

East Meath - North Dublin Grid Upgrade Environmental Impact Assessment Report (EIAR): Volume 3

Appendix A10.3 – Watercourse Data

EirGrid

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Appendix A10.3 – Watercourse Data

1. Aquatic Habitats

Aquatic habitats such as drainage ditches and water body crossing points and a minimum distance along waterbodies of 100m to either side of crossing points were visually assessed for their suitability to support aquatic flora and fauna species. Condition of aquatic habitats including substrate make-up, flow rates and notable species were recorded. These surveys were carried out between January 2023 and August 2023.

1.1 Water Bodies Field Data

Table 1: Water Bodies Within and Adjacent to the Proposed Development

EIAR Naming Convention	Water Body Name	Approximate Chainage	Location NGR	XY Coordinates (ITM)	Lat and Long	WFD Status	Field Survey Visual Assessment	Ecological Sensitivity Category	Survey	eDNA Survey Notes	eDNA Results	Aquatic Invasives
WB01	TOLKA_020	1,250	N 94742 47221	694685, 747244	53.466729, -6.5739546	Moderate	Potential for eel. Trout (sub-optimal), brook lamprey (possible) and WCC. No spawning gravels. Associated ditch crosses road. Downstream section ditch runs to the left of the road. Overdeep, approx. 30cm wide and 5cm deep. Likely ephemeral. No outfall seen. No fish (salmon, trout) likely. No WCC likely. Upstream section more ditch like than downstream and less likely to host fish.	Local (Higher Value)	no eDNA surveys carried out	N/A	N/A	None
WB02	DUNBOYNE STREAM_010	2,175	N 94483 46404	694426 746427	53.459436, -6.5780991	Poor	Watercourse width about 1.5m overall with mixed flows and substrates and depths. Highly polluted. Mostly shaded over length and no macrophytes seen. Potential for invertebrates and WCC. Otter possible but unlikely due to pollution. Culvert/bridge apron unpassable for all fish.	Local (Higher Value)	no eDNA surveys carried out	N/A	N/A	None
DD01	Drainage ditch	3,610	N 94119 45154	694062, 745177	53.448273 -6.5839517	N/A	Located behind hedge, 1m wide, at least 15cm water depth, water very cloudy, bank 1m high, lined with hedgerow, full of organic matter and some kind of runoff, no flow, scum on the water surface, no ecological value.	Local (Higher Value)	no eDNA surveys carried out	N/A	N/A	None
DD02	Drainage ditch	4,900	N 95370 44885	695313, 744908	53.445631 -6.5652081	N/A	Dry ditch on south side of road: Overgrown, 0.5m wide, bank height 1m.	Local (Lower Value)	no eDNA surveys carried out	N/A	N/A	None
DD03	Drainage ditch	5,800	N 96003 44375	695946, 744398	53.440935 -6.5558387	N/A	Both sides of the road, low ecological value. Poned, some amphibious potential, 1-3m wide, duckweed and algae covering entire surface.	Local (Higher Value)	no eDNA surveys carried out	N/A	N/A	None
DD04	Drainage ditch	6,925	N 97051 44032	696994, 744055	53.437662 -6.5401770	N/A	Ditch on north side of road, not possible to visually assess due to H&S considerations.	Local (Higher Value)	no eDNA surveys carried out	N/A	N/A	None
DD05	Drainage ditch	9,100	N 99022 43376	698964, 743399	53.431403 -6.5107316	N/A	Shallow, overgrown, shadowed by vegetation, dry, not possible not possible to visually assess due to H&S considerations.	Local (Lower Value)	no eDNA surveys carried out	N/A	N/A	None
WB03	DUNBOYNE STREAM_010	10,800	O 00537 42674	700479, 742698	53.424811, -6.4881675	Poor	Approx 3m wide, 0.5m deep but hard to see clearly from road, little overhanging vegetation moderate flow, culverted under roundabout. Description from slightly upstream: River: 3m wide, moderate flow, deep (can't see bottom), riparian vegetation: bramble, canary reed grass, Hawthorn, thistle, ash, nettles. Description from 170m upstream: no turbidity, 15% run, 5% riffle, 60% glide, 20% pool, bank Covered in vegetation, lined by treeline and hedgerow, mostly ivy and mosses on banks. Roots visible. Water cress present. Algae on rocks, mosses. Bank height 250cm, undercutting and erosion present, 20% silt, 5% sand, 10% gravel, 30% pebble, 15% cobble, 5% boulder, 15% overlying silt, channel width 550cm, wet width 500cm, >75% shading, gradient channel.	Local (Higher Value)	eDNA survey carried out	Sample taken 09.08.2023 Sample ID: CP1021WC3 Sample Location: 53.4269009, -6.4901190	Minnow, three-spined stickleback No WCC	None
WB04	TOLKA_020	11,640	O 01119 43261	701061, 743285	53.429973, -6.4792265	Moderate	Need access on other side of bypass to see all of it. Only surveyed north of bypass. 10cm water depth, 2.5m bank height, 2.5m channel width, 2m wet width, predominantly silt substrate composition with organic matter present, no turbidity, mainly glide and pool composition, heavily shaded by trees and scrub, no floodplain connectivity, minimal undercutting present, no erosion seen, ivy and tree roots visible. Adjacent to sheep grazing field. 10% run, 65% glide, 25% pool. 60% silt, 20% sand, 5% gravel, 15% overlying silt, >75% shading.	Local (Higher Value)	eDNA survey carried out	Sample taken 09.08.2023 Sample ID: CP1021WC4 Sample Location: 53.4308718, -6.4799618	Three-spined stickleback No WCC	None
WB05	TOLKA_020	12,550	O 01655 43968	701597, 743991	53.436221, -6.4709366	Moderate	Accessed from field to south of watercourse, not visible from rail carpark north of watercourse due to fencing. 50cm water depth, 2m bank height, 4.5m channel width, 4m wet width, predominantly silt substrate composition with some gravel, pebble, and organic matter present, some turbidity, mainly glide with some pools and runs, heavily shaded by trees and scrub in most parts but some open sections, no floodplain connectivity, undercutting present, no erosion seen, tree roots	Local (Higher Value)	eDNA survey carried out	Sample taken 09.08.2023 Sample ID: CP1021WC5 Sample Location:	Minnow, stone loach, three-spined stickleback, trout, lamprey spp. (river or brook)	None

EIAR Naming Convention	Water Body Name	Approximate Chainage	Location NGR	XY Coordinates (ITM)	Lat and Long	WFD Status	Field Survey Visual Assessment	Ecological Sensitivity Category	Survey	eDNA Survey Notes	eDNA Results	Aquatic Invasives
							visible. Adjacent to sheep grazing field, poaching by sheep evident. 500mm depth, turbidity present, 25% run, 55% glide, 20% pool, bank height 200cm, tree roots exposed, 50% silt, 5% sand, 10% gravel, 10% pebble, 5% cobble, 5% artificial, 15% overlying silt. 50-75% shading, straightened channel type. Low fish potential due to shading.			53.4367790, - 6.4721073	No WCC	
DD06	Drainage ditch	14,070	O 02215 44644	702157, 744667	53.442185, - 6.4622932	N/A	0.5-1m wide, water depth 5cm, bank height 3m, full of organic matter, orange-red tinge to water, ivy cover, sheltered by treeline and scrub, no flow, litter present, low ecological value.	Local (Higher Value)	no eDNA surveys carried out	N/A	N/A	None
DD07	Drainage ditch	14,360	O 02489 44598	702431, 744621	53.441719, - 6.4581858	N/A	Dry. 1m wide, bank height 2m, overgrown by ivy, damp, organic matter, low ecological value.	Local (Lower Value)	no eDNA surveys carried out	N/A	N/A	None
DD08	Drainage ditch	14,425	O 02566 44599	702508, 744622	53.441713, - 6.4570271	N/A	Watercourse flows south under road and into ditch on south side of road, 1m wide, moderate flow, bank height 1.5m high, covered by scrub further upstream, 5cm deep.	Local (Higher Value)	no eDNA surveys carried out	N/A	N/A	None
DD09	Drainage ditch	14,775	O 02922 44609	702864, 744632	53.441733, - 6.4516678	N/A	On north side of road, 1m wide, bank height 3m, dry, overgrown. On south side of road: 1.5m wide, bank height 3m, 10cm water, slow flow, organic material in water, flowing west, overshadowed by vegetation, low ecological value.	Local (Higher Value)	no eDNA surveys carried out	N/A	N/A	None
DD10	Drainage ditch	14,950	O 03051 44509	702993, 744532	53.440810, - 6.4497597	N/A	North side of road: 0.5m wide, organic matter, bank height 1m.	Local (Higher Value)	no eDNA surveys carried out	N/A	N/A	None
DD11	Drainage ditch	15,000	O 03114 44494	703056, 744517	53.440663, - 6.4488168	N/A	North side of road: 40cm wide, 1m bank height, dry, overgrown, hedgerow and grassy verge, low ecological value.	Local (Lower Value)	no eDNA surveys carried out	N/A	N/A	None
DD12	Drainage ditch	15,000	O 03114 44494	703056, 744517	53.440663, - 6.4488168	N/A	South side of road: 2m wide, 15cm deep, bank height 2m, overshadowed by vegetation, no flow, low - moderate ecological value.	Local (Higher Value)	no eDNA surveys carried out	N/A	N/A	None
DD13	Drainage ditch	15,125	O 03228 44468	703170, 744491	53.440404, - 6.4471096	N/A	Dry. 0.5m wide, bank height 0.5m, overgrown.	Local (Lower Value)	no eDNA surveys carried out	N/A	N/A	None
DD14	Drainage ditch	15,490	O 03522 44671	703464, 744694	53.442173, - 6.4426206	N/A	Dry. Approx 1m deep, 0.5m wide, filled with vegetation.	Local (Lower Value)	no eDNA surveys carried out	N/A	N/A	None
DD15	Drainage ditch	15,640	O 03609 44793	703551, 744816	53.443252, - 6.4412715	N/A	0.5m wide, overgrown m bank height 0.5m, dry, low ecological value. Same on opposite side of road.	Local (Lower Value)	no eDNA surveys carried out	N/A	N/A	None
DD16	Drainage ditch	15,780	O 03677 44919	703619, 744942	53.444370, - 6.4402070	N/A	Ditch runs behind hedgerow for most of this section of road but is present on the road side of the hedgerow in this mapped section. Completely dry, overgrown, grassy verge and hedgerow either side, 0.5m wide, 1m deep, low ecological value.	Local (Lower Value)	no eDNA surveys carried out	N/A	N/A	None
WB06	PINKEEN_010	16,100	O 03952 45039	703894, 745062	53.445394, - 6.4360298	Moderate	Viewed from field to north of watercourse however view there obstructed by scrub, accessed via garden south of it. 25cm water depth, 2m bank height, 2m average channel width but widens up to approx. 5m at points, 1.7m average wet width, predominantly silt substrate composition with pebble as well as small amounts of sand, gravel, cobble, boulder, and organic matter present, no turbidity, mainly glide with some pools and runs, heavily shaded by trees, scrub and herbaceous vegetation but some open sections, no floodplain connectivity, minimal undercutting present, no erosion seen, tree and ivy roots visible. Landowner said river name came from "Pinkeen" fish being present in it previously. Pinkeens are small fish such as minnow and stickleback. 15% run, 65% glide, 20% pool. 55% silt, 5% sand, 5% gravel, 20% pebble, 5% cobble, 5% boulder, 5% overlying silt, 50-75% shading. BRP in cracks in bridge in garden.	Local (Higher Value)	eDNA survey carried out	Sample taken 09.08.2023 Sample ID: CP1021WC6 Sample Location: 53.4454301, - 6.4359310	Three-spined stickleback, otter No WCC	None
DD17	Drainage ditch	16,225	O 04019 45043	703961, 745066	53.445417, - 6.4350204	N/A	Damp, 0.5m wide, bank height 1.5m, overgrown, overshadowed by hedgerow in parts, low ecological value.	Local (Higher Value)	no eDNA surveys carried out	N/A	N/A	None
WB07	PINKEEN_010	16,350	O 04095 44965	704027, 745069	53.445431, - 6.4340264	Moderate	Viewed from fields both north and south of crossing point Flowing south, 30cm water depth, 2.5m bank height, 3m channel width, 2.5m average wet width, predominantly silt substrate composition with some gravel, pebble, cobble and artificial substrate present too, organic matter present, no	Local (Higher Value)	eDNA survey carried out	Sample taken 09.08.2023 Sample ID: CP1021WC7	Three-spined stickleback No WCC	None

EIAR Naming Convention	Water Body Name	Approximate Chainage	Location NGR	XY Coordinates (ITM)	Lat and Long	WFD Status	Field Survey Visual Assessment	Ecological Sensitivity Category	Survey	eDNA Survey Notes	eDNA Results	Aquatic Invasives
							turbidity, mainly glide with a significant amount of pools and runs, heavily shaded by trees including conifer plantation, scrub and herbaceous vegetation with some aquatic vegetation present, no floodplain connectivity, slight undercutting present, no erosion seen, tree and ivy roots visible. Droppings, likely otter spraint, found on boulder within water so likely using this watercourse. See target note. 30% run, 5% riffle, 40% glide, 25% pool. 50% silt, 5% sand, 10% gravel, 10% pebble, 10% cobble, 5% artificial, 10% overlying silt. >75% shaded.			Sample Location: 53.4452923, - 6.4339589		
DD18	Drainage ditch	16,550	O 04226 45056	704168, 745079	53.445492, - 6.4319016	N/A	0.5m, bank height 2.5m, overgrown, dry, hedgerow on one side, grassy verge on other, low ecological value.	Local (Lower Value)	no eDNA surveys carried out	N/A	N/A	None
DD19	Drainage ditch	17,190	O 04847 44989	704789, 745012	53.444768, - 6.4225803	N/A	Dry. Overgrown, shallow, hedgerow adjacent, low ecological value.	Local (Lower Value)	no eDNA surveys carried out	N/A	N/A	None
DD20	Drainage ditch	17,400	O 05003 45089	704945, 745112	53.445635, - 6.4201998	N/A	Dry, 0.5m wide, 1m bank height, organic matter in ditch, hedgerow one side, grassy verge the other, low ecological value.	Local (Lower Value)	no eDNA surveys carried out	N/A	N/A	None
DD21	Drainage ditch	17,550	O 05084 45192	705026, 745215	53.446544, - 6.4189467	N/A	0.5m wide, 0.5m bank height, overgrown, grassy verge on road side, hedgerow on other side, low ecological value.	Local (Lower Value)	no eDNA surveys carried out	N/A	N/A	None
DD22	Drainage ditch	17,610	O 05121 45242	705063, 745265	53.446986, - 6.4183733	N/A	Ditch starts on south side of road, slightly damp, overgrown, 0.5m wide, bank height 0.5m, low ecological value. Ditch deepens slightly on north side of road, damp, overgrown, width 0.5m, bank height 0.5m, low ecological value.	Local (Lower Value)	no eDNA surveys carried out	N/A	N/A	None
WB08	WARD_020	17,750	O 05260 45264	705202, 745287	53.447156, - 6.4162745	Moderate	Is crossing red route but not really a watercourse, more of a damp drainage ditch but may run into Ward River. Ditch running along an arable field, is up to 2m deep in places, but 0.5m deep elsewhere, water approx. 15cm deep at points but much shallower and dry in some sections, 0.5m wide, very overgrown with bramble and scrub, heavily shaded, grassy verge on one side and scrub/hedgerow/treeline on other side, low ecological potential, but some sections of ditch within field could potentially be used by amphibians, no spawn visible during visit.	Local (Higher Value)	eDNA survey carried out	Attempted to sample on 09.08.2023 but could not as vegetation was too overgrown to access water. Had amphibian breeding potential when initially surveyed in February 2023.	Could not sample, vegetation too overgrown	None
DD23	Drainage ditch	17,860	O 05350 45321	705292, 745344	53.447650, - 6.4149013	N/A	0.5m wide, dry, heavily overgrown, hedgerow on one side, grassy verge on other, bank height 0.5m at deepest point, shallow dip on south side of road, also overgrown and dry. Low ecological value, no aquatic or amphibian potential.	Local (Lower Value)	no eDNA surveys carried out	N/A	N/A	None
WB09	WARD_010	18,200	O 05634 45422	305634, 245422	53.4485, - 6.4106	Poor	Watercourse is mapped on EPA mapper but was not visible during field surveys. Likely culverted under road at this point. Further north of the crossing point seemed to be linked to ditch along field. Further south of crossing point it links up with Watercourse 9b which then flows towards Watercourse 10. Ditch north of crossing point completely filled with vegetation and dry, 1m wide, 2m bank height, lined by cut back hedgerow and bare ground, no flow, filled with organic matter and cuttings, no ecological value. Ditch south of crossing.	Local (Lower Value)	no eDNA surveys carried out	N/A	N/A	None
WB10	WARD_010	18,200	O 05653 45452	705594, 745475	53.448766, - 6.4103043	Poor	Viewed from woodland north of crossing point 25cm water depth, 5m bank height, 3m channel width, 2.8m wet width, predominantly silt and pebble substrate composition with gravel and cobble substrate present too, some organic matter present, no turbidity, mainly glide with a significant amount of riffles and runs, moderate flow, heavily shaded by trees as within woodland, as well as scrub, no floodplain connectivity, undercutting present, low amounts of erosion seen, tree and ivy roots visible. 30% run, 25% riffle, 40% glide, 5% pool. 25% silt, 5% sand, 15% gravel, 25% pebble, 15% cobble, 5% artificial, 10% overlying silt. >75% shading Rhododendron recorded along watercourse. Bridge with BRP within watercourse	Local (Higher Value)	eDNA survey carried out	Sample taken 09.08.2023 Sample ID: CP1021WC9 Sample Location: 53.4490245, - 6.4098697	Three-spined stickleback No WCC	None



EIAR Naming Convention	Water Body Name	Approximate Chainage	Location NGR	XY Coordinates (ITM)	Lat and Long	WFD Status	Field Survey Visual Assessment	Ecological Sensitivity Category	Survey	eDNA Survey Notes	eDNA Results	Aquatic Invasives
DD24	Drainage ditch	18,800	O 06234 45523	706176, 745546	53.449287, -6.4015319	N/A	Narrow road, lined with hedges and trees, ditch on one side, 0.5m wide, 0.5m bank height, approx. 5cm water depth, filled with hedge cuttings, some litter, algae, no flow, some amphibian breeding potential.	Local (Higher Value)	no eDNA surveys carried out	N/A	N/A	None
WB11	WARD_010	19,240	O 06599 45597	706541, 745620	53.449878, -6.3960147	Poor	Route moved so now crossing here. Very overgrown so poor visibility and access. Assessed upstream at another end of this field. See habitat assessment point upstream. More of a ditch here anyway. 2m wide, shaded, banks 2m high heavily vegetated see treeline and grassy bund, slow flow, sandy/silty substrate 70%, small cobbles 30% substrate, aquatic vegetation, water mint, meadow sweet and water cress. Otter commute and amphibian potential.	Local (Higher Value)	eDNA survey carried out	Sample taken 09.08.2023 Sample ID: CP1021WC10 Sample Location: 53.4500112, -6.3947424	Three-spined stickleback No WCC	None
WB12	WARD_020	20,450	O 07317 44650	707259, 744673	53.441226, -6.3855333	Moderate	Land access needed. Crossed by route 3 times in 350m. Water depth 10cm, no turbidity, 0% run, 0% riffle, 25% glide, 75% pool, 0% torrent, 0% cascade, 0% slack, bank lined by trees, scrub, herbaceous vegetation, ivy creeping in, quite bare. 200cm bank height, no floodplain connectivity, no undercutting, no erosion, roots present, overhanging vegetation present (trees, scrub), 50% silt, 10% sand, 10% gravel, 5% pebble, 25% overlying silt. Channel width 350cm, wet width 150cm, >75% shading.	Local (Higher Value)	eDNA survey carried out (where 11a/b/c meet)	Meeting point: Sample taken 10.08.2023 Sample ID: CP1021WC11 Location: 53.4415688, -6.3820998	Results of sample at meeting point: Three-spined stickleback No WCC	None
WB13	WARD_020	20,650	O 07378 44541	707320, 744564	53.440235, -6.3846528	Moderate	Low flow, 2-3m wide, sheltered by overhanging vegetation, no amphibian potential but moderate ecological potential (commuting otter potential). Depth 30-40cm.	Local (Higher Value)	eDNA survey carried out (2 samples - at 11b and where 11a/b/c meet)	Sample taken 10.08.2023 Sample ID: CP1021WC11b Sample Location: 53.4404226, -6.3846911 Meeting point: Sample taken 10.08.2023 Sample ID: CP1021WC11 Location: 53.4415688, -6.3820998	Three-spined stickleback No WCC Results of sample at meeting point: Three-spined stickleback No WCC	None
WB14	WARD_020	20,850	O 07489 44351	707431, 744374	53.438505, -6.3830477	Moderate	Assessed on both sides of route, not a watercourse, a ditch with no ecological value. North of route description: Dry ditch, mostly inaccessible due to dense hedgerow. 2.5m drop, littered with leaves and little veg. Entirely shaded, 1.5m wide. No flow, no ecological potential. South of route description: Not visible, approx. 1.5m high, 1m wide, likely dry, completely covered by vegetation, likely contains runoff from field, low ecological value.	Local (Lower Value)	eDNA survey carried out (where 11a/b/c meet)	Meeting point: Sample taken 10.08.2023 Sample ID: CP1021WC11 Location: 53.4415688, -6.3820998	Results of sample at meeting point: Three-spined stickleback No WCC	None
DD25	Drainage ditch	21,300	O 07758 44011	707700, 744034	53.435396, -6.3791174	N/A	Approx 2-3m height, slightly damp, wet depth approx. 5cm, 1m wide, overshadowed by hedgerow, no flow visible, dumping present, organic matter, low ecological potential. Contains watercress and greater willowherb, duckweed, water starwort. Potential to be amphibian breeding habitat.	Local (Higher Value)	eDNA survey carried out	Attempted to sample on 10.08.2023 but could not as vegetation was too overgrown to access water. Had amphibian breeding potential	Could not sample, vegetation too overgrown	None

EIAR Naming Convention	Water Body Name	Approximate Chainage	Location NGR	XY Coordinates (ITM)	Lat and Long	WFD Status	Field Survey Visual Assessment	Ecological Sensitivity Category	Survey	eDNA Survey Notes	eDNA Results	Aquatic Invasives
										when initially surveyed in April 2023.		
DD26	Drainage ditch	21,550	O 07977 43950	707919, 743973	53.434804, - 6.3758440	N/A	2m wide, slow flow, bank height 1.5m on one side, 2.5m on the other, overshadowed by vegetation, ivy bank and scrub on banks, duckweed growing, low ecological potential, possible amphibian breeding site.	Local (Higher Value)	eDNA survey carried out	Sample taken 10.08.2023 Sample ID: CP1021D72 Sample Location: 53.4346970, - 6.3757832	Three-spined stickleback No WCC	None
DD27	Drainage ditch	21,720	O 08141 43941	708083, 743964	53.434689, - 6.3733803	N/A	Wet, bank height 4m, width 1m, no flow, covered by vegetation, no to low ecological value.	Local (Higher Value)	no eDNA surveys carried out	N/A	N/A	None
WB15	WARD_030	23,625	O 09528 44520	709469, 744543	53.439604, - 6.3523162	Moderate	Accessed via field south of red route crossing point. Is a wet drainage ditch. Culverted under road so not visible where route meets it. Further into field some visibility but very overgrown and little water. Is a drainage ditch for adjacent fields. 2.5m deep, water shallow but unable to give depth, completely overshadowed by hedgerow, trees, scrub and grasses, no flow visible, low ecological value.	Local (Higher Value)	no eDNA surveys carried out	N/A	N/A	None
WB16	WARD_030	24,600	O 10245 45153	710186, 745176	53.445141, - 6.3413086	Moderate	Route crosses here but watercourse is culverted under road at this section so no visibility here. Assessment carried out from section of watercourse in fields north of crossing point. 30cm water depth, 4m bank height, 4.5m channel width, 4m wet width, predominantly pebble, gravel and silt substrate present, no turbidity, mainly glide and runs, highly shaded by scrub, trees and grassy vegetation, no floodplain connectivity, low amount of undercutting present, no erosion seen, tree roots visible.	Local (Higher Value)	eDNA survey carried out	Sample taken 09.08.2023 Sample ID: CP1021WC13 Sample Location: 53.4490726, - 6.3437609	Three-spined stickleback No WCC	None
WB17	WARD_030	24,750	O 10370 45217	710311, 745240	53.445689, - 6.3394056	Moderate	Ditch running adjacent to field. Some flow out of outlet. 0.5m wide, 1m deep, 5cm water depth, vegetation within ditch, lined by grassy verge and recently cut hedgerow, dumping and organic matter present, low ecological value. Dries up further along. Cuts in under road where route runs through.	Local (Higher Value)	no eDNA surveys carried out	N/A	N/A	None
WB18	WARD_030	25,310	O 10840 45522	710781, 745545	53.448330, - 6.3322269	Moderate	2m wide, 1m bank height, water depth 5-10cm, slow flow, covered by vegetation, organic matter present, low ecological value. Cuts under road and comes out other side, lined by sheet metal in parts.	Local (Higher Value)	no eDNA surveys carried out	N/A	N/A	None
DD28	Drainage ditch	25,775	O 11253 45682	711194, 745705	53.449680, - 6.3259563	N/A	Ditches line road as well as hedgerows.	Local (Higher Value)	no eDNA surveys carried out	N/A	N/A	None
WB19	WARD_030	26,180	O 11650 45815	711591, 745838	53.450791, - 6.3199355	Moderate	water depth 15cm, no turbidity, 25% run, 20% riffle, 35% glide, 20% pool, 5% cascade, bank composition: Trees and scrub mainly on north side. Mostly herbaceous to south, Brambles and hawthorn and other scrub species growing into it. Hair algae within anchored to ground. 200cm bank height, Minimal undercutting visible, likely more, some seen, erosion not visible but is possible, scrub roots visible, lots of overhanging vegetation (trees, scrub), 15% silt, 10% gravel, 35% pebble, 15% cobble, 10% boulder, 5% artificial, 10% overlying silt, 150cm channel and wet width, >75% shading, over deepened.	Local (Higher Value)	eDNA survey carried out	Sample taken 10.08.2023 Sample ID: CP1021WC16 Sample Location: 53.4508532, - 6.3198829	Three-spined stickleback No WCC	None
DD29	Drainage ditch	26,925	O 12342 45762	712283, 745785	53.450168, - 6.3095419	N/A	Ditches and hedgerows line road, narrow road and deep ditches. 0.5m wide, filled with vegetation, shaded by hedgerow, damp, no to low ecological potential.	Local (Higher Value)	no eDNA surveys carried out	N/A	N/A	None
DD30	Drainage ditch	27,460	O 12618 45377	712559, 745400	53.446651, - 6.3055267	N/A	Ditches on either side of road. 0.5m wide, 1m deep, mainly dry, damp in places, lined by hedgerows and grassy verges. Vegetation growing within ditches, organic matter present, low ecological value. Draining adjacent fields.	Local (Lower Value)	no eDNA surveys carried out	N/A	N/A	None
WB20	WARD_030	28,350	O 13141 44724	713082, 744747	53.440674, - 6.2978924	Moderate	No access due to DAA land. Watercourse running through fields, cuts under road. Flowing north, 1.5m wide, bank 2.5m	Local (Higher Value)	no eDNA surveys carried out	N/A	N/A	None

EIAR Naming Convention	Water Body Name	Approximate Chainage	Location NGR	XY Coordinates (ITM)	Lat and Long	WFD Status	Field Survey Visual Assessment	Ecological Sensitivity Category	Survey	eDNA Survey Notes	eDNA Results	Aquatic Invasives
							high, 15cm deep from our view, moderate flow, vegetation within water, lined by grassy bank and scrub, draining adjacent fields, low to moderate ecological potential. Continues on from across road after cutting under road. Cannot access. Flooded field adjacent to it.					
WB21	WARD_030	29,280	O 14066 44606	714007, 744629	53.439415, - 6.2840201	Moderate	Heavily vegetated, low water level >5cm, overhanging vegetation, lined by scrub. 0.5m wide, 1m bank height. Could not access to survey thoroughly, no permission.	Local (Lower Value)	no eDNA surveys carried out	N/A	N/A	None
DD31	Drainage ditch	30,500	O 15276 44526	715217, 744549	53.438434, - 6.2658477	N/A	Both sides of road, nearly dry, few wet patches, 40cm wide, grassy verge either side.	Local (Lower Value)	no eDNA surveys carried out	N/A	N/A	None
DD32	Drainage ditch	31,040	O 15747 44696	715688, 744719	53.439858, - 6.2587003	N/A	both sides of road, >0.5m wide, vegetated banks.	Local (Higher Value)	no eDNA surveys carried out	N/A	N/A	None
WB22	SLUICE_010	31,780	O 16415 44423	716356, 744446	53.437259, - 6.2487527	Poor	Surveyed downstream but not at crossing point (looks to be culverted under road). Downstream description: width 1m, depth >0.5m, slow current, moderate pollution (on golf course), Majority in woodland, shaded by vegetation, juvenile stickleback, fine gravel substrate so poor for spawning, approx. 50cm wet width, sand gravel pebble with small number of cobbles. Stepped at artificial pond so would impede fish movement. It was 80% silt, 5% overlying silt and 5% sand. 20% pool and 80% glide. It was 95% shaded with bramble, ash, hawthorn, winter heliotrope, nettle and male fern.	Local (Higher Value)	eDNA survey carried out	Sample taken 10.08.2023 Sample ID: CP1021WC23 Sample Location: 53.4376308, - 6.2364498	European eel, three-spined stickleback No WCC	None
DD33	Drainage ditch	32,500	O 17094 44413	717035, 744436	53.437019, - 6.2385431	N/A	South ditch definitely wet, north ditch couldn't be seen into, couldn't survey due to H&S, >0.5m wide, grassy verges, low ecological value.	Local (Higher Value)	no eDNA surveys carried out	N/A	N/A	None
DD34	Drainage ditch	35,150	O 19201 43400	719142, 743424	53.427449, - 6.2072339	N/A	1m wide, low flow, overshadowed by vegetation, bank height 2m, low ecological value, water depth 15cm.	Local (Higher Value)	no eDNA surveys carried out	N/A	N/A	None
DD35	Drainage ditch	35,950	O 18860 42755	718801, 742779	53.421732, - 6.2126050	N/A	Low fish potential. Low flow, 30cm depth, 2.5m wide, muddy substrate with occasional stones, manmade debris in there and dumped rubbish, some macrophytic growth. Some potential for small fish and potentially breeding habitat for amphibians.	Local (Higher Value)	eDNA survey carried out	Attempted to sample on 10.08.2023 but could not as access to land was not granted. Had amphibian breeding potential and some potential for small fish species when initially surveyed in June 2023.	Could not sample, no access	None
WB23	MAYNE_010	36,825	O 19003 42112	718944, 742136	53.415925, - 6.2106973	Poor	Viewed from field to north of watercourse. 20cm water depth, 2.5m bank height, 2m average channel width, 1.75m average wet width, predominantly sand, silt and pebble substrate composition, no turbidity, mainly glide with some pools and runs, highly shaded by trees, scrub and herbaceous vegetation, no floodplain connectivity, undercutting present, slight erosion seen, roots visible. Winter heliotrope present on banks.	Local (Higher Value)	eDNA survey carried out	Sample taken 10.08.2023 Sample ID: CP1021WC24 Sample Location: 53.4156820, - 6.2089129	No WCC	None


1.2 Photographs of Water Bodies Within Study Area


Table 2: Photographs of Water Bodies Within the Study Area (Descriptions of Each Waterbody is Provided in Table 1)


EIAR Naming Convention	Waterbody Name	
WB01	TOLKA_020	
WB02	DUNBOYNE STREAM_010	

EIAR Naming Convention	Waterbody Name	
DD01	Drainage ditch	
DD02	Drainage ditch	

EIAR Naming Convention	Waterbody Name	
DD03	Drainage ditch	
DD04	Drainage ditch	Not available.
DD05	Drainage ditch	Not available.



EIAR Naming Convention	Waterbody Name	
WB03	DUNBOYNE STREAM_010	




EIAR Naming Convention	Waterbody Name	
WB04	TOLKA_020	 The image block contains four photographs of a stream. The top-left photo shows a stream flowing through a wooded area with dense vegetation and trees. The top-right photo shows a stream flowing through a wooded area with dense vegetation and trees. The bottom-left photo shows a stream flowing through a wooded area with dense vegetation and trees. The bottom-right photo shows a stream flowing through a wooded area with dense vegetation and trees.



EIAR Naming Convention	Waterbody Name	
WB05	TOLKA_020	 The image block contains four photographs arranged in a 2x2 grid, showing different views of a river or stream. The top-left photo shows a riverbank with a large, moss-covered log in the foreground and trees reflected in the water. The top-right photo shows a river flowing through a dense wooded area with bare trees. The bottom-left photo shows a close-up view of a riverbank with a large tree trunk and dense foliage. The bottom-right photo shows a river flowing through a wooded area with a muddy bank in the foreground.

EIAR Naming Convention	Waterbody Name		
DD06	Drainage ditch		
DD07	Drainage ditch		



EIAR Naming Convention	Waterbody Name		
DD08	Drainage ditch		
DD09	Drainage ditch		

EIAR Naming Convention	Waterbody Name	
DD10	Drainage ditch	 A photograph showing a narrow drainage ditch running alongside a paved road. The ditch is filled with water and surrounded by dense vegetation, including a tall wooden fence post on the right side. The background shows trees and a clear sky.
DD11	Drainage ditch	 A photograph showing a drainage ditch running alongside a paved road. The ditch is filled with water and surrounded by dense vegetation, including a tall wooden fence post on the right side. The background shows trees and a clear sky.




EIAR Naming Convention	Waterbody Name	
DD12	Drainage ditch	
DD13	Drainage ditch	
DD14	Drainage ditch	

EIAR Naming Convention	Waterbody Name	
DD15	Drainage ditch	
DD16	Drainage ditch	

EIAR Naming Convention	Waterbody Name	
WB06	PINKEEN_010	 The image block contains three photographs of a waterway. The top-left photo shows a stone bridge with two arches crossing a stream, with dense green and brown vegetation on the banks. The top-right photo shows a narrow stream flowing through a dense thicket of tall grasses and reeds. The bottom photo shows a stream flowing through a grassy area with a large, tangled mass of bare, brown branches and some green foliage on the right bank.




EiAR Naming Convention	Waterbody Name	
DD17	Drainage ditch	
WB07	PINKEEN_010	


EIAR Naming Convention	Waterbody Name		
			
DD18	Drainage ditch		


EIAR Naming Convention	Waterbody Name	
DD19	Drainage ditch	
DD20	Drainage ditch	
DD21	Drainage ditch	

EIAR Naming Convention	Waterbody Name	
DD22	Drainage ditch	 A photograph showing a drainage ditch with grassy banks. The ditch is filled with water and surrounded by tall grasses and some trees in the background. The scene is outdoors, likely in a rural or agricultural area.




EIAR Naming Convention	Waterbody Name		
WB08	WARD_020		
			






EIAR Naming Convention	Waterbody Name		
DD23	Drainage ditch		
			

EIAR Naming Convention	Waterbody Name	
WB09	WARD_010	
WB10	WARD_010	

EIAR Naming Convention	Waterbody Name	
		





EIAR Naming Convention	Waterbody Name		
DD24	Drainage ditch		
WB11	WARD_010		
			

EIAR Naming Convention	Waterbody Name		
WB12	WARD_020		 


EIAR Naming Convention	Waterbody Name		
WB13	WARD_020		
WB14	WARD_020		
DD25	Drainage ditch		

EIAR Naming Convention	Waterbody Name		
DD26	Drainage ditch		
DD27	Drainage ditch		

EIAR Naming Convention	Waterbody Name		
WB15	WARD_030	 A photograph showing a paved road with a yellow dashed line on the right side, bordered by a tall, dense hedge. The sky is overcast.	 A photograph of a grassy field with several trees, including a prominent ivy-covered tree trunk in the foreground. The sky is cloudy.
		 A photograph of a grassy field with a large, bare tree in the background. The sky is cloudy.	 A photograph of a grassy field with a hedge in the background. The sky is blue with scattered clouds.



EIAR Naming Convention	Waterbody Name		
WB16	WARD_030	 	 

EIAR Naming Convention	Waterbody Name	
WB17	WARD_030	
WB18	WARD_030	

EIAR Naming Convention	Waterbody Name	
DD28	Drainage ditch	
WB19	WARD_030	

EIAR Naming Convention	Waterbody Name		
DD29	Drainage ditch		
DD30	Drainage ditch		
			

EIAR Naming Convention	Waterbody Name	
WB20	WARD_030	
WB21	WARD_030	
DD31	Drainage ditch	

EIAR Naming Convention	Waterbody Name	
DD32	Drainage ditch	
WB22	SLUICE_010	

EIAR Naming Convention	Waterbody Name	
		
DD33	Drainage ditch	

EIAR Naming Convention	Waterbody Name		
DD34	Drainage ditch		
DD35	Drainage ditch	 	

EIAR Naming Convention	Waterbody Name	
WB23	MAYNE_010	

1.3 eDNA Sample Results

Table 3: Results of the eDNA Sampling Surveys

Unique Sample ID	Date	Co-ordinates	EIAR Naming Convention (WC Spreadsheet)	Notes	eDNA Results
CP1021WC3	09/08/2023	53.4269009, -6.4901190	WB03	N/A	Minnow, three-spined stickleback, <i>Columbidae</i> (pigeon, dove spp.), red deer, brown rat
CP1021WC4	09/08/2023	53.4308718, -6.4799618	WB04	N/A	Three-spined stickleback, brown rat
CP1021WC5	09/08/2023	53.4367790, -6.4721073	WB05	N/A	Minnow, stone loach, three-spined stickleback, trout, <i>Columbidae</i> (pigeon, dove spp.), corvid spp., thrush spp. (blackbird, thrush, fieldfare), lamprey spp. (river or brook), brown rat
CP1021WC6	09/08/2023	53.4454301, -6.4359310	WB06	N/A	Three-spined stickleback, <i>Columbidae</i> (pigeon, dove spp.), otter, rabbit
CP1021WC7	09/08/2023	53.4452923, -6.4339589	WB07	N/A	Three-spined stickleback, <i>anatidae</i> (ducks, geese, swan spp.), thrush spp. (blackbird, thrush, fieldfare)
CP1021WC9	09/08/2023	53.4490245, -6.4098697	WB10	N/A	Three-spined stickleback
CP1021WC10	09/08/2023	53.4500112, -6.3947424	WB11	N/A	Three-spined stickleback
CP1021WC11	10/08/2023	53.4415688, -6.3820998	WB12/WB13/WB14	Not in watercourse spreadsheet, is point where 3 crossing points meet. Marked as watercourse 11 on mapper.	Three-spined stickleback, <i>Columbidae</i> (pigeon, dove spp.), moorhen, rabbit, brown rat
CP1021WC11b	10/08/2023	53.4404226, -6.3846911	WB13	One of the crossing points for watercourse 11	Three-spined stickleback, <i>Columbidae</i> (pigeon, dove spp.), corvid spp., robin, tit spp., warbler spp., wren, song thrush, thrush spp. (blackbird, thrush, fieldfare), brown rat

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Unique Sample ID	Date	Co-ordinates	EIAR Naming Convention (WC Spreadsheet)	Notes	eDNA Results
CP1021WC13	09/08/2023	53.4490726, -6.3437609	WB16	N/A	Three-spined stickleback, blackcap, brown rat
CP1021WC16	10/08/2023	53.4508532, -6.3198829	WB19	N/A	Three-spined stickleback, <i>Columbidae</i> (pigeon, dove spp.)
CP1021WC23	10/08/2023	53.4376308, -6.2364498	WB22	N/A	European eel, three-spined stickleback, <i>anatidae</i> (ducks, geese, swan spp.), egret
CP1021WC24	10/08/2023	53.4156820, -6.2089129	WB23	N/A	<i>Columbidae</i> (pigeon, dove spp.)
CP1021D72	10/08/2023	53.4346970, -6.3757832	DD26	Is a ditch	Three-spined stickleback