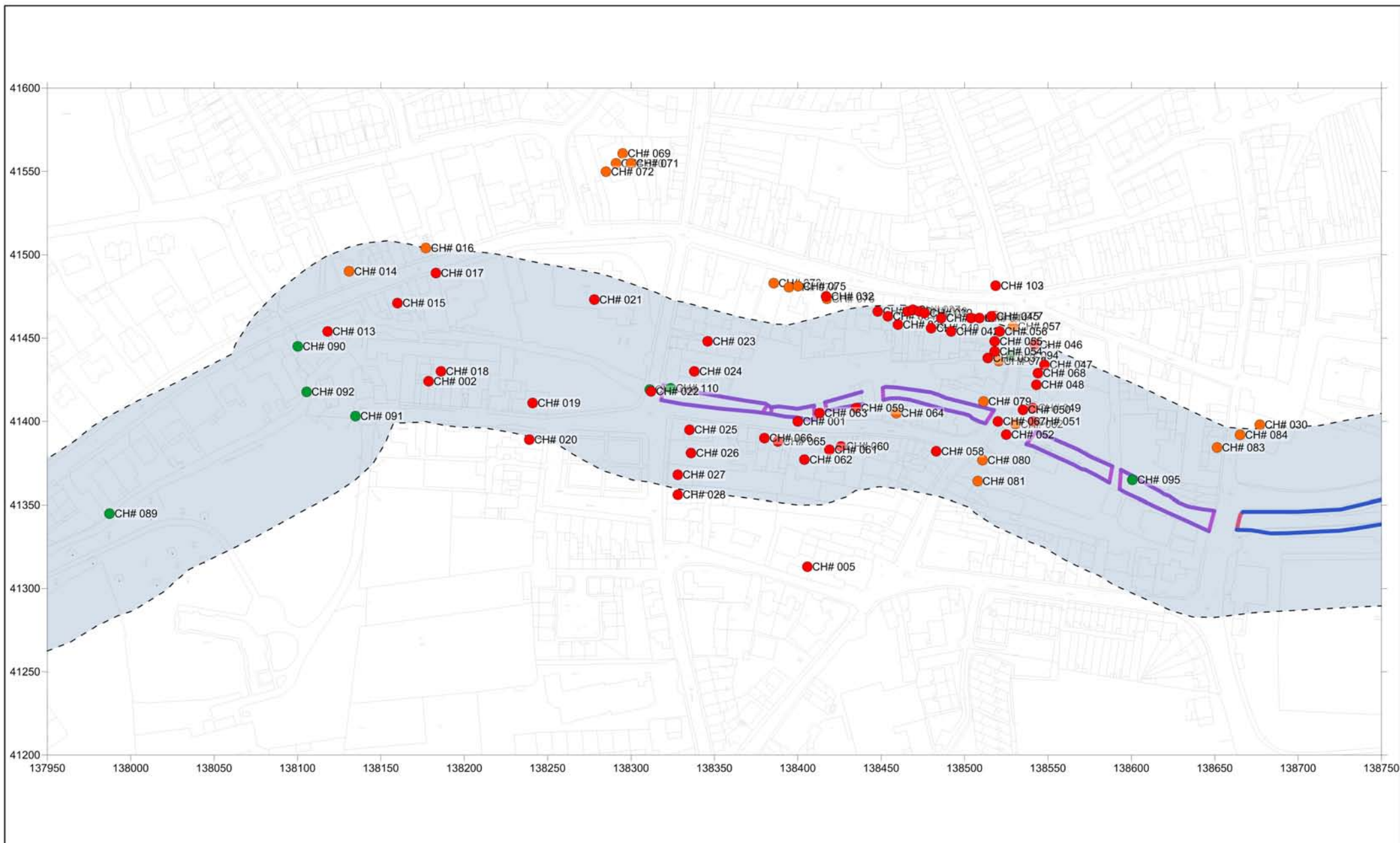
Figure 5 - CH Sites impacted on by the development

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## Key

Cultural Heritage Buffer Zone	
Very High	Red dot
High	Orange dot
Medium/High	Yellow dot
Medium/Low	Green dot



Project Name: Clonakilty Flood Relief Scheme EIA

Project Code: CFR114



0m 100m

Figure 6 - CH Sites impacted on by the development

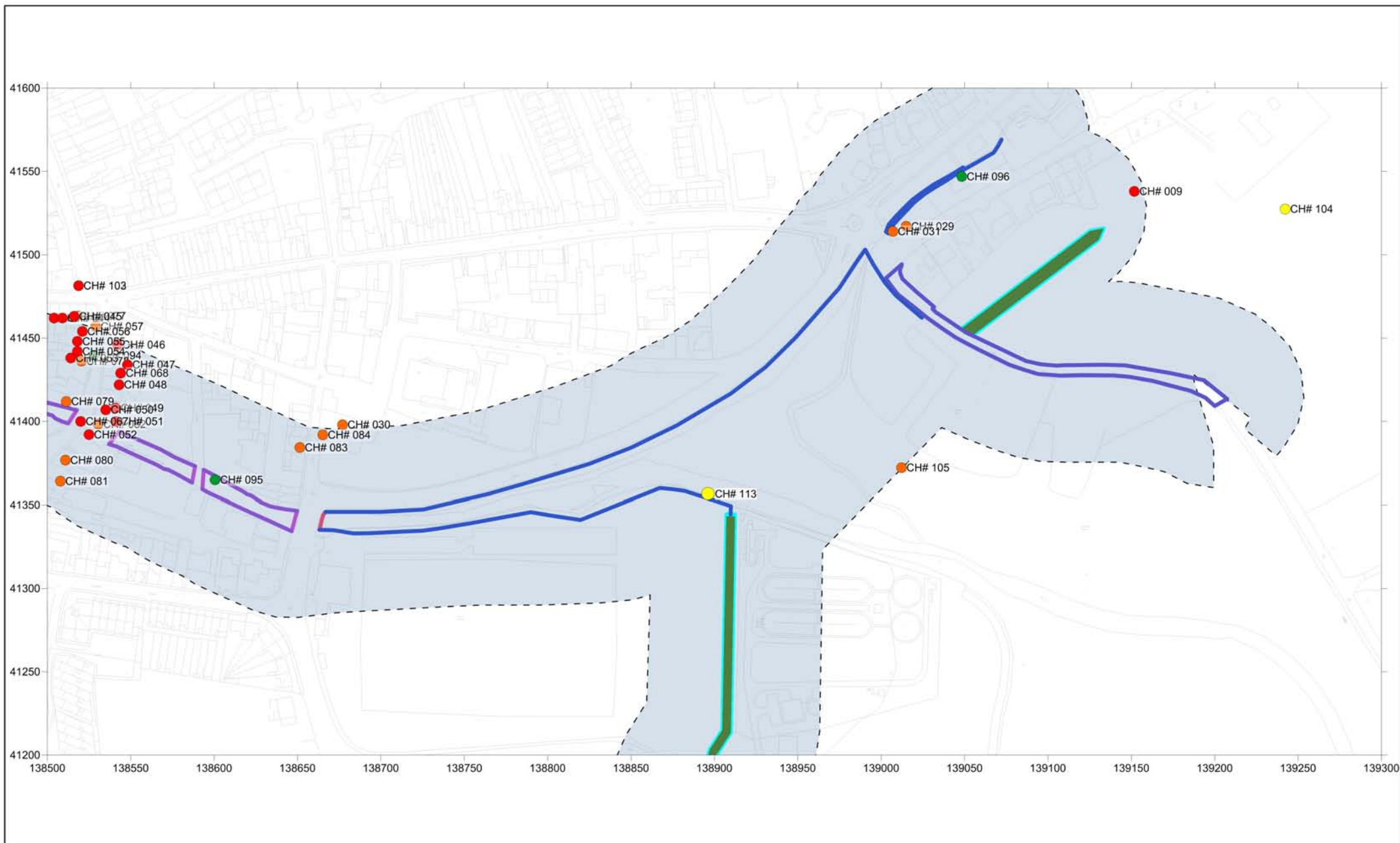
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## Key

Cultural Heritage Buffer Zone	
Very High	Red dot
High	Orange dot
Medium/High	Yellow dot
Medium/Low	Green dot



Project Name: Clonakilty Flood Relief Scheme EIA

Project Code: CFR114



0m 50m

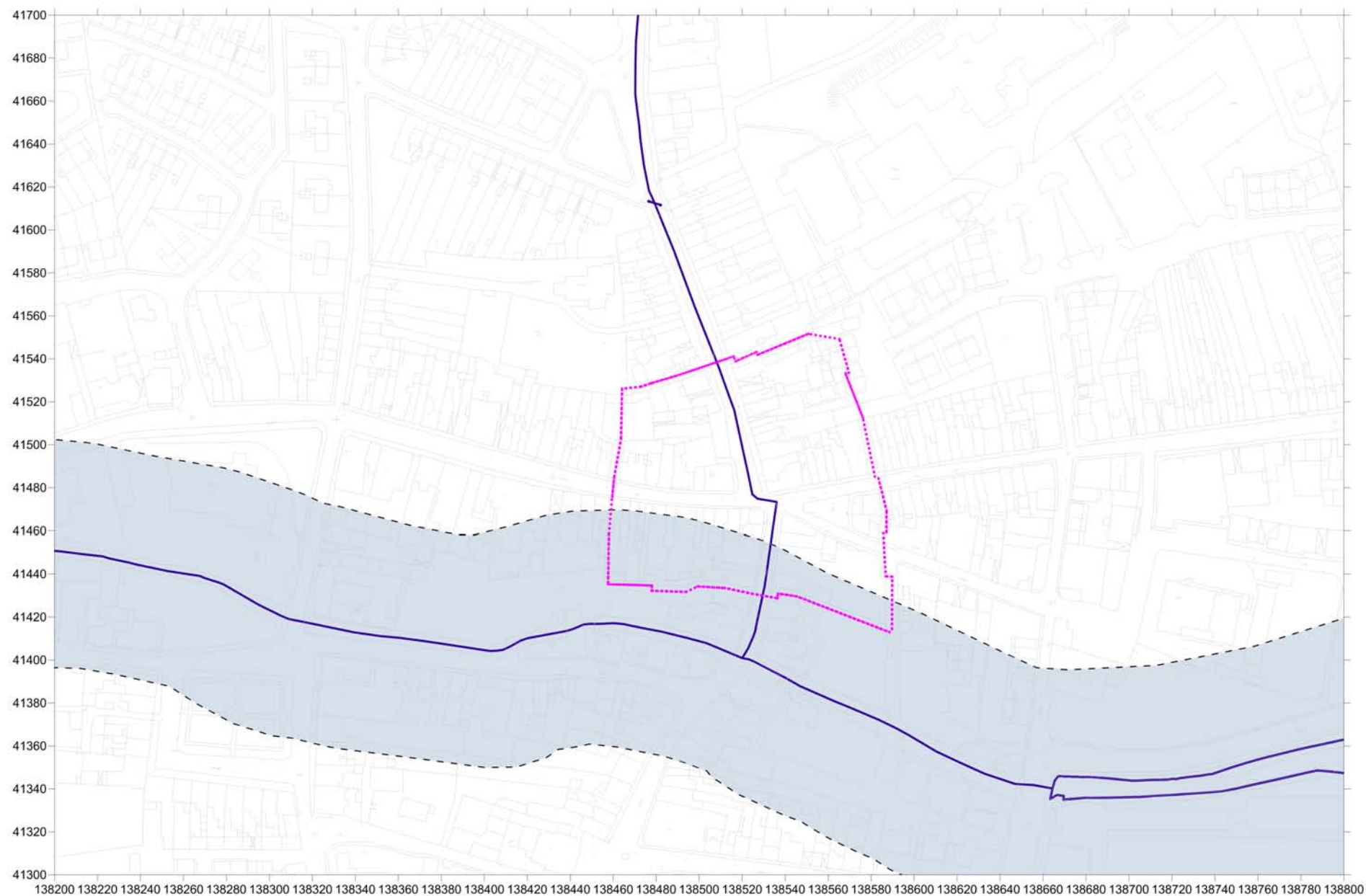
Figure 7 - CH Sites impacted on by the development

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## Key

Townland Boundary	
Zone of Archaeological Potential	
Cultural Heritage Buffer Zone	



Project Name: Clonakilty Flood Relief Scheme EIA

Project Code: CFR114



0m 50m

Figure 8 - Zone of Archaeological Protection for Clonakilty

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## Key

Townland Boundary	
Architectural Conservation Area	
Cultural Heritage Buffer Zone	



Project Name: Clonakilty Flood Relief Scheme EIA

Project Code: CFR114



0m 50m

Figure 9 - Architectural Conservation Area for Clonakilty

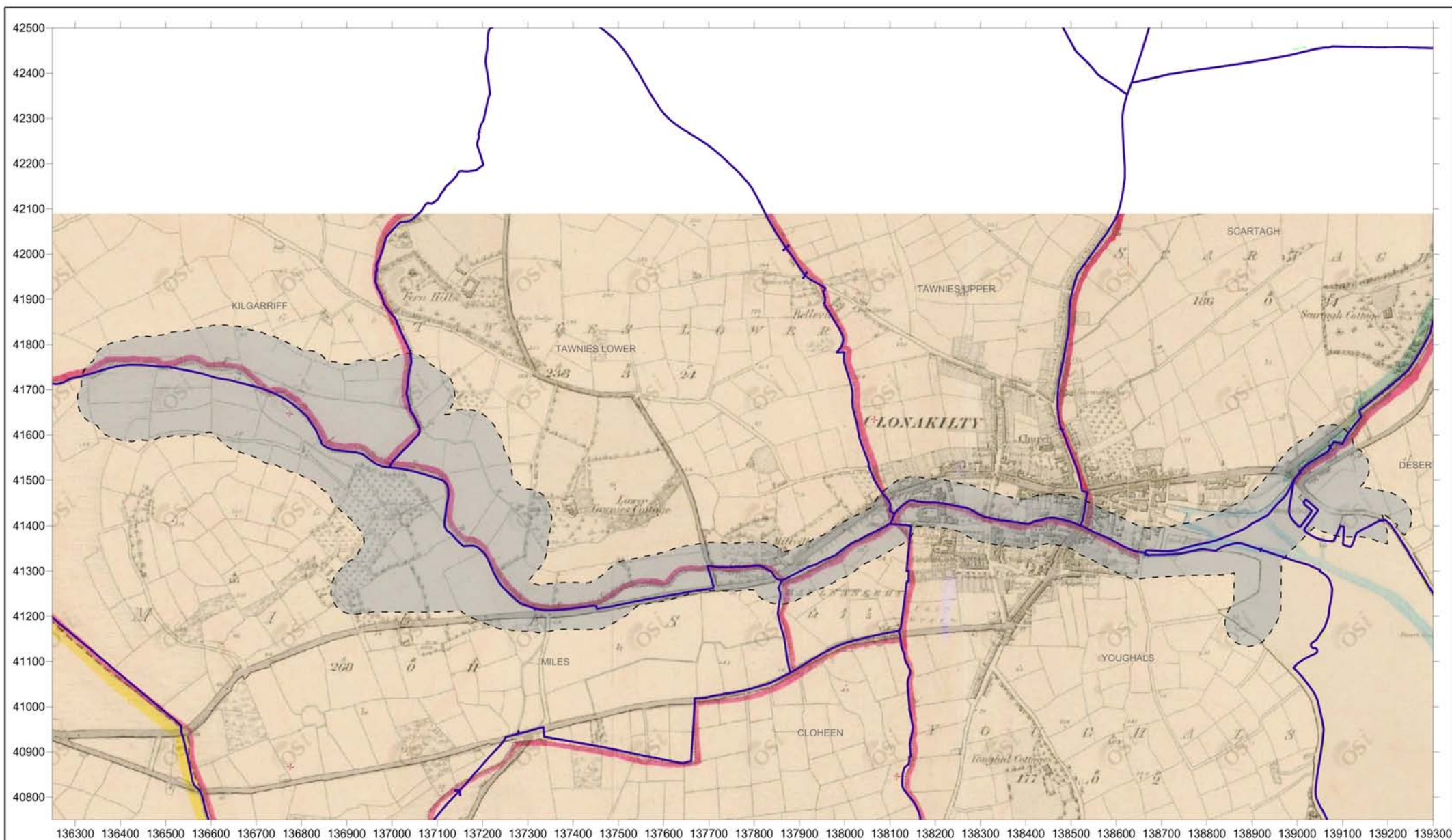
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## Key



Project Name: Clonakilty Flood  
relief Scheme EIA

Project Code: CFR114



0m 100m 200m

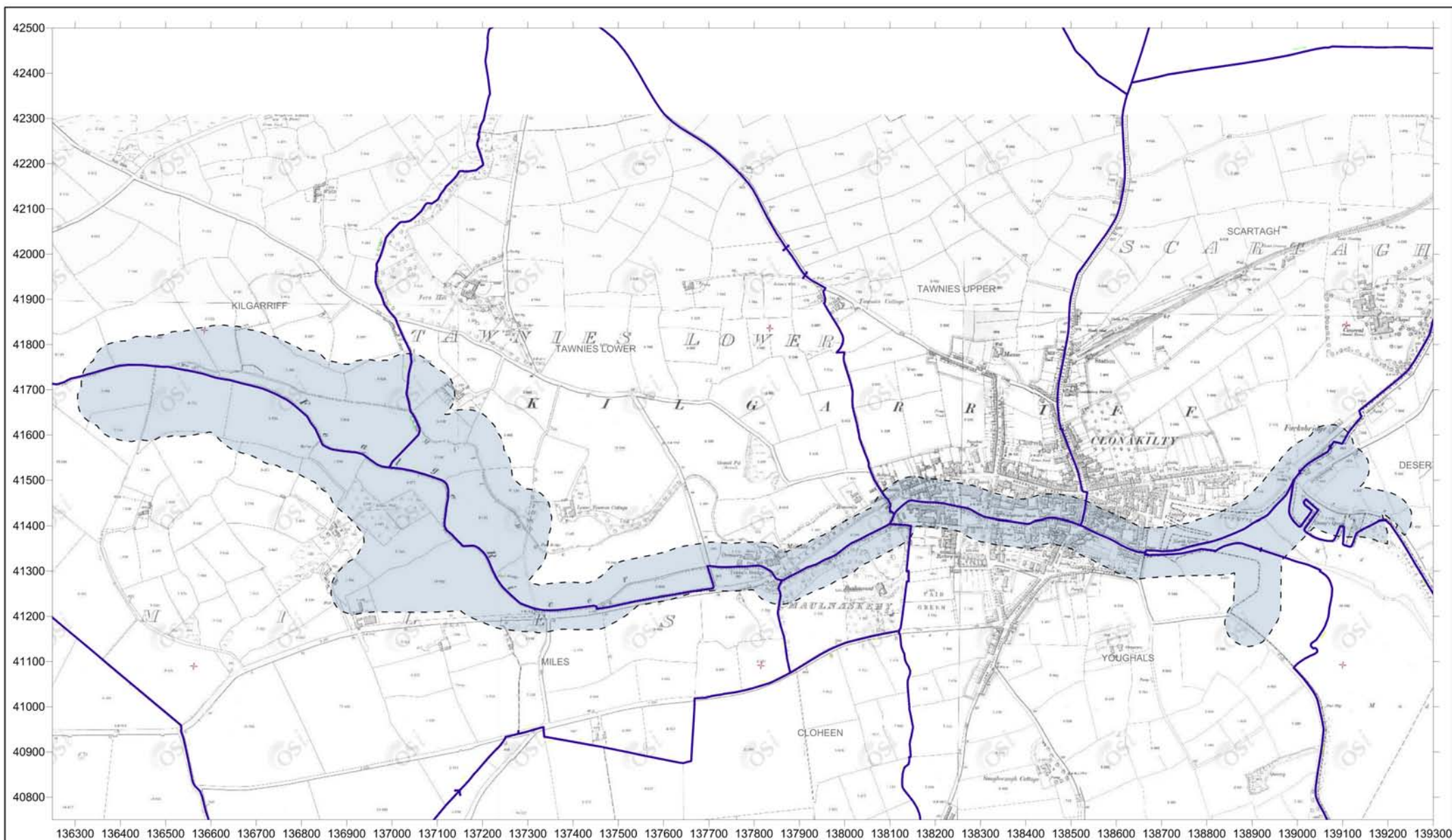
Figure 10 - First Edition OS Sheet  
(1834 - 46) for Clonakilty

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1st edit by:

2nd edit by:

Signed off:



## Key



Project Name: Clonakilty Flood relief Scheme EIA

Project Code: CFR114



0m 100m 200m

Figure 10 - Second Edition OS Sheet (1904 - 1905) for Clonakilty

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Plate 1 - View of Clonakilty Harbour - facing southwest



Plate 2 - View of present river channel facing west from Clarke St. Bridge





Plate 3 - View of present river channel facing west from Clarke St. Bridge



Plate 4 - View of present river channel facing west from Connolly St. Bridge





Plate 5 - View of the proposed Flow Storage Area - facing south



Plate 6 - An example of dry-stone revetment style evident along the present river channel and at Deasy's Quay





Plate 7 - Possible dry-dock/shipyard at Deasy's Quay, facing southwest



Plate 8 - Culvert located to the southwest of Forge Cottage

## **Appendix 16A - Landscape Assessment Methodology**



## A.1 Methodology: landscape impacts

### A.1.1 Introduction: landscape impacts

For the purposes of LVIA, the landscape is considered to be a resource in its own right, The European Landscape Convention (2000) provides the following definition of landscape:

*"Landscape means an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors".*

The assessment of landscape impacts considers the impacts the proposed development or change will have on this landscape resource.

Landscape impacts that may arise include a change, loss or addition of elements; features, aesthetic or perceptual aspects that contribute to the distinctiveness or character of the landscape.

### A.1.2 Establishing the landscape baseline

To enable the assessment of the impacts of a proposed development or change, the landscape baseline, or starting point must be established. This study may include the following:

**Landscape fabric** - physical landscape elements present within the landscape such as landform, land cover, boundary features and trees and woodland.

**Landscape character** - the distinct and recognisable pattern of elements that occurs consistently in a particular type of landscape and how this is perceived by people. It reflects particular combinations of geology, landform, soils, vegetation, land use and human settlement but also encompasses its perceptual and aesthetic qualities. It creates the particular sense of place of different areas of the landscape

**Landscape designations** - sites with landscape designations are considered in addition to the overall landscape character areas, to enable site specific judgements of impacts on particularly valued sites.

### A.1.3 Determining landscape sensitivity

The next stage is to determine the sensitivity of the landscape receptors to the type and scale of development proposed.

The sensitivity of a landscape receptor is informed by the *susceptibility* and *value* of the receptor. Susceptibility relates to the ability of the landscape to accommodate the proposed development without undue consequences on the existing baseline or planning policies. **The value** of a landscape receptor is informed by designations, planning policy and documents, the contribution of special (cultural, historic or conservation) contributors or associations, scenic quality, rarity, recreational value and aesthetic, perceptual and experiential qualities.

Landscapes of high value may include those with national or international designations on such as National Parks or World Heritage Sites; they may relate to the setting of features that have high archaeological or heritage significance. Medium value landscapes include areas that are subject to local policy protection, such as Areas of High Landscape Value, or where it is considered that particular features or elements contribute to a greater value than other nearby areas. Low value landscapes are not subject to designation but may be appreciated at a community or local level.

Three levels of sensitivity are recorded:

- **High** sensitivity: A landscape of high value and a particularly distinctive character that is susceptible to relatively small changes of the type proposed.
- **Medium** sensitivity: A landscape of valued characteristics reasonably tolerant of change of the type proposed; and
- **Low** sensitivity: A landscape of relatively low value or importance which is potentially tolerant of substantial change of the type proposed.

The considerations noted above are further informed by general observations regarding the condition and quality of the landscape. These support the overall narrative and judgement of sensitivity. Landscape quality or condition may relate to the level of management, distinctiveness, number of detracting features, pattern, unity, structure, sense of place, function, definition and aesthetic value.

Areas of landscape quality may not necessarily correlate directly with landscape character areas or designated sites as defined by statutory agencies or local planning authorities. Where it is considered that this is the case, mention is made within the description and sensitivity evaluation.

#### A.1.4 Magnitude of landscape change

Impacts on landscape receptors are assessed in terms of their magnitude of change. This is a combination of the size or scale, geographic extent of the area influenced and the duration and reversibility of the impact.

Size and scale concerns the amount of existing landscape elements that will be lost, the extent to which these represent or contribute to the character of the landscape. It also relates to the degree to which aesthetic or perceptual aspects of the landscape are altered through removal or addition of new features, such as hedge loss or introduction of tall features on skylines.

The **geographical extent** over which landscape impacts are felt is distinct from the size or scale. For example, large scale impacts may be limited to the immediate site area.

The **duration** of the effect relates to the time period during which the changes to the landscape will occur.

The **magnitude of change** is a product of the size/scale, extent and duration of the impacts. This is judged as a four-point scale:

- **High:** Notable and long term change in landscape characteristics over an extensive area ranging to a very intensive, long term change over a more limited area;
- **Medium:** Moderate, short term change over a large area or moderate long term change in localised area;
- **Low:** Slight long term or moderate short term change in landscape components; and
- **No Change/Negligible:** No discernible/virtually imperceptible change to the landscape's resources
- 

Once the landscape sensitivity and magnitude of change are established, it is then possible to determine the effect. This is described in Section A.3

## A.2 Methodology: visual impacts

#### A.2.5 Introduction

Visual impacts relate to how the development may affect the views available to people and their *visual amenity*. Visual amenity is the visual quality of a site or area as experienced by residents, workers or visitors. Visual *receptors* are people that experience the view. Development can change people's direct experience and perception of the view depending on existing context, the scale, form, colour and texture of the proposals, the nature of the activity associated with the development, and the distance and angle of view. Visual impacts can be experienced through development intruding into existing views experienced by residents and day to day users of the area, and the views of tourists and visitors passing through or visiting the area.

#### A.2.6 Establishing the visual baseline

Identification of potential visual receptors is informed by desk and field studies in conjunction with consideration of the likely visual influence of the proposed development, to identify places where people might be expected to receive a view of the proposed development.

#### A.2.7 Visual receptor sensitivity

In order to determine the scale of visual impacts, it is necessary—as with the assessment of landscape impacts—to determine the sensitivity of the receptor. This is achieved through the consideration of the susceptibility of the receptor and the value of the view.

Visual receptor susceptibility is a function of receptor type, location and activity. In assessing visual receptor susceptibility, factors such as the following have been accounted for with a degree of professional judgement:

- Receptor activities – for example, relaxing at home, undertaking leisure, recreational and sporting activities, at work
- Movement/duration – whether receptors are likely to be stationary or moving, which influences how long they will be exposed to the change
- Orientation – of receptors in relation to the development
- Purpose/expectation – of receptors at that location
- Context – the quality of the landscape
- Importance of the view/location – popularity of location as indicated by existence of designations or local value
- 

The **value** of the view that is experienced may relate to associated landscape or planning designations, cultural references or the presence of facilities (car parking, interpretation boards, signage) that may emphasise importance.

In this assessment, sensitivity is judged as a combination of susceptibility and value and is ranked as follows:

- **High:** visitors to promoted or valued viewpoints especially those with panoramic views; viewers with a particular interest in the environment; viewpoints noted within planning guidance or policy; nationally important recreational routes where views in highly valued landscapes are available; scenic routes; receptors in homes with views designed to appreciate views of high-value landscapes;
- **Medium:** receptors to local viewpoints, public rights of way, local trails, local landmarks with key views; visitors to heritage or tourism sites where views are important; residents where the view may not be especially valued;
- **Low:** receptors that are fast-moving (due to speed on roads and motorways) or because they are engaged in an activity not concerned with the landscape or view (such as work or sport).
- 

As with all aspects of the methodology, these definitions are not rigid; where professional judgement has been applied, this would be noted in the narrative.

#### A.2.8 Visual receptor magnitude of change

The assessment of the magnitude of change on visual receptors follows similar principles to landscape assessment in terms of size or scale, the geographic extent of the area influenced and its duration and reversibility.

The **magnitude of change** is a product of the size/scale, extent and duration of the impacts. These are judged as a four-point scale:

- **High** - where the development causes a very notable (or significant) change in the existing view for a sensitive receptor
- **Medium** - where the development would cause a very noticeable change in the existing view
- **Low** - where the development would cause a noticeable change in the existing view
- **Negligible/no Change** - where the development would cause a barely perceptible change in the existing view
- 

### A.3 Assessment of landscape and visual impacts

The second step is to determine the scale of impacts. This is evaluated by combining the sensitivity (or nature) of the landscape or visual receptor and the magnitude (or nature) of change. The following matrix provides an objective rationale for determining the scale of impacts, in order to provide consistency and transparency to the process; however a degree of professional judgement is a key element of the evaluation.

Table Error! No text of specified style in document.-1: Scale of impacts matrix

		Sensitivity to change (nature of receptors)		
		Low	Medium	High
Magnitude of Change resulting from impacts identified	No Change/ Negligible	Negligible	Negligible	Negligible
	Low	Slight	Slight - Moderate	Moderate
	Medium	Slight - Moderate	Moderate	Moderate - Substantial
	High	Moderate	Moderate - Substantial	Substantial

The scale of impacts detailed above can be classed as beneficial, neutral or adverse.

#### A.3.9 Classification of landscape impacts:

**Adverse landscape impacts** occur when features or key landscape characteristics such as established planting, old buildings or structures which—when considered singularly or collectively—help to define the character of an area are lost, or where new structures out of scale or character with the surroundings are introduced.

- **Substantial adverse landscape impacts** occur where the proposals are at considerable variance with the landform, scale and pattern of the landscape and would be a dominant feature, resulting in considerable reduction in scenic quality and large scale change to the intrinsic landscape character of the area.
- **Moderate adverse landscape impacts** occur where proposals are out of scale with the landscape, or inconsistent with the local pattern and landform and may be locally dominant and/or result in a noticeable reduction in scenic quality and a degree of change to the intrinsic landscape character of the area;
- **Slight adverse landscape impacts** occur where the proposals do not quite fit with the scale, landform or local pattern of the landscape and may be locally intrusive but would result in a minor reduction in scenic quality or change to the intrinsic landscape character of the area.

**Neutral landscape impacts** arise when the change proposed results in no discernible improvement or deterioration to the landscape resource. The proposals sit well within the scale, landform and pattern of the landscape and / or would not result in any discernible reduction in scenic quality or change to the intrinsic landscape character of the area.

**Beneficial landscape impacts** occur where derelict buildings, land or poorly maintained landscape features are repaired, replaced and maintained or where new features are introduced such as new tree planting which helps to define landscape structure where none currently exists. Beneficial landscape impacts can be slight, moderate or substantial.

#### A.3.10 Classification of visual impacts:

**Adverse visual impacts** occur when the proposed development will introduce new, non-characteristic, discordant or intrusive element/s into views.

- **Substantial adverse visual impacts** occur where the proposed development would cause a considerable deterioration in the existing view or visual amenity.
- **Moderate adverse visual impacts** occur where the proposed development would cause a noticeable deterioration in the existing view or visual amenity.
- **Slight adverse visual impacts** occur where the proposed development would cause a barely perceptible deterioration in the existing view or visual amenity.

**Neutral visual impacts occur where** the change proposed results in no discernible improvement or deterioration to views or visual amenity.

**Beneficial visual impacts** *occur when the proposed development would enhance the quality of the receptor's view e.g. by creating a new focal point in a degraded landscape that includes a range of existing detractors.* Beneficial visual impacts can be slight, moderate or substantial.

The scale indicates the importance of the impacts, taking into account the sensitivity (or nature) of the receptor and the magnitude (or nature) of the impact. It is usually rated on the following scale of impact:

- *Substantial* indicates an impact that is very important in the planning decision making process.
- *Moderate - substantial* indicates an impact that is, in itself, material in the planning decision making process.
- *Moderate* indicates a noticeable impact that is not, in itself, material in the planning decision making process.
- *Slight* indicates an effect that is trivial in the planning decision making process.
- *Negligible/No Change* indicates an effect that is akin to no change and is thus not relevant to the planning decision making process.

### **Judging the overall importance of the impacts**

Impacts may be described as significant in projects that are subject to EIA. *Significant* impacts are defined as those that are moderate-substantial or substantial. However whilst an impacts may be significant, it does not necessarily mean that such an effect would be unacceptable. Account is taken of the impact that any mitigation measures—for example planting or landform—may have in terms of minimising potentially detrimental impacts or improving the landscape composition of the area.

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