My Name is Terri Gray and I am a resident of Clonshaugh and speak on behalf 2019 the residents.

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I would request that An Bord Pleanala review the selection process used to determine Clonshaugh as the designated site and the Southern corridor as the designated pipeline. This part of the project needs to be evaluated closely by the Bord as this the criteria used is not balanced. It is weighted and favours the southern route simply because it is shorter and more cost effective with little regard to impact it will have on a heavily populated area or the special area of conservation.

Some points

- 1. The criteria set out in the earlier Strategic Environmental Assessment (SEA) (Phase 1) was changed:
 - The requirement to assess 'neighbouring zoning', was removed. This
 would have made it difficult to get the southern pipeline corridor included
 as it runs mainly though light industrial zoned lands and adjacent 'highly
 densely populated areas'.

• Also removed was the requirement to favour state owned land. (Matrix attached)

- 2. In the Alternative Site Assessment (ASA) it states that 'the preference always has been to avoid impact rather than mitigate' (Page 118 of Alternative Site Assessment Phase 2) when assessing routes and sites in the methodology. There were 22 sites mentioned in the original report and that was reduced to nine in the next phase, but no details are given as to how or why sites were dismissed. If Irish Water were truly using avoidance the southern outfall through the Baldoyles Special Area of Conservation (SAC) would have been ruled out early on. The northern outfall does not run through any Special Area of Conservation (SAC).
- 3. Baldoyle SAC is not identified on the study area map (Page 15 Preliminary Screening Outcome Report) it was simply overlooked
- 4. The southern outfall was never in the 2005 reports. There was an amendment made to change the wording of the outfall to the North Dublin Coast.
- 5. The iterative process appears deeply flawed in the PHASE Two; sites are considered and marked negatively/favourably based on the pipeline. Therefore, in theory any sites on the southern corridor were always staying to the end as the criteria for assessment was completely biased towards the northern routes being 'least advantageous'. The assessment of the sites based on the pipeline corridor they are situated on is deeply flawed. The southern corridor is shorter, and this is used as a criteria. This criteria based on the shorter distance appears to used more than once like double counting which is flawed and not a fair comparison, despite the ecological significance of the southern outfall pipe which seems to be have been overlooked.
- 6. There is bias present in the comparison of the southern and northern outfalls. The scale of both maps used is different. The northern outfall is shown covering a

much larger area (this was noted in the Landscape and visual report). This means it captures far more 'sites' of cultural heritage. This is significant as these are then used in the criteria for assessment. The southern looks far less intrusive on cultural criteria, but it is not a fair comparison. It demonstrates that the mapping comparison is flawed.

- Pipeline section C doesn't appear to have been considered in the schematics for the northern routes. These impacts less then Section D, which would have left Clonshaugh and Cloghran not looking as favourable, as route D passes close to Malahide Estuary SAC.
- 8. There are clear errors in how the sites are compared in terms of the routes corridors. The Landscape & Visual reports note numerous sections of pipeline corridors effecting designated landscapes and demesne but this is not reflected in the Assessment Matrix. It also downplays the location of hotels close to Clonshaugh and its significance use with tourists travelling to and from the airport.
- 9. It does not appear that any attempt was made to tweak the corridors to avoid monuments, particularly Dunsloughy Castle, this is important as it is used to negatively mark down the northern routes. Making southern route look more favourable.

Irish Water has advised that the 'Clonshaugh site option is better from an environmental, technical and cost perspective' yet the alternative site selection overlooked a vital special area of conservation, dismissed the heavily population location on the second phase. It would appear to me the study was done to fit around an already pre-determined corridor and site. Therefore the site selection process is flawed and the consultation process meaningless. It would appear that the site was already selected despite a vast number of objections received by residents, businesses and organisations. I would urge the inspector to review the selection process from phase 1 – phase 4 and ensure the comparisons used are correct and that the 'neighbouring zone' and special area of conservation are included as this will change the outcome.

Phase 2 Alternative Siles Assessment and Route Selection - Matrix Assessment

First Reration on Matrix - List of Sub-Criteria assigned a 'green' colour

Ref	Environmental Criterie	Annabrook	Beldurgen	Clonehegh	Coskulown	Clogivan	Newtonneorout	Pathertan	Bascarstown	Tyrneleiown Little
1.0	Cultural Haritage	Annebreok	Beldurgen	Clonshagh	Cookstown	Cloghran	Newtowncordult	Antherian	Beauerstewn	Tyrrelatewn Little
1.1	Culturel Horitago -Bitos				and the second sec			的 中心 化化学		
1.1.1	Potential to impact (direct/indirect) on National Monuments (designated sites)	Ofrect: Hone - Audirect: Hone	Direct: None Indirect: None	Direct: None Indirect; None	Direct: None - Indirect: None	Direct: None Indirect: None	Olect: None Indirect: None	Direct: None Ballmot: None	Direct: Note Indirect: Note	Direct: None Indirect: One moderate negative (DU005-038)
1.1.2	Potential to impact (directindirect) on himra	Direct: None Indirect: One imperceptible negative (Gracediesu DU007-015)	Direct: None Indirect: One Imperceptible negative (DU007-016)	Direct: None Indirect: Three Imperceptible negative (DU015-056, 057 & 059)	Direct: None Indirect: One slight negative (DU007-016)	Direct: None Indirect: One slight negative (DU014-010)	Direct: None Indirect: None	Direct: None Indirect: None	Direct: None Indirect: None	Direct: None Indirect: Two Imperceptible negative (DU008-057, 055)
1.1.3	Polential to Impeci (direct/indirect) on RPS/NBAH (designated sites)	Olrect; Nane Indirect: None	Direct: None Indirect: One Imperceptible negative (RPS 323)	Direct: None Indirect: One Imperceptible negative (RPS 792)	Direct: None Indirect: One slight negative (RPS 323)	Direct: None Indirect: One slight regative (RPS 605)	Ofrect: None Indirect: None	Direct: None Indirect: One moderate negative (RPS 246), one imperceptible negative (RPS 283)	Direct: None - Indirect; Hone	Direct: None Indirect: One moderate negative (RPS 245)
1.1.4	Potential to impact (direct/indirect) on CH sites (praviously unrecorded sites)	Direct: None Indirect: Four moderale regative (CH 26, 105,106,108)	Direct: None Indirect: Two, one moderate negative (CH 30), one slight negative (CH 32)	Direct: None Indirect: Three imperceptible negative (CH 56, 65, 62)	Direct: None Indirect: Two slight negative (CH 30, CH 32)	Direct: None Indirect: None	Direct: None Indirect: Four imperceptible negative (CH 13, 14, 16, 17) & three slight negative (CH 11, 12, 24)		Direct: Three profound negative (CH 38, 39, 40) Indirect: Two moderate negative (CH 41, 42), one slight negative (CH 43), one imperceptible negative (CH 48)	Direct: None Indirect: One slight negative (CH 3) & one imperceptible negative (CH 2)
1.1.5	Potential to Impact (direct) on water courses and environs (areas of archaeological potential)		One (potentially significant)	None State party of	Three (potentially significant)	One (potentially significant)	One (potentially significant)	One (potentially significant)	Two (potentially significant)	None
1.1.6	Potential to impact (direct/indirect) on historic designed landscapes	Direct: None Indirect: One slight negative (Woodpark))	Direct: None Indirect: One slight negative (Newlawn)	Direct: None Indirect: Three slight negative (Spring Hill, Lower Middletown, Upper Middletown)	Direct: None Indirect: One slight negative (Skiddo House)	Direct: None Indirect: None	Oirect: None Indirect: None	Direct: None Indirect: None	Direct: None Indirect: One slight negative - Saucerstown	Direct: None Indirect: One slight negative (Tyrrelstown House)
1.1.7	Potential to impact (direct) on lownland boundaries (cultural heritage significance)	Two moderate negative	None	One moderals negative	Two moderate negative	One moderate negative	One moderate negative	Two moderate negative	Two moderate negative	Two moderate negative
1.2	Cultural Haritage -Pipelines									Content of the State
121	Potential to Impact on RMPs	32 RMP sites located within corridor	32 RMP sites located within corridor	20 PMP siles localed within comdor	32 RMP sites located within corridor	20 RMP sites located within corridor	32 RMP sites located within corridor	32 RMP sites localed within corridor	32RMP siles located within RMP corridor	32 RMP sites located within corridor
1.2.2	Potential to impact on National Monuments	One national monument located within corridor	One national monument located within contidor	No national monuments located within consider	One national monument located within corridor	No national monuments located within corridor	One national monument located within corridor	No national monuments located within corridor	No national monuments located within corridor	One national monument located within corridor
1.2.3	Potential to impact on RPS/HAH	27 RPS and 12 NIAH sites localed within corridor	27 RPS and 12 NIAH sites located within corridor	15 RPS and 6 MAH sites located within comdor	27 RPS and 12 NIAH sites located within corridor	16 RPS and 7 NIAH sites located within corridor	27 RPS and 12 NIAH sites located within corridor	35 RPS and 19 NIAH sites located within corridor	35 RPS and 19 NIAH sites located within corridor	27 RPS and 12 NIAH sites located within corridor
1.2.4	Potential to Impect on CH sites	27 CH sites located within corridor	27 CH sites located within corridor	9 CH altes located within corridor	27 CH sites located within corridor	11 CH sites located within corridor	27 CH sites located within corridor	28 CH sites located within corridor	28 CH sites located within corridor	27 CH sites located within corridor
1.2.5	potential to impact on historic designed landscapes	22 demesne landscapes located within conidor	22 demesne landscapes located within corridor	14 demesne landscapes loosted with constar	22 demesne landscapes localed within conidor	15 demesne landscapes located withit corridor	n 22 demesne landscapes located within corridor	23 demesne landscapes localed within corridor	23 demesne landscapes located within corridor	22 demesne landscapes located within corridor
1,3	Caltural Haritage - Marine Cuttalle	to the second of the				and the second second				
1.3.1	Potential to impect on RMPs	11 FIMP sites localed within outfall area	11 RMP sites located within outfall area	No RMP also located within outlall area	11 RMP sites located within outfall area	No RMP size located within outfall - area	11 RMP siles located within outfall area	11 RMP sites located within outfall ares	11 RMP sites located within outfall area	11 RMP sites located within outfall area.
1.3.3	Potential to impact on RPS/NAH	29 RPS/NIAH sites located within corridor	29 RPS/NIAH sites located within corridor	No RPS/NEAH sites located within contidor	29 RPS/NIAH sites located within corridor	No RPS/MAH siles located within contdor	29 RPS/NIAH sites located within corridor	29 RPS/NIAH sites located within corridor	29 RPS/NIAH sites located within corridor	29 RPS/NIAH sites located within corridor
1.3.4	Potential to impact on CH sites	12 CH siles located within outfall area	12 CH sites located within outfall area	1 CH size broased within outfail area	12 CH sites located within outfall area	1 CH site located within outlall area	12 CH sites located within outfall area	12 CH sites located within outlall area	12 CH sites located within outfall area	12 CH sites located within outfall area
1.3.5	Recorded shipwreck sites	40 shipwracks in and within vicinity of the outfail area	40 shipwracks in and within vicinity of the outfall area	27 shipwrecks in and within vicinity of the outfall area	40 shipwrecks in and within vicinity of the outfall area	27 shipwradia in and within vicinity of the outfail area.	40 shipwrecks in and within vicinity of the outfail area	40 shipwrecks in and within vicinity of the outfall area	40 shipwrecks in and within vicinity of the outfall area	40 shipwrecks in and within vicinity of the outfall area

Alternative Sites Assessment and Route Selection Report

2.0	Landacape & Vieual	Annebrook	Seidurgan	Clanehegh	Cookstown	Cloghran	Newteencorduft	Retherton	Reuperstown	Tyrreletown Little
21	Landscope & Visual - Sites	的复数 化合同合合合							Contraction (1)	
2,1,1	Potential to impact on views from scenic routes (designation in Fingal CDP)	Moderate - scenic views located 1.2km NE and 1.3km SW have no visibility but those 2.7km north within HSL zone have elevated clear view lowards site	Significant - one 0.5km N with clear views and one 0.5km SE also with clear views - also distant elevated views from scenic routes >5km N	Imperceptible - nearest scenic route 4km E and associated with coast	Significant - one 0.5km E with relatively clear views towards the site alforded from here - also distant elevated views from acenic routes >Skm N	Imperceptible - nearest scenic route Ston NE and associated with coast	Significant - one 0.5km N and one 0.7km NW - clear views available from the nearest of these also longer distance (3km) elevated views from scenic routes to NW	Moderate - one located 0.5km S and although likely to be associated with coestal views it does allord an elevated but brief glimpse of the site in the opposite direction	Significant - One 0.5km 5 with occasional open and elevated views over site and another 0.8km W with no clear views	Significant - One 1.6km N with clear views over alle - two 2km NW and one 1.7km S with fleeting views over site
2.1.2	Potential to impact on areas of "Highly Sensitive Landscape" (designation in Fingal CDP)	Moderate - HSL located 1.2km N elevated above with some intervisibility	Moderate - HSL located 1.5km N with some intervisibility from higher ground within the HSL	Slight - one 1,3km NE with limited intervisibility	Slight - HSL located 1,6km N with limited intervisibility	Slight - one 1km E with limited intervisibility	Slight - elevated HSL zone located 0.7km NW but separated by M1 motorway	Slight - extensive coastal one located only 0.5km S but within a different landscape and viewing context	Imperceptible - one 2.5km E associated with the coastal landscape	Significant - an extensive one on higher ground 0.5km N of site with strong intervisibility and similar character
2.1.5	Potential to impact on views from settlements	Imperceptible - Crossrouds authement (Bellytoghill) 2.5km W has no view of site	Moderate - Crossroads settlement (Ballyboghill) 1.5km NW and essociated dwellings stretch southwards along R108 closer to the stile (11m)	Slight - Densely populated Nth Dublin suburb of Damdale <1km S, other estates 1km N and E - No clear views afforded toward the aite from any of these	(Ballyboghlil) 1.7km NW and	Moderate - small estate settlement of Ballymacartie 1km SE also clear views available from an estate adjacent to the east of the M1/Swords junction		Significant - sizeable coastal settlement of Rush 0,8km E	Significant - settlement of Swords 1kr SE - extensive new housing development school and community centre at outskirts	Slight - settlement of Lusk 1.5km SW and Rush 2km SE but views not readily available from either
2.1.7	Potential to impact on views from dwellings / local roads	Moderate -A number of dwellings lining local roads < 0.5km E and W and regional road 0.6km S	Slight - Numerous dwellings lining regional road (R108) 0.5km W plus a farmstead 0.3km SE but the site refinement creates a generous buffer	Moderate - some rural dwellings lining local roads to the north and east (houses otherwise mainly clustered in estates)	Slight - Numerous dwellings lining regional road (R108) 0.3km W but the site refinement creates a generous buffer	Moderate - several house clusters 0.5km S at Glebe and <0.5km to the E at Greenwood	Moderate - several dwellings lining local road 0.5km N and old N1 0.5km E	Moderate - several dense clusters of houses at Kingtown 0.5km W, Haytown 0.5km N and Whitestown 0.5km S	Significant - a number of houses on local road 0.5km N have clear views across river and houses linking regiona road 0.5km S have elevated views over site	Slight - site surrounded by local roads at distances of 0.3 to 0.7 km but other than for several clusters there is not a high stocking of dwellings
2.1.8	Potential to impact on views from M1 motorway	Slight - M1 passes 0.8km E with possible glimpse of site at apex of bend -view alforded from local road overpass 1km NE	Imperceptible - M1 passes 2.5km E end views of the achience would not be efforcted	Slight - M1 passes 1km W - clear views only alforded from highest point of M1/M50 interchange	Imperceptible - M1 passes 3km E and views of the scheme would not be afforded	Moderate - M1 in minor section of cut with some screen planting - clear elevated view afforded from overpasses N and S	Significant - site is located directly adjacent to E of M1 motorway and littered views of site through roadside screening will be alforded	Imperceptible - M1 Skm W	Imperceptible - M1 2,5km E	imperceptible - M1 4.Skm W
2.1.9	Potential to impact on views from Dublin - Belfast rall line	Imperceptible - rail line Skin E	Imperceptible - rail line Give E	Imperceptible - rail line 3.5km E	Imperceptible - rail line Gian E	Imperceptible - rail line 3km E	Imperceptible - rall line 3km E	Significant - rail line lies directly adjacent to W	Imperceptible - rail line Gam E	Significant - rail line 0.6km E
2.1.10	Potential to impact on views from other major roads (national or regional roads)	Moderate - regional road (R129) 0.6km S gimpses may be allorded and has limited but elevated view from R129 overpass of M1 2km SE	Significant - Regional roads R108 and R129 bound the site to the W and N respectively 4 0.5km - dear views alforded from some sections and site access from R129	and R107 regional road 1km E - neither has clear views towards site	Significant - R108 regional road 0.3km W and clear views afforded from some sections		Significant - slightly elevated R132 regional road (dd N1) 0.5km E alfords occasional clear views over site	Significant - R128 regional road 0.5km S with clear views from some sections	Moderate - R108 0.8km W and R125 O.Skm 5 Seeting views available from both	Moderate - R127 regional road on elevated ground 1.3km W and R128 regional road 1.7km S - clear views towards site not readily available from either
2.1.11	Potential to impact on arrival views from Dublin Airport including serial approach and vehicular agress	emperopailide - airport 10km 3	imperceptible - eirport 8.5km 5	Significant - airport 2km NW - clear views not allorded towards the site at ground level but it would be a prominent feature of the low level landing approach from the E	imperceptible - algorit 7.5km S	Significant - eirport 1.5km SW - clear views afforded lowards the site from eleveled M1/eirport access road interchange and it would be a prominent feature of the low level landing approach from the E	Imperceptile - airport 10km 5	Imperceptible - alignet >10km SW	Slight - airport 5km S but views likely to be available on Slight low landing approach from the E	Ingecoepilitie - alignet >10km SW
2.1.13	Potential to Impact on historic designed landscapes	Moderate - Woodpark demesne 0.15km NE	Imperceptible - No demesne Indecapes within or negr this site	Moderate - appears to be a number of current or former demesne landscapes including Abbeyville estate in close proximity to the site	Moderate - Skidoo house sumounded to the north and east by the site at the minimum setback (0.3km)	Slight - Abbeyville Estate 1km E	Imperceptible - No demosrer Iendecapes within or near this site	Slight - Hayslown Demesne 0.3km NI	E Moderate - Saucerstown Demesne 0.2km W	Imperceptible - No demosne Iandicapes within or near this ste

2.2	Landecepe & Viewei - Pipelines		Stream Land	Carlo and a start				o Canada an	the state of the second	
2.2.10	Polential lo disrupt landscape structure (treelines / hodgerows / field pattern etc.)	pipeline consider section but with some hadgerow field patients D = Mokrate - Andiscape is reliatively unstructured and irregular along this pipeline controls section but with some hedgerow field patients F - Significant - Ihis controls reaction passes almost entrely through fields and hedgerows G - Sight - Moderate - Innotcape is relientery unstructured and open along	A - Moderale - landscape is relatively unstructured and irregular along this oplene controls section but with some hedgerow liaid patterns D - Moderate - landscape is relatively unstructured and irregular along this objective control section but with some hedgerow liaid patterns F - Significant - this controls section passes almost enricely through fields and hedgerows G - Sight - Moderate - landscape is alway unstructured and open along this pipeline control section but with some hedgerow lield patterns	unsequented and impulse along this popeline conducts, esclar, but with some hedgerow linkt patients. B Moderne - landicape is instantive unsequent along along this popeline conduct section but with some hedgerow field patients. G - Slight Moderne - landicape is materialized unsequent and appendix	F - Significant - this corridor section passes almost entirely through fields and hedgerows G - Slight - Moderate - landscape is relatively unstructured and open along	plpsine conduct section Dut with some heatprove field patterns. B- Modarate - Lendecape is reliatively unstructured and impute along this pipeline conduct section but with some heatprove field patterns. G - Sight - Modarate - lendecape is relatively unstructured and goes along	A - Moderate - landscape is relatively unstructured and irregular along this peptiene corridor section but with some hedgerow field patterns D - Moderate - landscape is relatively unstructured and irregular along this pipeline corridor section but with some hedgerow tield patterns F - Significant - this corridor section passes almost entirely through fields and hedgerows. G - Sight - Moderate - landscape is relatively unstructured and open along this pipeline corridor section but with some hedgerow field patterns	hedgerow field patterns D -Moderate - Endiscops is relatively urstructured and irregular along this pipeline corridor section but with some hedgerow lield patterns. E - Significant - this corridor section passes almost entirely through fields and hedgerows: G - Sight - Moderate - landscape is G - Sight - Moderate - landscape is	A - Moderate - landscape is relatively unstructured and irregular along this optione corrido section but with some hedgerow field patterns D - Moderate - landscape is relatively unstructured and irregular along this pipeline corrido section but with some hedgerow field patterns E- Significant - this corridor section passes almost entriely through fields and hedgerows G - Signific - Moderate - landscape is relatively instituted and open along this pipeline corridor but the bane hedgerow field patterns	unarructured and irregular along this pipeline corridos eaction but with some hedgerow field patterns D - Moderate - Landscape is relatively unstructured and irregular along this pipeline corridor section but with some hedgerow field patterns P - Significant - Inits corridor section passes almost entirely through fields and hedgerows G - Sight - Moderate - landscape is relatively unstructured and open along in this pipeline contidor section but with
2.2.13	Potential to impact on historic designed landscapes	A - Imporceptide - There does not appare to be any demenen landscapes in the vicinity of this pipeline contidor section D - Significant - passes across correr of Abbrythe statile at cession end of condor E - Imporceptide - There does not appear to be any demense tendscapes in the vicinity of this pipeline contidor section G - Imporceptide - There does not pipe a bas any demense tendscapes in the vicinity of this pipeline contidor section	in the vicinity of this pipeline comdor section G - Imperceptible - There does not	G - Imperceptible - There does not appear to be any demastre landscepts in the vicinity of this pipeline comdor	A - Imperceptible - There does not appear to be any demesse landscapes in the vicinity of this pipeline control section D - Significant - passas access conter ortifide - Imperceptible - There does not appear to be any demesse landscapes in the vicinity of this pipeline contidor section C-piperceptible - There does not depart to be any demesse landscapes in the vicinity of this pipeline contidor section	A - Imperceptible - There does not appear to be any demeaner landscaper section B - Imperceptible - There does not appear to be any demeaner landscaper in the vicinity of this poleine combor section C - Imperceptible - There does not appear to be any demeaner landscaper to be vicinity of this poleine contridor section	action D -Significant - passes across corner of Abbeyvide estate at eastern end of corridor F - Imperceptible - There does not appear to be any demesne landscaper in the vicinity of this pipeline corridor section	in the vicinity of this pipeline contribu- section O-Significant - passes across corner of Abbryville estate at leastme ned of corridor E-Imperceptible - There does not appear to be any demense landscape in the vicinity of this pipeline contidor section F- Imperceptible - There does not pipeline to any demense landscape to be any demense landscape to be any demense landscape location G- Imperceptible - There does not	A - Imperceptible - There does not appear to be any demostre landscaper in existing of this positive control ection D - Significant - passes across corner of Abbrydle estate at easien end of contdor E. Imperceptible - There does not appear to be any demostra landscaper in the vicinity of this positive contdor section - E - Imperceptible - There does not appear to be any demostra landscaper in the vicinity of this positive contdor section in the vicinity of this positive contdor section.	Cornor F - Imperceptible - There does not appear to be any demesne landscape in the vicinity of this pipeline corridor section G - Imperceptible - There does not appear to be any demesne landscape and any demission landscape and any of this pipeline corridor
2.3	Landscape & Visual - Marine Outfalls	a grad to be a sign	and the second se		Resident Address	and the second second	A. C. Rollinson			
2.0	Ecology	Annabreok	Beidurgen	Clonelagh	Cookstown	Cloghran	Newtowncordult	Patherian	Beweerstown	Tyrrelatown Little
3.1	Ecology - Siles			Same and Same				and the second	Contraction of	1 Contraction
3.1.2	Potential to impact on Fingal Ecological Network Sites	Moderate: Site located 125m from Rath Little Stream ecological corridor	Moderate: Site located 180m from Ballyboghill Stream ecological corridor but access road crosses it.	Significant: Sile abuts Mayne River acological corridor	Slight: Sile located 800m from Ballyboghill Stream ecological corridor	Significant: Site abuts Sluice River . acological corridor	Significant: Sile abuts Rath Little ecological corridor; Access road crosses Ballough Stream ecological corridor.	Imperceptible: Site located more that 3km from Ballough Streem acclogical corridor	n Moderate: Sile located 250m from th Broadmeadow River ecological comidor	e Imperceptible: Sile located more the 3km from Ballough Siream ecological comdor
3.1.5	Potential to impact on a salmonid system	Moderate - The access road abuts the a inbusary of the Ballyboghil River (main channel and tributaries) constitutes a salmonid system.	Moderate - The Ballyboghil River (main channel and Iributaries) constitutes a salmonid system and the access road crosses IL However, the Donabate River constitutes a non- salmonid system.	s Silght - The Mayne River constitutes a non-salmonid system	Slight - The Donabate River constitutes a non-salmonid system.	Moderate - The Sluice River (main channel and inbutaries) constitutes a selmonid system.	Moderate - The Ballough River (main channel and Iributaries) constitutes a salmonid system and the access road crosses it.	Slight - The Lusk River constitutes a	Significant - The Broadmeadow Rivv (main channel and tributaries) constitutes a salmonid system and th access road crosses a tributary and site abuts a tributary.	Inner contible . The Look Blar
1.1.7	Potential to result in the loss of winter Graylag Goose Feeding Aress based in WeBS Data.	Imperceptible - Outside the normal geographical range of the north Co Duble werker Grayley Goose Rock	Imperceptible - Outside the normal geographical range of the north Co Dublin water Caryleg Grove Rock	Imperceptible - Quiside the normal geographical range of the north Co Dudin where Greyteg Gome Book	Imperceptible - Outlide the normal pergraphical range of the north Co Dubles where Grayleg Grosse Bock	Imperceptible - Quiside the normal geographical range of the north Co Dublin winter Greyleg Goole Rock	Imperceptible - Outside the normal geographical range of the morth Co Outsin writer Greying Gome Book	Moderate - Within the normal geographical range of the north Co. Dublin winter Greylag Goose flock. Location is in an area considered like to be used by the north Co Dublin winter Greylag Goose flock on occasion	Imperceptible - Outside the normal y geographical range of the normal Dublin winter Greyleg Goose Rock	Signtflcant - Within Skerries Grasslands IWEBS area, likely to but a feeding site for the north Co Dublin winter Greytag Goose Rock

Alternative Sites Assessment and Route Sel Appendix 4 - First Iteration

12	Boology - Fipslines	新日本市中国		The second second	Sector States of	A STREET STREET		医		and a start of the start
		Crasses river upstream of following (c)SAC/SPA/(p)NHA	Crosses river upstream of following (c)SAC/SPA/(p)NHA		Crosses river upstream of following (c)SAC/SPA/(p)NHA		Crosses river upstream of following (c)SAC/SPA/(p)NHA	Crosses over upstream of following (c)SAC/SPA/(p)NHA A - 13km South Dublin Bay and River Tolka Estuary SPA/pNHA; North	Crosses over upstream of following (c)SAC/SPA/(p)NHA A - 13km South Dublin Bay and River Tolka Estuary SPA/pNHA; North	Crosses river upstream of following (c)SAC/SPA/(p)NHA
1		A - 13km South Dublin Bay and River Tolka Estuary SPA/pNHA; North Dublin Bay SAC/SPA	A - 13km South Dublin Bay and River Tolka Estuary SPA/pNHA; North Dublin Bay SAC/SPA	Crosses river spatneem of following (c)SAC/SPA/(p)NHA	A - 13km South Dublin Bay and River Tolka Estuary SPA/pNHA; North Dublin Bay SAC/SPA	Crosses river upstream of following (c)SAC/SPA/(p)NHA	A - 13km South Dublin Bay and River Tolka Estuary SPA/pNHA; North Dublin Bay SAC/SPA	Dublin Bay SAC/SPA D - 0.5km Malahide estuary SPA/SAC; 2.0km Baldoyle Bay SPA/SAC/oNHA	Dublin Bay SAC/SPA D - 0.5km Malahide estuary SPA/SAC; 2.0km Bałdoyle Bay SPA/SAC/pNHA	A - 13km South Dublin Bay and Rik Tolka Estuary SPA/pNHA; North Dublin Bay SAC/SPA
		D - 0.5km Malahide estuary SPA/SAC; 2.0km Baldoyle Bay SPA/SAC/pNHA	D - 0.5km Malahide estuary SPA/SAC; 2.0km Baldoyle Bay SPA/SAC/pNHA	Dublin Bay SAC/SPA	D - 0.5km Malahide estuary SPA/SAC; 2.0km Baldoyle Bay SPA/SAC/pNHA	A - 13km South Dublin Bay and River Tolka Estuary SPArphElA; North Dublin Bay SAC/SPA	D - 0.5km Malahide estuary SPA/SAC; 2.0km Baldoyle Bay SPA/SAC/pNHA	E - 5.0km Malahide Estuary SPA/SAC/pNHA; Rogerstown Estuary SPA/SAC/pNHA; Rogerstown Estuary	E - 5.0km Malahide Estuary	D - 0.5km Malahide estuary SPA/SAC; 2.0km Baldoyle Bay SPA/SAC/pNHA
21	potential to impact on Natura 2000 Sites and Natural Heritage Areas		F - Malahide Estuary SPA/SAC/pNHA; Rogerstown Estuary SPA/SAC/pNHA; Balcunnin Stream flows out to WFD coastal waters	B - 6.0mm North Dubin BAY SAC and North Bull Island SPA; 4.5mm Baldoyle Bay SAC/SPA/pNHA	F - Malahide Estuary SPA/SAC/pNHA: Rogerstown Estuary SPA/SAC/pNHA: Balcunnin Stream Ilows out to WFD coastal waters	Bay SAC/SPA/phHA	F - Malahide Estuary SPA/SAC/pNHA Rogerstown Estuary SPA/SAC/pNHA; Balcunnin Stream flows out to WFD coastal waters	Rogerstown Estuary SPA/SAC/pNHA Balcunnin Stream flows out to WFD	F - Malahide Estuary SPA/SAC/pNHA Rogerstown Estuary SPA/SAC/pNHA; Balcunnin Stream flows out to WFD	F - Malehide Estuary SPA/SAC/ph Rogerstown Estuary SPA/SAC/ph Balcunnin Stream flows out to WF coastal waters
		G - 0.5km Baldoyle Bay SAC/SPA/pNHA	G - 0.5km Baldoyle Bay SAC/SPA/pNHA	G - 0,5km Baldoyle Bay SAC/SPA/pNHA	G - 0.5km Baldoyle Bay SAC/SPA/pNHA	G - 0.5km Baldoyle Bay SAC/SPA/pNNA	G - 0.5km Baldoyle Bay SAC/SPA/pNHA	coastal waters G - 0.5km Baldoyle Bay	coastal waters G - 0.5km Bakkoyle Bay	G - 0.5km Baldoyle Bay SAC/SPA/pNHA
		F - Also crosses Balcunnin Stream which flows out to WFD coastal waters	F - Also crosses Balcunnin Stream which flows out to WFD coastal waters	G - Also Interfaces with Baldoyle Bay SAC/SPA/pNHA and Remaar also	F - Also crosses Balcunnin Stream which flows out to WFD coastal waters	G - Also Interfaces with Baldoyle Bay SAC/SPA/pNHA and Ramsar sile	F - Also crosses Balcunnin Stream which flows out to WFD coastal waters	SAC/SPA/pNHA E - Also crosses Rush Stream which flows out to WFD coastal waters	SAC/SPA/pNHA E - Also crosses Rush Stream which flows out to WFD coastal waters	F - Also crosses Balcunnin Stream which flows out to WFD coastal waters
		G - Also interfaces with Baldoyle Bay SAC/SPA/pNHA and Ramsar site	G - Also interfaces with Bakboyle Bay SAC/SPA/pNHA and Ramsar site		G - Also interfaces with Baldoyle Bay SAC/SPA/pNHA and Ramsar sile		G - Also interfaces with Baldoyle Bay SAC/SPA/pNHA and Ramsar site	F - Also crosses Balcunnin Stream which flows out to WFD coastal waters	F - Also crosses Balcunnin Stream which flows out to WFD coastal waters	G - Also interfaces with Baldoyle B SAC/SPA/pNHA and Remser site
		Impinges upon 6 ecological buller zones (3 No. D; 3 No. G)	Impinges upon 6 ecological buller zones (3 No. D; 3 No. G)	Impinges upon 3 ecological builter zones (Route G)	Impinges upon 6 ecological buffer zones (3 No. D; 3 No. G)	Impinges upon 3 ecological buffer zones (Route G) Impinges upon five nature	Impinges upon 6 ecological buffer zones (3 No. D; 3 No. G)	Impinges upon 6 ecological buller zones (3 No. D; 3 No. G)	Impinges upon 6 ecological buller zones (3 No. D; 3 No. G)	Impinges upon 6 ecological buffer zones (3 No. D; 3 No. G)
1.2.2	Potential to impact upon ecological butter zones or Neture Development Areas	Impinges upon four nature development areas	Impinges upon four nature development areas	Impinges upon four nature development areas	Impinges upon four nature development areas	development areas	Impinges upon four nature development areas	Impinges upon four nature development areas	Impinges upon four nature development areas	Impinges upon four nature development areas
	identified in the Fingal Development Plan 2011 - 2017	potentially impinges on 6 No. Nature Development Areas	potentially impinges on 6 No. Nature Development Areas	Crosses 1 No. nature development erst potentially impinges on 1 No. Nature Development Arses	potentially impinges on 6 No. Nature Development Areas	potentiely impinges on 1 No. Nature Development Areas	potentially impinges on 6 No. Nature Development Areas	potentially impinges on 6 No. Nature Development Areas	potentially impinges on 6 No. Nature Development Areas	potentially impinges on 6 No. Nai Development Areas
				Crosses 2 No. ecological contidore		Crosses 2 No. ecological opridors				
1		Crosses 10 No. ecological corridors Potentially crosses 1 No. ecological	Crosses 10 No. ecological corridors Potentially crosses 1 No. ecological	Potentially crosses 1 No. ecological conidor	Crosses 10 No. ecological corridora Potentially crosses 1 No. ecological	Potentially crosses 1 No. ecological conider	Crosses 10 No. ecological corridors Potentially crosses 1 No. ecological	Crosses 12 No. ecological corridors Potentially crosses 1 No. ecological	Crosses 12 No. ecological corridors Potentially crosses 1 No. ecological	Crosses 10 No. ecological corrid Potentially crosses 1 No. ecologi
	Potential to impact upon ecological	corridor Impinges upon TPO sites	corridor Impinges upon TPO sites	Impinges upon TPO silve	corridor Impinges upon TPO sites	Impinges upon TPO sites Crosses 1 No, TPO site	conidor Impinges upon TPO sites	corridor Impinges upon TPO sites	Impinges upon TPO sites	Impinges upon TPO sites
2.3	corridor, nature development area or high value habitats	Potentially impinges upon TPO areas	Potentially impinges upon TPO areas	Crosses 1 No. TPO sile Potentially crosses 6 rivers or streams	Potentially impinges upon TPO areas	Potentially crosses 8 No rivers or	Potentially impinges upon TPO areas	Potentially impinges upon TPO areas	Potentially impinges upon TPO areas	Potentially impinges upon TPO a
		Potentially crosses 36 rivers or streams	Potentially crosses 36 rivers or streams	Potentially crosses one area of deciduous woodland	Potentially crosses 36 rivers or streams	Potentially crosses 1 No. area of	Potentially crosses 36 rivers or streams	Polentially crosses 45 rivers or streams	Potentially crosses 45 rivers or streams	Potentially crosses 36 rivers or streams
		Loss of hedgerow habitat along 41km	Loss of hedgerow habitat along 41km	Loss of hedgerow habitat along 17km	Loss of hedgerow habital along 41km	deciduous woodland Loss of hedgerow hebitat along 20km	Loss of hedgerow habitat along 41km	Loss of hedgerow habitat along 54km	Loss of hedgerow habitat along 54km	Loss of hedgerow habital along 4
2.4	Potential to impact on a salmonid system	Crosses 8 No. salmonid systems.	Crosses 8 No. salmonid systems.	Crosses 2 No. selmonid systems.	Crosses 8 No. salmonid systems.	Crosses 3 No. salmonid systems.	Crosses 8 No. salmonid systems.	Crosses 9 No. salmanid systems.	Crosses 9 No. salmonid systems.	Crosses 8 No. salmonid systems
3.2.6	Potential to impact on the breading habitet for Annex 1 species Kinglisher	Portion of route D located along the Broadmeadow River where possible suitable habitat for breeding kingfisher occurs	Portion of route D located along the Broadmeadow Filver where possible suitable habitat for breeding kinglishe occurs	No suitide rearies habital for traceing langliner	Portion of route D located along the Broadmeadow River where possible suitable habitat for breeding kinglishes occurs	No suitable ripanse habitat for treading kinglisher	Portion of route D located along the Broadmeadow River where possible suitable habitat for breading kinglishe occurs	Portion of route D located along the Broadmeadow River where possible soutable habital for breading kinglishe occurs Crosses Ballough River which is unilikely to have suitable riparian habitat for breading kinglisher	Partien of route D located along the Broadmeadow River where possible suitable habital for breeding kinglishe occurs Crosses Ballough River which is unlikely to have suitable riparian habital for breeding kinglisher	Portion of route D localed along t Broadmeadow River where possi suitable habitat for breeding kingl occurs
3.2.6	Potential to impact on WeBS identified areas of importance to birds adjacent to Malahide Estuary	Portion of route located within Malahide Estuary IWEBS area Portion of route located within	Portion of route located within Malahide Estuary IWEBS area Portion of route located within	No IWEB areas located on pipeline route	Portion of route located within Materiale Essuary IWEBS area Portion of route located within Skerries Grasslands' IWEBS area	No IWEB areas located on pipeline route	Portion of route localed within Matahide Estuary IWEBS area Portion of route localed within Sterries Grasslands' IWEBS area	Portion of route localed within Malahide Estuary IWEBS area Portion of 2 No. routes localed within Skerries Grasslands' IWEBS area	Portion of route located within Matahide Estuary IWEBS area Portion of 2 No. routes located within Skerries Grasslands' IWEBS area	Portion of route located within Matahide Estuary IWEBS area Portion of route located within Starries Grasslands' IWEBS are
11	Ecology - Marine Cuthell	'Skerries Grasslands' IWEBS area	"Skerries Grasslands" IWEBS area		ONETTIES GREESINGS INVEDS BY		Unerings (Transfer In TCD) 200		h.8425.000	
4.0	Hydrology -	Annabrook	Baldargan	Cionalaga	Cookateern	Cloghran	Hewtowncordult	Rathertan	Soucerstawn	Tyrrelatown Little
41	Hydralogy - Siles	and the Replaced			All and the second second	State Carrier				
4,1,2	Culverting requirement - used to indicate impact on fload-prone watercourses due to reduced conveyance.	None: He new culvert required.	Moderate: Crossing Ballyboghil River, High importance. Will have permanent impact on small proportion of attribute.	None: No new culvest required	Imperceptible: Culvert might be required for a local minor tributary. Low importance. Will have permanent impact on small proportion of attribute	None: No new culvert required	Slight: Crossing Ballough Tributary , Medium importance. Will have permanent impact on small proportion of attribute.	Slight: Crossing Collinstown Stream Medium Importance. Will have permanent impact on small proportion of attribute.	Tributary, Medium importance, Will	None: No new culves required.

Alternative Siles Assessment and Route Se Appendix 4 - First Iteration

42	Hydralogy - Pipelines	You and a start to say the				and and the second	the second second	the foreign and the state		这时代 学习的中学会
4.2.1	Proximity to water bodies in terms of flooding and as an indicator of sensitive surface water receptors	18 river calchments and some coastal areas	18 river catchments and some coastal areas	7 river catchments and some coestal arres	18 river catchments and some coastal areas	9 river calchments and some coastal areas	18 river calchments and some coastal areas		28 river calchmonts and some coastal areas	16 river calchments and some coastal areas
4.3	Hydrology - Marine Cuttell				a state that when		Contra Asiante		的情况的基本目的代表	
•••	Hydrogeology -	Annebrook	Beldurgen	Clonehegh	Cookstown	Cloghran	Newtowncordulf	Patherian	Saucerptown	Tyrreistown Little
5.1	Hydrogeology - Silee	Part Contractor							a dense de ser	
5.1.4	and the second se	None: No Groundwater Supplies whith 500m however uncontinend information from FCC suggests the operability of additional groundwater absraction points and wells nearby (Appendix, A): B present, well would be of Low Importance and would have a premisent impact on a significant proportion of attribute.	Stight: Is Spring: St. Bridget's Well 400m South. Unconfirmed histornation from FCC stoggets the possibility of an and the state of the balancion points and great nearby abanctorn points and state. Well have permanent impact on a significant proportion of attRute.	Nona: No Grandvater Supplen within 500m	Slight: 1x Sping: SL Bridget's Well 21on South East. Unconfirmed information trom FCC augests the possibility of additional groundwater abarraction points and wells nearby (Agendia AL, Low importance, Will have permanent impact on a significant proportion of attribute.	None: Na Groundwater Supplies within 500m	Slight: 1x bored well; for agriculture and domestic use will good yields 510m North. Unconfirmed information from FCC suggests the possibility of addisonal groundwater abstraction points and wells nearby (Aggendix A). Low importance. Will have permanent impact on a significant proportion of attribute.	None: No Groundwater Supples white 500m. Unconfirmed information from FCC supples the possibility of additional groundwater abstraction paintal and white nearby (Appmolick A). In present, while) would be of Low importance and would have a pormaniest facated on a supplicant proportion of attracts.	Nena: No Groundwater Supplies within 500m	Hone: No Ground-mater Supplies within 500m. Unconfirmed information inon FCC augrets the possibility of additional groundwater abstraction points and walls nearby (Appende A). Low importance. Will have permanent impact on a significant proportion of attribute.
5.1.6	Identification of hydrogeological leatures from the GSI Karst delabase	Norne: No Korst Feature within 2km	Marne: No Karst Feature within 2km	Slight: 1x spring: St. Doolaghs Well 1.2km east of the site, Low importance. Will have permanent impact on a significant proportion of attribute.	Nore: No Karsi Feature within 2km	Slight: 1x spring; SL Dooleghs Well Zun south east of the site, Low importance. Will have permanent impact on a significant proportion of attribute.	Slight: 4 x springs: Horlakes Well, St. Catherine's Well, Bridetree Well and St. Maccullins Well within 1.5km north east to south east of the site. Low importance. Will have permanent impact on a significant proportion of astribute.	Slight: 1 x spring: Bog Well 1.7km north west of the site, Low importance. Will have permanent impact on a significant proportion of attribute.	None: Na Kant Feeture within 2km	Slight: 1x spring: Bog Weil 700m west of the site, Low importance, Will have permenent impact on a significant proportion of attribute.
6.2	Hydrogeology - Fipelines			R. S. D. L. Higher and			的。各校会议的工作的考	and the second second	Construction in the second	
5.2.2	Vulnerability Classification - potential for groundwater contamination	A - predominanily high D - predominanily high F - predominanily low G - predominanily low	A - predominantly high D - predominantly high F - predominantly low G - predominantly low	A - predominantly high B - Predominantly low G - predominantly low	A - predominantly high D - predominantly high F - predominantly low G - predominantly low	A - predominantly high B - Predominantly kow G - predominantly kow	A - predominantly high D - predominantly high F - predominantly low G - predominantly low	A - predominantly high D - predominantly high E - predominantly low F - predominantly low G - predominantly low	A - predominantly high D - predominantly high E - predominantly low F - predominantly low G - predominantly low	A - predominantly high D - predominantly high F - predominantly low G - predominantly low
5.3	Hydrogeology - Merine Outlali	Contract of the								
5.3.2	Vulnerability Classification - potential for proundwater contamination	predominantly low	predominantly low	predominantly high	predominantly low	predominantly high	predominantly low	predominently low	predominantly low	predominantly for
5,313	Groundwater Supplies - Identification of water supply springs and bored wells based on GSL EPA & FCC records	7 No. bored wells with moderate to encellent yields Possible additional groundwater abstraction points and wells nearby	7 No. bored wells with moderate to excellent yields Possible additional groundwater abstraction points and wells nearby	No groundwater supplies within 500m	7 No. bored wells with moderate to excellent yields Possible additional groundwater abstraction points and wells nearby	No groundwater supplies within 500n	7 No. bored wells with moderate to excellent yields Possible additional groundwater abstraction points and wells nearby	7 No, bored wells with moderate to excellent yields Possible additional groundwater abstraction points and wells nearby	7 No. bored wells with moderate to excellant yields Possible additional groundwater abstraction points and wells nearby	7 No, bored wells with moderate to excellent yields Possible additional groundwater abstraction points and wells nearby
5.3,5	Identification of hydrogeological features from the GSI Karst database	2 No, springs within the corridor	2 No. springs within the corridor	No karst features within 500m of the outfall study area	2 No. springs within the corridor	No karst leatures within 500m of the outial study area.	2 No. springs within the corridor	4 No. springs within the corridor	4 No. springs within the corridor	2 No. springs within the corridor
6.0	Solls and Geology	Annabrook	Baldurgen	Clonehegh	Cookstown	Cloghran	Newtownoorduft	Pathertan	Secondium	Tyrralateren Little
6,1	Solis and Geology - Siles	and the second	8			A CONTRACTOR				
6.1.4	Potential to encounter shallow bedrock during construction (interactions with other disciples during construction - noise, dust etc)	Imperceptible - Limited data, however it does indicate had bedrock is at least to migit across the site. Confirm using ground knestigation (rotary coring)	Imperceptible - conlini veing group Imperceptible - conlini veing group Imperceptible - conlini veing	d Imperceptible + confirm using groun Investigation (rotary coring)	in imperceptible - confirm using group investigation (rotary coring)	d Slight negative - confirm using ground investigation (rotary coring)	Imperceptible: Confirm using groun Investigation (rolary coring)	d Imperceptible - confirm using groun investigation (rolary coring)	d Silght negative: 30% Shallow Bedrock, Conlinn using ground investigation (rolary coring)	Imperceptible - confirm using grou Investigation (rotary caring)
6.1.6	Potential to encounter soft ground	Imperceptible: No allovial deposits mapped within wite toconderies however, presently to their indicates port sits may be present in the northern and southeestern part of the like. Ground investigation to confirm		Imperceptible: No sluvisi deposits mapped within site boundaries boewer providing to river indicates acti sits may be present in the north of the site. Crownd investigation to contiem	Imperceptible: No alluvial deposite mapped within the site boundary. Presence of a river along the norther boundary indicates alluvium (include soft alts) may be present. Ground investigation to contilm	Imperceptible: No allivial disposite mapped vitibilit alle boundaries in however prosently to riem inflication g acti allis may be present in the north of the site. Ground investigation to confirm	Imperceptible: No alluvial deposite mapped within the site boundary. Presence of a new new the south east and south vest commen indicate alluvium (including not site) may be present. Ground investigation to confirm	Imperceptible: No studied deposite mapped vitilitis site locardinine howevery prostnity to new indicates soft alls may be present in the south west of the site. Ground investigation to confirm		Imperceptible: No alluvial deposits mapped. Soft ground unitieity to be encountered.

8.2	Solie and Geology - Pipelines	THE REAL FROM	San Charles	Property and the second		an in instruction		新設設施設に		A. C. H. Starten
6.2.1	Potential to Impact on Geological Heritage Sites/County Geological Sites	1 No.	1 No.	No Geological Heritage Sites within corridor	1 No.	No Geological Heritage Sites within corridor	1 Na.	1 No.	1 No.	1 No.
6.2.2	Potential to interact with contaminated land	35 No.	35 No.	24 No.	35 No.	32 No.	35 No.	38 No.	38 No.	35 No.
624	Potential to encounter shallow bedrock during construction (Interactions with other disciplines during construction - noise, dust etc)	bedrock at surface) D - 45% Shallow bedrock (5% bedrock at surface) F - 25% Shallow Bedrock (1% bedrock at surface)	A - 95% shallow bedrock (15% bedrock al surface) D - 45% Shallow bedrock (5% bedrock al surface) F - 25% Shallow Bedrock (1% bedrock al surface) G - 5% shallow bedrock (0% al surface)	A - 95% shallow bedrock (15% bedrock at surface) B - 5% Shallow bedrock (0% bedrock at surface) C - 5% shallow bedrock (0% at	at surface) F - 25% Shallow Bedrock (1% bedrock at surface)	ai sunace)	A - 95% shallow bedrock (15% bedrock at surface) D - 45% Shallow bedrock (5% bedrock at surface) F - 25% shallow Bedrock (1% bedrock at surface) G - 5% shallow bedrock (0% at	at surface) E - 10% Shallow bedrock (1% bedrock at surface)	A - 95% shallow bedrock (15% bedrock at surface) D - 45% (Shallow bedrock (5% bedrock at surface) E - 10% (Shallow bedrock (1% bedrock at surface) F - 25% Shallow bedrock (1% bedrock at surface) G - 5% shallow bedrock (0% at surface)	D - 45% Shallow bedrock (5% bedrock at surface) F - 25% Shallow Bedrock (1% bedrock
6.2.5	Potential Impect on karst features	2 No.	2 No.	No karat leatures within conidor	2 No.	No least features within corridor	2 No.	2 No.	2 No.	2 No.
6.2.6	Potential to encounter soft ground	A - 1% Allarium deposits D - Small area of Bihosoto/Peats (basic); 10% of allarium deposits F - 5% Allarium deposits G - 10% Allarium Deposits	A - 1% Albrium deposits D - Small area of lithosols/Peats (bask); 10% of albrium deposits F - 5% Albrium deposits G - 10% Albrium Deposits	A - 1% Maxim depoils B - 1% Maxim depoils G - 10% Alaxium Depoils	A - 1% Alluvium deposits D - Small area of Introdols/Peats (basic): 10% of alluvium deposits F - 5% Alluvium deposits G - 10% Alluvium Deposits	A - 1% Alluvium deposits B - 1% Alluvium deposits C - 4% alluvium deposits G - 10% Alluvium Deposits	A - 1% Alluvium deposits	A - 1% Alkvium deposits D - Small area of lithosolu/Peets (basic); 10% of alkvium deposits E - 10% of alkvium deposits F - 5% Alkvium deposits G - 10% Alkvium Deposits	A - 1% Alkvium deposits D - Small area of lithosols/Peats (basic): 10% of alkvium deposits E - 10% of alkvium deposits F - 5% Alkvium deposits G - 10% Alkvium deposits	A - 1% Albvium deposits D - Small area of liftosols/Peals (basic): 10% of albvium deposits F - 5% Albvium deposits G - 10% Albvium Deposits
43	Solis and Geology - Marine Outfail			R. Mathematica	是我们的问题 的问题。	a and the state	Carrier and the second			
6.3.1	Potential to Impact on Geological Heritage Sites/County Geological Sites	2 No	2 No	No Geological Heritage Sites within comdor	2 No	No Geological Heritage Siles within contdor	2 Na	2 No	2 No	2 Na
6.3.2	Potential to interact with contaminated land	9 No.	9 No.	1 No.	9 No.	1 No	9 No.	9 No.	9 No.	9 No.
6.3.4	Potential to encounter shellow bedrock during construction (Interactions with other disciplines during construction - noise, dust etc)	5% shallow bedrack (2% bedrack a) esciace)	9% shellow betweek (2% bedrock al surface)	15% shallow bedrock	5% shallow bedrock (2% bedrock at surface)	15% shallow bedrock	5% shallow bedroch (2% bedrock al surface)	9% shallow bedrock (2% bedrock at seriece)	5% shallow badrock (2% bedrock at avriace)	9% stallow badrock (2% badrock ef auflace)
6.3.5	Potential impact on karst features	3 No.	3 No.	No lunst lestures within corridor	3 No.	No karst features within corridor	3 No.	3 No.	3 No.	3 No.
6.3.6	Potential to encounter soft ground	1% Alkvium deposits	1% Alkvium deposits	15% Alluvium deposits	1% Alkuvium deposits	15% Alluvium deposits	1% Alluvium deposits	1% Alluvium deposits	1% Alluvium deposits	1% Alluvium deposite
7.0	Agronomy & Agriculture - Siles	Annebrask	Beidurgen	Clonehegh	Cookstewn	Cloghran	Newsouncorduit	Pathertan	Saucerstewn	Tyrralatown Little
7.2	Farming Enterprise	Beef & Horticulture (The majority of the site is used for a beef enterprise)	Tillage, Potatoes & Horticulture	Honiculture & Tillage	Tillage, Horticulture, & Potaloes	Beet The State of State	Mixed liveslock & tillage	Horticulture & Tillage, (intensive markat gardening area)	Tillage, Potatoes& Horticulture	Beel (site is located in an intensive market gardening area)
7.3	Number of landowners impacted within site boundary	Tes -	1103	3 to 6	163	3 10 6	1 103	7 10 9	103	163
75	Severance based on site location within overall land holdings	Minor	Minor	Minor	Moderate	Minor	Minor	Moderate	Minor	Imperceptive
7.7	Crop rolation practiced	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	No
	Noise	Annabrook .	Beldurgen	Clonshagh	Cookstown	Cloghran	Newsourcordult	Patherton	Seucerstown	Tyrralatown Little
8.4	Construction Phase Impact rating	slight	imperceptible	skyte	imperceptible	slight	slight	slight	slight	Imperceptible
8.5	Operational Phase Impact rating	slight	Imperceptible	sigh		Ingile	slight	slight	slight	Imperceptible
8.0	Air and Odear	Annabrook	Beldurgen	Clanatege	Costaterm 1	Cloghran	Series and	Fishertan	Secondary	Tyrrelateuro Little
8.5	Construction Phase Impact rating		Imperceptible	an perceptible	- Imperceptible	slight	imperceptible	Imperceptible	sight	Imperceptible
9.10	Operational Phase Impact rating	inperceptible	Imperceptible	imperceptible	imperceptile	slight	imperceptible	imperceptible	slight	Imperceptive

14.4	People and Communities	Annukreek	Baldurgen	Cloudingh	Contrainers	Cleghran	Henrisongarduff	Retherien	Seucerateurs	Tyrrelations Little
10.1	Number of residential & commercial buildings 300-500m from site boundary	44	21	63	53	116	33	131	66	50
10.3	Potential to impact an known community amenities and facilities within 1km from ski boundary.	Ballyboghill Hedgerow Round (Sli na Sceacha) - c. 460m to the SW.	Ballyboghill Hedgerow Round (Sil na Scencha) - c. 200m to the east.	Football grounds c. 700m to the NW, Darndale and Belcamp Parks c. 800m to the SW and SE respectively and Innistall GAA club c. 500m to the south.	Nords Roganstown golf club c. 990n to the south and Ballyboghill Hedgerow Round c. 960m to the NE.	(Nevinslown East) and National Show	None	A 7-a-side lootball pitch c. 920m to th esst.	A school complex c. 400m to south, Swords and Roganstown goll course c. 200m to the NW. Broadmesdow linear park c. 320m to east and demesne parkland c. 620m to the SW	More
11.0	Traille	Annibrosk	Inidegen	Claudicat	Containum	Cleghran	Hentourcordaft	Retheries	Severations -	Tyrreisinen Little
11.1	Length of access road required	1230m access road required	580m access road required	320m access road required	930m access road required	290m access road required	640 access road required	620m access road required	650m access road required	1,410m access road required
11.2	Number of crossings required for access read	None	2 river/stream crossings	Note:	1 dtch/stream crossings	None	1 stream/river crossings	2 stream/river crossings	1 sirean/river	1 road crossing
11.3	Petential Impact on landowners	Access road impacts on 6 fields	Access road impacts on 3 fields splitting one	Access read impacts on 2 lists however can follow solating track	Access road impacts on 5 fields	Access Read impacts on 2 field	Access Road impacts on 2 listle	2-3 fields impacted upon.	Access road impacts on 2 lists	Access road impacts on 8 lields. Could potentially require demolition of barn
11.4	Works required to provide sale access entrance	Some local widening likely. Boundery treatments required for visibility so some additional landtake probable	Some local widening likely. Visibility ok.	Visibility ok, Can make use of existing field access. Some local road widening probable	Road would likely require widening. To gachieve visibility would require significant landtake.	Road on embankment so would need to raise access road on approach to junction	None, Wide raid, good visibility	Some local widening likely. Boundary treatments required for visibility so some additional landtake probable	Some local widening likely. Boundary treatments required for visibility so some additional landtake probable	Good visibility achievable with minimal landtake. Can use existing field access.
11.5	Potential Impact on surrounding local road network	Can access R132 alter approx, 2km o Iravel on R129.	Can access R132 alter approx. 2km o travel on R129.	Access onto local road however not lar from N32	Access onto R108. Road not particularly suitable for HGVs. Travel distance to better road moderate	Access onto local road however not far from N32	Easy access to wide road (R132)	Access onto R128 and probable use of R127. Both Roads are not perticularly suitable for HGVs	Access onto R125 which is ak. Would likely avoid Swords however resulting in significant travel along lower quality regional roads	Crosses narrow local road to reach access on more suitable road
11.5	Frequency of accidents near entrance	1 accident (minor) near proposed entrance	None	None 21	Now Contraction of the la	Name State State State State State	4 accidents (3 minor 1 serious) near proposed entrance	1 accident (minor) approx. 200m from entrance		None
11.7	Frequency of accidents on surrounding network (indication of general road safety issues)	lew accidents on surrounding roads	Tww.accidents on aurrounding roads /	High accident rate on N32 & R107 (Including deaths)	lew accidents on surrounding roads	High accident rate on N32 & R107 (including deaths)	Several accidents on R132	Probable use of R127 south of Lusk with high accident rate. If this road wasn't to be used then slight to moderate rating	many accidents on R125 Including several deaths)	Probable use of R127 south of Lusk with high accident rate. If this road wasn't to be used then slight to moderate rating
11.8	Road link Impacted upon by all construction traffic (excluding major routes i.e. R132/N32)	2km (R129)	4km (R 129)	450m (Clonshagh Rd)	Two options but both long (R108 & R129 7.8km, R108 & R125 6.9km)	Stockhole Lane / Clonshagh Rd could be used from either direction	None	5.2kms (R127)	3.25km (R125)	6.8km (R127 & R128)
12.0	Perping Pelloy	Annatorest	Balderum	Clonebugh	Contistown	Cloghran	Nowtemperiuli	Patherian	Seyconstrem	Tyrrelatoryn Little
12,3	Airport Public Safety and Noise Zonee on alte	*		Outer PSZ Inner Noise Zone Outer Noise Zone	NA CONTRACTOR	Inner PSZ Outer PSZ Inner Noiss Zone Outer Noise Zone	NA		NA	NA CONTRACTOR
12,4	Local Objectives on Site	Name -		432 (Prepare Masterplan)	Name - Constant And Constant	None of Cold Street And Cold	None	None	GBM8 (new regional park)	Hone
12.5	Other Local Objectives on Site		Name Tort Line	Road objectives	Name	None	None	None	Road objective	None
12.8	Airport Public Safety and Noise Zones within 300m of alte boundary			Inner PSZ Outer PSZ Inner Noise Zone Outer Noise Zone		Inner PSZ Outer PSZ Inner Noise Zone Outer Noise Zone	NA CONTRACTOR	WA		
12.9	Local Objectives within 300m of site boundary	180 (2 dwellings)	Name of the second s	432 (prepare roads masterplan)	Home	374 (nursing lacility)	None	141 (agri-laurism)	GBM8 (active recreational hub)	GIM7 (historic landscape study)
12.10	Other Local Objectives present within 300m of site boundary	Hana -	Name -	Road objectives	Name	Indicative Cycle / Pedestrian Route	None	None	Road objective	None
12.13	Airpart Public Selety and Noise Zones within 1km of land parcel boundary	· San Barrier		Outer PSZ Inner Nolse Zone Outer Nolse Zone	NA CONTRACTOR	Inner PSZ Outer PSZ Inner Noise Zone Outer Noise Zone	NA	WA	WA THE REAL PROPERTY OF	MA
12.15	Other Locel Objectives present within 1km of Land Percel Boundary	Hone	Preserved Views to north and southeast	Anna ann an Anna ann an Anna Anna Anna	Preserved views to east	Indicative Cycle / Pedestrian Route	Preserved views to north, northeast Road objective to west	Preserved views to south Indicative Cycle / Pedestrian Route Road objective	Road objective Preserved views to south	Preserved views to the north
13.0	Engineering Design - Plastians	Annabreok	Reidurgen	Clonetogh	Confusion	Cloghmin	Mewigenererdulf	Restauran	Searcer stewny -	Tyrreletown Little
18,1	Pipelite Longth				a Assessment and spect		and the second			
13.1.6	Titlel Pipeline Longths	·····································		EN LASSANSIN A						
	Total Pipeline Length	47,850 m	47,850 m	30,800 m	47,900 m	34,300 m	47,850 m	46,900 m	47,850 m	47,900 m

13.2	Power Regulacements		a state of the second	and the second s	Section Street States	a sure and the second	The second second second	Carter Charles and Carton	Contraction of the	aller and see a state
1000	Total Power Requirements	10,000 kW	9,700 kW	7,850 kW	9,600 kW	8,550 kW	9,300 kW	9,800 kW	7,100 kW	10,500 kW
13.3	Cerbon Entesione	Mag Manakara	The particular and the ma	h datatana na	1228-0228-017-23 ⁸ 0			Res State Party		A State of the second
	Total Carbon (Ionnes CO2)	504,008	488,427	385,931	482,905	435,140	482,523	508,325	378,598	547,849
13.5	Access / Hight of Way / Wayleaves along Pipeline Corridors	The second second								
	Potential restrictions Along Pipeline Corridors to WwTP Sites	11	11	1.000	11		11	12	12	11
13.8	Crossings - Waterways, Rail, etc. along Plastine Corridors	and the second	All Street and				State States of			A COLOR
	Total Crossings	31	31	17	31	17	31	31	31	31
19.7	Potential to impact on Physical Infrastructure story Pipeline Corridory	State of the								
		More Impact on local Roads	More Impact on local Roads	Least Impact on Local Roads	More Impact on local Roads	Least Impact on Local Roads	More Impact on local Roads	More Impact on local Roads	More Impact on local Roads	More Impact on local Road
13.9	Presence of Public Utilities within WwTP sites	Company and a start of	Mar Bridge Street		San and an and			and the second		
	Public Utilities within the Sile	No known public uslides	2 number: ESB (MV) Overhead (10- 20kv)	1 number: ESB (MV) Overhead (38kv)	No known public utilities	No known public selles	1 number: ESB (MV) Overhead (38kv)	No known public usilities	1 Number: ESB (MV) Overhead (38kv). 2 Number: ESB (MV) Overhead (10-20kv)	M
13.10	Land Ownership and Titles slong Pipeline.		Collegen Contracted	Protect States			a Contraction of	Real Providence in the		Contraction of the second
		Most Ownerships	Most Ownerships	Losst Ownerships	Most Ownerships	Least Ownerships	Mast Ownerships	Most Ownerships	Most Ownerships	Most Ownerships
13.11	Route Traffic Management		Charles and the sources	The second second second		Constraint Part and		The second of th	an ta that a set a	Production Stream
		Moderate Impact during Construction stage	Moderate Impact during Construction stage	Imperceptible Impact during Construction stage	Moderate Impact during Construction stage	Imperceptible Impact during	Moderate Impact during Construction stage	Moderate Impact during Construction stage	Moderate Impact during Construction stage	Moderate Impact during Constru stage
	States and States	No Impact Alter Construction Stage	No Impact Alter Construction Stage	No Impact Alter Construction Stage	No Impact Alter Construction Stage	No Impect Alter Construction Stage	No Impact After Construction Stage	No Impact After Construction Stage	No Impact Alter Construction Stage	No Impact Alter Construction 8
3.12	Construction Risk along Pipeline Corridors		Constant and the second			al an teacher and	以 於10月1日日的社会	Contraction of the		A STATE OF STATE
		Most Variability in Depth to Bedrock	Most Variability in Depth to Bedrock	Least Variability in Depth to Bedrock	Most Variability in Depth to Bedrock	Least Variability in Depth to Bechock	Most Variability in Depth to Bedrock	Most Variability in Depth to Bedrock	Most Variability in Depth to Bedrock	Most Variability in Depth to Bee
3,13	Operation and Maintenance - WwTP, Pumping Stations & Pipeline ancitaries						And Alexandre			
		Most lasues	Most asues	Least lasues	Most Issues	Linest lasues	Most issues	Most issues	Most Issues	Most issues

Phase 2 Alternative Sites Assessment and Route Selection - Matrix Assessment

Second Iteration on Matrix - List of Sub-Criteria assigned an 'amber' colour during the second iteration of the matrix

Ret	Environmental Criteria	Annebrook	Bakturgen	Clonehagh	Cookstown	Cloghran	Newtowncorduit	Retherton	Saucerstown	Tyrrelatown Little
1.0	Cultural Haritage	Annebrook	Beidurgen	Clonehegh	Cookstown	Clegitren	Ministerincondutt	Reduction	Sevension	Tyrralstown Little
1.1	Cultural Heritage -Siles	and the second second	The Case of Strategies and Strategies and			HERE THE A	and the second	and the second second		
1.1.1	Patential to Impact (direct/indirect) on National Monuments (designated sites)	Direct: None Indirect: None	Direct: None Indirect; None	Direct; None Indirect; None	Direct: None Indirect: None	Direct: None Indirect: None	Direct: None Indirect: None	Direct: None Indirect: None	Direct: None & Indirect: None	Direct: None Indirect: One moderate negative (DU005-038)
1.1.4	Potential to impact (direct/indirect) on CH sites (previously unrecorded sites)	Direct: None Indirect: Four moderate negative (CH 26, 105,106,108)	Direct: None Indirect: Two, one moderate negative (CH 30), one slight negative (CH 32)	Diract: None Indiract: Three Imperceptible negative (CH 56, 65, 62)	Direct: None Indirect: Two slight negative (CH 30, CH 32)	Direct: None - Indirect: None	Direct: None Indirect: Four imperceptible negative (CH 13, 14, 16, 17) & three slight negative (CH 11, 12, 24)	Direct: None Indirect: Three imperceptible negative (CH 2, 7, 10) & one slight negative (CH 8)	Direct: Three profound negative (CH 38, 39, 40) Indirect: Two moderate negative (CH 41, 42), one slight negative (CH 43), one Imperceptible negative (CH 48)	Direct: None Indirect: One slight negative (CH 3) & one imperceptible negative (CH 2)
1.2	Cultural Haritage -Pipelines	Section Constant	Same and Share					and the low sea		San Star Sheet
13	Cultural Heritage - Marine Outlaile		M. Starten	Contributions	Sanda P. Markara				N. C.	
2,0	Landscope & Viscol	Annabrook	Buldurgen	Clonehegh	Cookstown	Cloghran	Newsownoorduit	Retherton	Seucerstewn	Tymeletown Little
2,1	Landecape & Visual - Sites			the second second second	Sec. 20 Sec.	in a state of the	and the second			a with and deep
21,1	Potential to impact on views from scenic routes (designation in Fingal CDP)	Moderate - scenic views located 1.2km NE and 1.3km SW have no visibility but those 2.7km north within HSL zone have elevated clear view lowards site	Significant - one 0.5km N with clear views and one 0.5km SE also with clear views - also distant elevated views from scenic routes >5km N	Imperceptible - nearest scenic route firm E and associated with coast	Significant - one 0.5km E with relatively clear views towards the sile afforded from hare - also distant elevated views from scenic routes >Skm N	Imperceptible - nearest scenic route Jum HE and associated with coast	Significant - one 0.5km N and one 0.7km NW - clear views available from the nearest of these also longer delance (3km) elevated views from scenic routes to NW	Moderate - one located 0.5km S and although likely to be associated with coastal views it does afford an elevated but brief glimpse of the site in the opposite direction	Significant - One 0.5km S with occasional open and elevated views over site and enother 0.5km W with no claw views	Significant - One 1.6km N with clear views over alle - bro 2km NW and one 1.7km S with Bealing views over site
2.1.2	Potential to impact on areas of 'Highly Sensitive Landscape' (designation in Fingal CDP)	Moderate - HSL located 1,2km N elevated above with some intervisibility	Moderate - HSL located 1.5km N with some intervisibility from higher ground within the HSL	Slight - one 1.3km NE with limited Intervisibility	Slight - HSL located 1.6km N with Imited Intervisibility	Slight - one 1km E with limited Intervisibility	Slight - elevated HSL zone located 0.7km NW but separated by M1 motorway	Slight - extensive coastal one located only 0.5km S but within a different landscape and viewing context	Imperceptible - one 2.5km E associated with the coastal landscept	Significant - an extensive one on higher ground 0.5km N of site with strong intervisibility and similar character
22	Landecape & Visual - Pipelines		Distanting the second		Selection of the selection of the					
2.3	Landecepe & Visual - Marine Outfalle			No. 19 Contraction of	and the state of the	Section Station		S. A. S. S. S. S. S.		Sand a start of
3.0	Ecology	Annabraok	Seldurgen	Clonshigh	Cookatown	Cloghran	Hentowncordult	Rathertan	Seucerstown	Tyrrelatown Little
3.1	Ecology - Sites	and the second second	and the state of the state of the			An Children	and the shirt of			
3.1.1	Potential to impact on Natura 2000 Sites and Natural Heritage Areas	Slight: 4.1km upstream of Natura 2000 wetland sites Rogerstown Estuary SPA/SAC)	Silight: 5.3km upstreem ol Natura 2000 wetland sites Rogerstown Estuary SPA/SAC and 7.0km upstreem of Natura 2000 wetland sites Mathide Estuary SPA/SAC	Slight: 4,5km upstream of Natura 2000 wetland sites (Baldoyle Bay SPA/SAC)	Slight: 7.0km upstream of Natura 2000 wetland sites(Malahide Estuary SPA/SAC)	Slight: 4.3km upstream of Natura. 2000 wedand sites (Baidoyle Bay SPA/SAC)	Moderate: 2.5km upstream of Natura 2000 wetland sites Rogerstown Estuary SPA/SAC)	Significent: 1.0km upstream of Natura 2000 wetland sites Rogenstown Estuary SPA/SAC)	Moderate: 3.0km upstream of Natur 2000 wetland sites (Melehide Estuary SPA/SAC)	Moderate: 2.2km upstream of Nature 2000 welland sites (Rogerstown Estuary SPA/SAC)
3.1.5	Potential to impact on a salmonid system	Moderate - The access road abuts the a tributary of the Balyboghil River (main channel and tributaries) constitutes a salmonid system.	Moderate - The Ballyboghi River (mein channel and tributaries) constitutes a satmonid system and the access road crosses it. However, the Donabate River constitutes a non- salmonid system.	Slight - The Mayne River constitutes a non-salmonid system	Slight - The Donabate River constitutes a non-salmonid system.	Moderate - The Skiica River (main channel and tributaries) constitutes a salmonid system.	Moderate - The Ballough River (main channel and tributaries) constitutes a salmonid system and the access road crosses it.	Slight - The Lusk River constitutes a	Significent - The Broadmeadow River (main channel and tributaries) constitutes a salmonid system and the access road crosses a tributary and site abults a tributary.	Imperceptible - The Lask River consilies a non-stimorid system
3.1.7	Potential to result in the loss of winter Greying Goose Feeding Areas based in IWeBS Data.	Imperceptible - Outside the normal geographical range of the north Go- Dublin writer Greyleg Gosse Rock	Imperceptible - Outside the normal peographical range of the north Co- Duble writer Greyleg Goose Rock	Imperceptible - Outside the normal geographical range of the north Co Duble winter Groylag Goose Book	Imperceptible - Outside the normal geographical range of the north Co Dublin winter Greyleg Goose Tock	Imperceptible - Outside the normal geographical range of the north Co Dublin winer Greyleg Goose Rock	Imperceptible - Outside the normal geographical range of the north Co Dublin where Grayley Gorse flock	Moderate - Within the normal geographical range of the north Co Dublin winter Greylag Goose flock. Location is in an area considered Biely to be used by the north Co Dublin winter Greylag Goose flock or occasion	Imperceptible - Outlide the normal geographical range of the north Co Dublin where Greyting Goose flock n	Significant - Within 'Skerries Grasslands' IWEBS area, ikely to b a feeding able for the north Co Duble wher Greyley Goose Rock
12	Ecology - Pipelines	Section 2				a state of the second				Photo
11	Ecology - Marine Outlall	A CARLES AND	Contraction and	And the second		The state of the		In the second		The second second

4.0	Hydrology	Annatirook	Beldurgen	Clonehegh	Cookstown	Cloghran	Hewtowncorduit,	Retherton	Beucaratown	Tyrreletown Little
4.1	Hydrology - Slice			and the new state				Press Prints		
4.1.1	Proximity to water bodies in terms of flooding and as an indicator of sensitive surface water receptors	Slight: The Ballough River (water quality (33/4) and Ballycophil stotary (water quality (23) are within 170m and 60m of the site respectively, Maclium importance, Will have permanent impact on small proportion of attribute.	Slight: Ballyboghill River (200m north), Ballyboghill Iributary (40m west) (water quality (23) and Belinstown Iributary (60m south) of the site (all (23), Medium important the site (all (23), Medium important magnetic south and the south and proportion of altribute.	and Mayne Troutary (south) (water quality Q3) within 370m of the site, Medium importance. Will have	Moderate: Belinstown River (10m notit) and Broadmedow ributary (Item south) (water quality 03) of site, High Importance, Will have permanent impact on small proportion of attribute.	Aloderate: Sluice River (10m north) and Sluice tributary (290m south) of the site, High importance. Will have permanent impact on small proportion	east) and Ballough River (10m west) of the site (water quality Q3), High Importance. Will have permanent impact on small proportion of	Slight: Collinstown Stream (30m west) and Palmerstown Stream (120m southeast) of the site, Medium importance. Will have permanent impact on small proportion of attribute.	Significant: Broachmandow inductions (water quality (23) are- walshin 10m of the sale, the sale is summarized by Inductives almost introduction by Inductives almost introduction, 11 have permanent impact on a small proportion of attribute. With have permanent impact on a significant proportion of attribute.	Imperceptible: Collinstown Stream (120 southwest), Rush Town Stream (200m southwest) and Balcumin Stream (300m morth) of the site. Low importance. With have parmease impact on small proportion of attribute.
42	Hydrology - Pipelines	CONTRACTOR OF		1. April 1 Section					and the second	and the second of
4	Hydrology - Marine Cutial			A TANK	State States		成為自然的影響的影響			
1.0	Hydrogeology	Annebrook	Beldurgen	Clonshigh	Caolatown	Cloghran	Newtownoordult	Ratherian	Secondom	Tyrrelatour Little
6.1.2	Hydrogeology - Sites									
5.1.3	GSI Groundwater Protection Response metrix	R1	R1	R1	R1	R2	R1	R1	R2	RI
12	Hydrogeology - Pipelines	a seat and the R	and a state of the			S. A. Stadlering		Carlos States		
-	Hydrogeology - Marine Cutles	2月1日 日本	h find and starting			Real Change and		and a state of the state of the		Carton Carton Carton
6.0	Solis and Goology	Annabrosit	Baldurgan,	Clonahagh	Coolation	Clogisten	Newtowncordult	Reflection	Secondown	Tyrrelatown Little
6.1	Salls and Geology - Siles							Population 200		Star Star Star
62	Bolle and Goology - Pipelines	and the second second		A MARKET AND AND AND			·	and the second		
U	Selis and Goology - Merine Cuttell									and the second
7.0	Agronomy & Agriculture - Sites	Annobrook	Bakturgen	Clonehegh	Coolutown	Cloghran	Newtowncordult	Ratherine	Secondaria	Tyrrelatown Little
7.2	Farming Enterprise	Beef & Horticulture (The majority of the site is used for a beef enterprise)	Tillage, Polatoes & Horliculture	Horticulture & Tillage	Tillage, Horticulture, & Potatoes	Beef 1	Mixed liveslock & tillage	Honiculture & Tillege, (Intensive market gardening area)	Tillage. Polatoes& Horticulture	Beef (sile is located in en intensive market gardening area)
7.8	Overall Impact	Moderate negative impact	Moderate negative impact	Moderate negative impact	Moderale negative impact	Moderale negative impact	Moderate negative impact	Major nagative impact	Moderale negative impact	Moderate negative impact
	Noise	Annabroek	Baldurgen	Clonathagh	Cookstown	Cloghran	Mentowncorduff	Retherton	Severation	Tyrreletown Little
	Air and Odout	Annabrook	Boldurgen	Clonshigh	Cookstown	Cloghran	Newtowncondult	Retherian	Saucerstown	Tyrreistown Little
10.0	People and Communities	Annsbrook	Baldurgen	Clonshagh	Costation	Cloghran	Newtowncordult	Reduction	Succession	Tyrralstown Little
10.1	Number of residential & commercial buildings 300-500m from site boundary	44	21	83	53	116	33	131	66	50
10.4	Potential to Impact on areas of Significant Population Densities	Lusk is c. 3.1km to the east and Ballyboughal (school) is 2.2km to the SW.	Ballyboughal (houses at Doorope) is c. 0.7km to the NW.	Belcamp and Damdele are c. 0.8km to the south. Dublin Airport entrance and Terminal 1 are c. 2.1km and 2.4km to NW respectively.	Ballyboughai (houses at Dooroge) is c. 1.1km to the NW.	Swords is c. 1km to the north. A housing estate at Ballymacarde is c. 0.6km to the SE. Dublin Akport entrance is c. 1.1km to the SW.	Lusk is c. 1.3km to the east.	Rush is c. 0.7km to the east and Lusk (settlement at Lough Common) is c. 1.8km to the west.	Swords (Mooretown) is c. 1.2km to the SE.	Lusk (school) is c. 1.6km to SW and Rush is c. 1.9km to the SE.
11.0	Traffic	Annebrook	Beldurgan	Clonshegh	Coolision	Cloghran	Newtowncorduit	Rethertan	Seucerstown	Tyrreistawn Little
11.4	Works required to provide safe access entrance	Some local widening likely. Boundary treatments required for visibility so some additional landtake probable	Some local widening likely. Visibility ok,	Visibility ok. Can make use of existing lield access. Some local road widening probable	Road would likely require widening. To achieve visibility would require significant landtake.	Road on embanisment so would need to raise access road on approach to junction	None, Wide road, good visibility	Some local widening likely. Boundary treatments required for visibility so some additional landtake probable	Some local widening likely. Boundary treatments required for visibility so some additional landtake probable	Good visibility achievable with minim landtake. Can use existing field access.
11.6	Frequency of accidents near entrance	1 accident (minor) near proposed entrance	Hore	None 1	Nate	Now	4 accidents (3 minor 1 serious) near proposed entrance	1 accident (minor) approx. 200m from entrance	4 accidents (all minor) located near entrance	None Carlos Anno 1

12.0	Planning Policy	Annebrook	Beidurgen	Clonshagh	Cookstown	Cloghran	Hewtownoordult	Retherton	Saucersiown	Tymelstown Little
0.00.000	Site Zoning	RU (Rural)	RU (Runal)	GB (Greenbelt) HT (High Tech)	RU (Rural)	GB (Grænbell)	RU (Runal)	RU (Rural)	OS (Open Space) GB (Greenbell)	RU (Rural)
12,3	Airport Public Salety and Noise Zones on alle		NA	Outer PS2 Inner Noise Zone Outer Noise Zone	NA. THE STATE	Inner PSZ Outer PSZ Inner Noise Zone Outer Noise Zone	WA	NA		NA STATE
12.7	Zoning present within 300m of alte boundary	RU (Rural)	RU (Rurel)	GB (Greenbelt) HT (High Tech) OS (Open Space) PA (New Residential)	RU (Rural)	GB (Greenbelt) GE (Enterprise)	RU (Rural) RC (Rural Cluster)	AU (Rural)	OS (Open Space) GB (Greenbelt) RU (Runal) RA (New Residential)	RU (Rumi)
134	Englassing Design - Pipelines	Annebrook	Beldergen	Cloneheigh	Cookstown	Cloghran	Newtowncordull	Rathertan	Settoratore	Tyrrelatown Little
13.1	Pipeline Longiti	San Markey		A Real Providence				4. 制作的高品牌推进		
13.1.6	Total Pipeline Longths		Contraction and a state	A AND TRANSPORTATION		电空运电子 计中国公司	P Contract of the second			
13.2	Power Requirements			a strange of the strange of			a.	a ser en en avante	211月1日日月1日日日	
1	Total Power Requirements	10,000 KW	9,700 KW	7,850 KW	9,600 kW	8,550 kW	9,300 kW	9,800 kW	7,100 kW	10,500 kW
13.3	Carbon Emissions	A SHE SHE SHE	a strate to be shown	a state was a state	A REAL PROPERTY OF	A State of the second	a chaile and the second		a start and a start and	
	Total Carbon (tonnes CO2)	504,008	486,427	365,831	482,905	435,140	482,523	508,325	\$79,594	547,849
15.5	Access / Right of Way / Wayleaves along . Pipeline Corridors	Ex Propostal	a star and and a				an the second the bas	2 Contraction In the		
13.6	Crossings - Waterways, Rell, etc. along Pipeline Contitions	and the second second				A STREAM STREET		1	and the second s	
	Potential to Impact on Physical Intrastructure along Pipeline Contiders				Contraction of the second			and the Party server of		
13.6	Presence of Public Utilities within WwTP		a and a second			A Real of the second second second second		a the state of the state of the		
13,10	the state with a state of the state			the second second	A State State of State	A Constant of the second			S. T. S. S. S. S. S. S. S.	Construction of the second
ALC: NOT	Noute Traille Management							The second second	2 And State State	
13,12	Construction Risk along Peoline Consider	and the second states of the	a the second second	A BOARD AND AND AND AND AND AND AND AND AND AN			a chemole states of the	a summer of		
13,13	Operation and Maintenance - WwTP, Pumping Stations & Pipeline anotheries			A Province of the				a succession and		

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Phase 2 Alternative Sites Assessment and Route Selection - Matrix Assessment

Third iteration on Matrix - List of Sub-Criteria assigned an 'amber' colour during the third iteration of the matrix

Ref	Environmental Criteria	Annebrook	Beklurgen	Clonehagh	Cookstown	Cloghran	Newtowncorduft	Rethertan	Tyrrelatown Little
1.0	Cultural Heritage	Annebrook	Beldurgen	Clossheph	Cookstown	Cloghran	Hewtowncordult	Rathertan	Tyrrelatown Little
1.1	Cultural Heritage -Sites	「日本」でも				e e Real Stephen			
1.1.1	Potential to Impact (direct/indirect) on National Monuments (designated sites)	Direct: None _ Indirect: None	Direct: None Indirect: None	Direct: None Indirect: None	Direct: None - Indirect: None	Direct: None Indirect: None	Direct: None Indirect: None	Direct: None - Indirect: None	Direct: None Indirect: One moderate negative (DU005-038)
1.1.2	Potential to impact (diract/indirect) on HMPs	Direct: None Indirect: One imperceptible negative (Gracedieau DU007-015)	Direct: None Indirect: One imperceptible negative (DU007-016)	Direct: None Indirect: Three imperceptible negative (DU015-056, 057 & 059)	Direct: None Indirect: One slight negative (DU007-016)	Direct: None Indirect: One slight negative (DU014-010)	Direct: None Indirect: None	Direct: None Indirect: None	Direct: None Indirect: Two imperceptible negative (DU008-057, 055)
1.1.3	Potential to impact (direct/indirect) on RPS/NIAH (designated sites)	Direct: None Indirect: None	Direct: None Indirect: One imperceptible negative (RPS 323)		Direct: None Indirect: One sight negative (RPS 323)	Direct: None Indirect: One slight negative (RPS 605)	Direct: None Indirect: None	Direct: None Indirect: One moderale negative (RPS 246), one imperceptible negative (RPS 283)	Direct: None Indirect: One moderate negative (RPS 245)
1.2	Cultural Heritage -Pipelines		Altopic and			La Strender Const			
1.3	Cultural Heritage - Marine Outfalle								
2.0	Landecape & Vieuel	Annabrook	Baldurgan	Clonshagh	Cookstown	Cloghran	Newtowncorduff	Retherton	Tymeletown Little
21	Landscape & Visual - Sites								
2.1.1	Potential to impact on views from scenic routes (designation in Fingal CDP)	Moderate - scenic views localed 1.2km NE and 1.3km SW have no vebility but those 2.7km north within HSL zone have elevated clear view towards site	Significant - one 0.5km N with clear views and one 0.5km SE also with clear views - also distant elevated views from scenic routes -5km N	Imperceptible - nearest scaric route 4km E and associated with coast	Significant - one 0.5km E with relatively clear views towards the site alforded from here - also distant elevated views from scenic routes >5km N	Imperceptible - nearest scenic route 3km, NE and essociated with coast	Significant - one 0.5km N and one 0.7km NW - clear views available from the nearest of these also longer distance (3km) elevated views from scenic routes to NW	Moderate - one located 0.5km S and although Broly to be associated with coastal views It does alford an elevated but briel glimpse of the site in the opposite direction	Significant - One 1.8km N with clear views over site - two 2km NW and one 1.7km S with fleeting views over site
2,1,2	Potential to Impact on areas of 'Highly Sensitive Landscape' (designation in Fingal CDP)	Moderate - HSL localed 1.2km N elevated above with some Intervisibility	Moderate - HSL located 1.5km N with some intervisibility from higher ground within the HSL	Slight - one 1.3km NE with limited intervisibility	Slight - HSL located 1.6km N with Imited intervisibility	Slight - one 1km E with limited intervisibility	Slight - elevated HSL zone located 0.7km NW but separated by M1 motorway	Slight - extensive coastal one localed only 0.5km S but within a different landscape and viewing context	Significant - an extensive one on higher ground 0.5km N of site with strong intervisibility and similar character
2,1,3	Potential to Impact on views from heritage/ tourist/amenity leatures	Slight - no such features identified in the immediate vicinity of site	Slight - no such features identified in the immediate vicinity of site	Moderate - Potential oblique views from upper storeys of Bewleys Airport Hotel (0.5km W) as well as parify screened views from the Hilton Airpor Hotel (1.3km SE) - also GAA grounds to S	Slight - no such features identified in the immediate vicinity of site	Slight - no such leatures identified in the immediate vicinity of site	Moderate - Pub located on nearest sceric route designation 0.5km NE overlooking the site - new M1 service: 1km N - B&B at Dunganstown 1km SE	Moderate - Baldungan Church on hill 2.5.Km N with extensive scenic views in the direction of the site	Significant - Baldungan Castle on hill 1.7km N with extensive scenic views in the direction of the site
22	Landscape & Visual - Pipelines		· 特别的"		A COLORADO	The Asia Managers	ARCTIC THE REAL	Reality Straight	
-23	Landecepe & Vieuel - Marine Outlails							and a subject of the subject of	

3.0	Ecology	Annabrook	Baldurgen	Clonshegh	Cookstown	Cloghran	Newtowncondulf	Ratherten	Tymulatown Little
3.1	Ecology - Siles								
3.1.1	Potential to impact on Natura 2000 Siles and Natural Heritage Areas	Slight: 4.1km upstream of Natura 2000 wetland sites Rogerstown	Estuary SPA/SAC and 7.0km	Slight: 4.6km upstream of Natura 2000 wetland sites (Baldoyle Bay SPA/SAC)	2000 wetland sites (Malahide Estuary	Slight: 4.3km upstream of Natura 2000 wetland sites (Baldoyle Bay SPA/SAC)	Moderatis: 2.9km upstream of Natura 2000 welland sites Rogerstown Estuary SPA/SAC)	Significant: 1.0km upstream of Natura 2000 welland sites Rogerstown Estuary SPA/SAC)	Noderate: 2.2km upstream of Natura 2000 welland altes (Rogenstown Estuary SPA/SAC)
3.1.5	Potential to impact on a salmonid system	Moderate - The access road abuts the a inbutary of the Ballyboghil River (main channel and inbutaries) constitutes a salmonid system.	Moderate - The Ballyboghi River (main channel and tributaries) constitutes a salmonid system and the access road crosses & However, the Donabate River constitutes a non- salmonid system.		Slight - The Donabate River constitites a non-salmonid system.	Moderate - The Sluice River (main channel and tributaries) constitutes a salmonid system.	Moderate - The Ballough River (main channel and tributaries) constitutes a salmonid system and the access road crosses it.		Imperceptible The Lusic River constities a non-salmonid system
3.1.7	Potential to result in the loss of winter Greying Goose Feeding Areas based in WeBS Data.	Imperceptible - Outside the normal geographical range of the north Co Duble winter Graying Goose Book	Imperceptible - Qualde the normal geographical range of the north Co Dublin where Grayleg Goose Rick	Imperceptible - Outside the normal geographical range of the north Co. Dublin winter Greying Goose Bock	Imperceptible - Dunido the normal geographical range of the north Co Dublin winter Greyleg Goose Rock	Imperceptible - Outside the normal geographical range of the north Co Dublin wher Grayleg Goose Bock	Imperceptible - Outside the normal geographical range of the north Co Dubin winter Greyleg Goose flock	Moderate - Within the normal peographical range of the north Co Dublin winter Greylag Goose Bock. Location is in an area considered Beek to be used by the north Co Dublin winter Greylag Goose Bock on occasion	Significant - Willin Skerries Grasslands IWEBS area, likely to be a leading size for the north Co Dublin winter Grayleg Goose Rock
3.1.9	Potential to result in algorificant loss of winter habitat for Lapwing and Golden Plower and other wader species outside of designated areas (Le. relatively large, flat open fields of ploughed or failow arable land or pasture)	Moderate - site includes wel pasture suitable for Lapwing, Golden Plover or other winter waders	fields suitable for Lapwing, Golden	Moderate - ske includes large pastum fields suitable for Lagwing, Golden Plover or other winter waders	Moderate - site includes large arable fields suitable: for Lapwing, Golden Plover or other winter waders.	Slight - smallish fields, unlikely to be used regularly by Lapwing and Golden Plover	Slight - smallish fields, unlikely to be used regularly by Lapwing and Golden Plover	Moderate - smallish fields, but proximity to Rogerstown Estuary increases Biklhood of site being used by Lapwing and Golden Plover	Significant - sile includes large arable lields and pestures suitable to Lapwing, Golden Plover or other winter waders
12	Ecology - Pipelines	Contraction and the	North Martine 1	Constant and the	See Street Street Street	Service Strategies		Steel Contraction of the	Marine and a
3.8	Ecology - Marine Outlal		a later states	a service the service	Station and				
3,3.1	potential to impact on Natura 2000 Sites within survey area footprint	Moderale (main area avoids marine designations)	Moderale (main area avoids marine designations)	Significant (passes through Baldoyle SAC)	Moderale (main area avoids marine designations)	Significant (passes through Baldoyle SAC)	Moderate (main area avoids marine designations)	Moderate (main area avoids marine designations)	Moderate (main area avoids marine designations)
3,3.2	Potential to Impact on Fingal Ecological Network Sites	Moderate Transfer pipeline can potentially pass through SL Catherner's Wood and/or Drumanagh Nature Development Areas, and mus cross through Annex I habitats at the coastiline (Rocky Sex Cliffs)	Moderale Transfer pipeline can potentially pass through St. Catherine's Wood and/or Drumanagh I Nature Development Areas, and musi cross through Annex I habitats at the coastline (Riocky Sea Cliffs)	Significant Transfer pipeline must pass through Baldoyle Coast Ecological Builder Zone and Portmanmock Golf Course Nature Development Area. These sites are protected in the County Pilan and serve to further protect the Baldoyle Bay SPA/SAC(pNHA.	Moderate Transfer pipeline can potentially pass through SL Catherine's Wood and/or Drumangh Nature Development Areas, and musi cross through Annex I habitats at the coastline (Rocky Sea Califs)		Moderale Transfer pipeline can potentially pass through St. Catherine's Wood and/or Drumanagh Nature Development Areas, and mus cross through Annex I habitais at the coastline (Rocky Sea Cilifs)	Moderate Transfer pipeline can potentially pass through St. Catherine's Wood and/or Drumanagh Nature Development Areas, and mus cross through Annex I habitats at the coastline (Rocky Sea Ciffs)	
3.3.3	Potential to impact on other potectial annex 1 habitats (under the Habitats Directive) within the survey area footprint	Moderate (possible, dune habitats and biogenic reels in north area)	Moderate (possible, dune habitats and biogenic reefs in north area)	Significani (saltmasch and zosiera beds in Bardoyle Estuary)	Moderate (possible, dune habitats and biogenic reels in north area)	Significant (saitmasch and zosiera beds in Bardoyle Estuary)	Moderate (possible, dune habitats and biogenic reels in north area)	Moderate (possible, dune habilats and biogenic reels in north area)	Moderate (possible, dune habitats and biogenic reefs in north area)

4.0	Hydrology -	Annabrook	Baldurgan	Cloneingh	Cooksiown	Cloghran	Newtowncordult	Rathertan	Tymeletown Little
4,1	Hydrology - Slice						(1) 「「「「「」」」		
	Proximity to water bodies in terms of Receiling and as an indicator of sensitive surface water receptors	Slight: The Balough River (water quality C3/C4) and Ballyboghill Iributary (water quality C3) are within 170m and 60m of the site respectively, Medium importance. Will have permanent impact on small proportion of altribute.	Slight: Balyboophill River (200m north), Balyboophill tributary (40m west) (water quality Q3) and Belinstown tributary (60m south) of the site (all Q3), Medium importance. Will have permanent impact on small proportion of altribute.	Stight: Medium: Cuckoo River (north) whin 50m and Mayne River and Mayne Tributary (south) (water quality (23) whin 370m of the site, Medium importance. Will have permanent impact on small proportion of attribute.	Moderate: Belinstown River (10m north) and Broadmeedow tibutary (1km south) where quality Q3) site, High Importance, WB have permanent Impact on small proportion of attribute.	Afoderate: Skice River (10m north) and Skice tributary (200m south) of the alte. High importance. Will have permanent impact on small proportion of attribute.	Moderate: Ballough Inbutary (180m east and Ballough River (10m vest) of the site (vestor callet) (23). High importance, Will have permanent impact on small proportion of attribute.	Slight: Collinstown Stream (30m west) and Palmerstown Stream (120m southeast) of the site, Neckum importance. Will have permanent impact on small proportion of attribute.	Imperceptible: Collinstown Stream (120 southwest), Ruch Town Stream (360m southwest) and Balcunnin Stream (300m north) of the site. Low importance. Will have permanent impact on small proportion of altribute.
4.1.2	Culverting requirement - used to indicate impact on flood-prone watercourses due to reduced conveyance.	Alone: No new culvert required.	Moderate: Crossing Ballybophil River, High Importance. Will have permanent Impact on small proportion of attribute.	None: No new culvert required	Imperceptible: Culvert might be required for a local minor tributary, Low importance. Will have permanent impact on small proportion of attribute.	None: No new culvert required	Slight: Crossing Ballough Tributary , Medium importance. Will have permanent impact on small proportion of attribute.	Slight: Crossing Collinstown Stream , Medium importance. Will have permanent impact on small proportion of attribute.	None: No new culvert required.
4.1.4	Potential Impact on ecologically Important and designated sites.	Slight: The rivers discharge into the Rogerstown Estuary (SAC, SPA, pNHA, Ramara and SNR) approx. 4.1km downstiream, Medum importance. Will have permanent impact on small proportion of attribute.	Siight: The rivers discharge into Rogerstown Estuary (SAC, SPA, pN+A, Ramaar and SNR) and Malahide Bay (SAC, SPA and pN+A) approx. 5.3 and 7km downstream respectively, Medium importance. Will have permaneri impact on small proportion of attribute.	Imperceptible: The Mayne River discharges into Bakkoyle Estuary (SPA, SAC and pHrA) approx. 4.6km downstream, Low importance. Will have permanent impact on small proportion of altribute.	Imperceptible: The Belinstown River discharges Hito Malahide Bay and the Broadmeadow tributary discharges into Broadmeadow Estuary (SAC, SPA, pNHA) approz. Law Importance. Will have permanent impact on small proportion of attribute.	Imperceptible: The river discharger into Badoyle Estuary (SAC, SPA and PhiNA) approx. Alsm downstream, Low importance. Will have permanent impact on small proportion of attribute.		Addensite: The Collinsions stream discharges into Ropersions Estuary (SAC, SPA, phHA, Ramsar and SNR) approx. Hon downstream, His importance. Will have permanent import on small proportion of attribute.	Slight: The Collinstown Stream discharges into Rogerstown Estuary and Rush Town Stream discharges into the inits ac (unpolitic dwater quality approx. 2.2km downstream, Medium importance, will have permanent impact on small proportion of attribute.
42	Hydrology - Pipelines	Configer Water Cold State		End and the second	En the second			S. S. Sector Market Sector	
43	Hydrology - Marine Outfall		and a state of the state of the					· · · · · · · · · · · · · · · · · · ·	
5.0	Hydrogeology -	Annabrook	Beldurgen	Clonehegh	Cookstown	Cloghran	Newtowncordulf	Rethertan	Tyrreletown Little
5.1	Hydrogeology - Sites							Colline parts	
5,1.3	GSI Groundwater Protection Response matrix	R1	R1	R1	R1	R2	R1	R1	R1
5,2	Hydrogeology - Pipelines				Rest Restored and March	Print and the second	and phill all sufficient	the state of the state of the	
5.3	Hydrogeology - Marine Outlall		STATES FRANCE				10、11、10、10、10	P. Martine Martine	
8.0	Soils and Geology	Annebrook	Bakturgan	Clonshegh	Cookstown	Cloghran	Heuriownoordult	Ratherton	Tyrrelstown Little
8.1	Solls and Geology - Siles	The sector of the sector	Carthern and the species			and the second	a faith a strength of a		
8.2	Soile and Geology - Pipelines		When the state of the			The second second			
6.3	Solis and Geology - Marine Outfall								
7,0	Agronomy & Agriculture - Sites	Annabrook	Bakturgen	Clonshigh	Cookstown	Cloghran	Newtowncordult	Retherten	Tyrrelatourn Little
7.2	Farming Enterprise	Beel & Horticulture (The majority of the site is used for a beel enterprise)	Tillage, Potatoes & Horticulture	Horticulture & Tillage	Tillage, Horticulture, & Potatoes	Beel	Mixed livestock & tillage	Horticulture & Tillage, (Intensive market gardening area)	Beel (site is located in an intensive market gardening area)
7.3	Number of landowners impacted within elte boundary	TIDSIL	1103	4 to 6	163	4 10 6	1.10.3	7 to 9	103
7.8	Overall Impact	Moderate negative impact	Moderate negative impact	Moderate negative impact	Moderate negative impact	Moderate negative impact	Moderate negative impact	Major negative impact	Moderate negative impact
•	Noime	Annabreok	Beidurgen	Clenshigh	Cookstown	Cloghran	Newtowncordulf	Ratherten	Tyrrelatown Little
9.0	Air and Odour	Annabrook	Bakturgen	Cionshegh	Cookstown	Cloghran	Newtowncordult	Rethertan	Tyrrelatown Little

10.0	People and Communities	Annabrook	Baldurgan	Clonshegh	Cookstown	Cloghran	Newtowncordulf	Rathertan	Tyrreletown Little
10.1	Number of residential & commercial buildings 300-500m from site boundary	4	21	83	53	116	33	131	50
10,4	Potential to Impact on areas of Significant Population Densities	Lusk is c. 3.1km to the east and Ballyboughal (school) is 2.2km to the SW.	Ballyboughal (houses at Dooroge) is c. 0.7km to the NW.	Belcamp and Damdale are c. 0.8km to the south: Dublin Airport entrance and Terminal 1 are c. 2.1km and 2.4km to HW respectively.	Ballyboughal (houses at Dooroge) is c. 1.1km to the NW.	Swords is c. 1km to the north. A housing estate at Gallymacarile is c. 0.6km to the SE. Dublin Airport entrance is c. 1.1km to the SW.	Lusk is c. 1.3km to the east.	Rush is c. 0.7km to the east and Lusk (settlement at Lough Common) is c. 1.8km to the west.	Lusk (school) is c. 1.6km to SW and Rush is c. 1.9km to the SE.
11.0	Traffic	Annebrook	Beldurgen	Clonshegh	Cookstown	Cloghran	Newtownoordust	Retherten	Tyrreletown Little
11.1	Length of access road required	1230m access road required	580m access road required	320m access road required	930m access road required	290m access road required	640 access road required	620m access road required	1,410m access road required
11.2	Number of crossings required for access road	None	2 river/stream crossings	None A Contractor	1 ditch/stream crossings	None	1 stream/river crossings	2 stream/river crossings	1 road crossing
11.3	Potential Impact on landowners	Access road impacts on 6 fields	Access road impacts on 3 fields splitting one	Access road impacts on 2 fields however can follow existing track	Access road impacts on 5 fields	Access Road Impacts on 2 field	Access Road impacts on 2 fields	2-3 fields impacted upon.	Access road impacts on 8 fields. Could potentially require demolition of barn
11.4	Works required to provide safe access entrance	Some local widening likely, Boundary treatments required for visibility so some additional landtake probable	Some local widening likely. Visibility ok.	Visibility ok. Can make use of existing field access. Some local road widening probable	Road would likely require widening. To achieve visibility would require significant landtake.	Road on embankment so would need to raise access road on approach to junction	None, Wide road, good visibility	Some local widening likely. Boundary treatments required for visibility so some additional landtake probable	Good visibility achievable with minima landtake. Can use existing field access.
11.6	Frequency of accidents near entrance	1 accident (minor) near proposed entrance	None	None	None	None	4 accidents (3 minor 1 serious) neer proposed enfrance	1 accident (minor) approx. 200m from entrance	None
11.7	Frequency of accidents on surrounding network (indication of general road safety issues)	lew accidents on surrounding roads	tew accidents on surrounding roads	High accident rate on N32 & R107 (including deaths)	few accidents on surrounding roads -	High accident rate on N32 & R107 (including deaths)	Several accidents on R132	Probable use of R127 south of Lusik with high accident rate. If this road waarn to be used then slight to moderate rating	Probable use of R127 south of Lusk with high accident rate. If this road wasn't to be used then slight to moderate rating
12,0	Planning Policy	Annabrook	Beldurgen	Clonehagh	Cookatown	Cloghran	Newtownoordult	Retherten	Tyrrelatown Little
12.2	Site Zoning	RU (Rural)	RU (Rural)	GB (Greenbelt) HT (High Tech)	RU (Rural)	G8 (Greenbelt)	RU (Rural)	RU (Rural)	RU (Rural)
12.3	Airport Public Safety and Noise Zones on site	WA	N/A	Outer PSZ Inner Noise Zone Outer Noise Zone	NA	Inner PSZ Outer PSZ Inner Noise Zone Outer Noise Zone	wa 1957 ti Africa I	NA	N/A
12.7	Zoning present within 300m of site boundary	RU (Rurel)	RU (Rural)	GB (Greenbelt) HT (High Tech) OS (Open Space) RA (New Residential)	RU (Rural)	GB (Greenbelt) GE (Enterprise)	RU (Rural) RC (Rural Cluster)	RU (Rural)	RU (Rural)
13.0	Engineering Design - Pipelines	Annabrook	Beidurgen	Clonshegh	Cookstown	Cloghran	Newtowncordulf	Rathertan	Tyrrelatown Little
13.1	Pipeline Length	Star Barthan			A. MICHARD	and the second			
13.1.6	Tetal Pipeline Langths		West Carlo and the	and the second second		A CONTRACTOR OF A CONTRACT		And Constant States	
	Total Pipeline Length	47,850 m	47,850 m	30,600 m	47,900 m	34,300 m	47,850 m	46,900 m	47,900 m
13.2	Power Requirements				Carl Carl Carl		Salar and and the second		
	Total Power Requirements	10,000 kW	9,700 kW	7,850 kW	9,600 kW	8,550 kW	9,300 kW	9,800 kW	10,500 kW
13.3	Carbon Emissions	A CARACTER STAT			A CONTRACTOR STOCK				CARDING STREET
	Total Carbon (tonnes CO2)	504,008	488,427	385,931	482,905	435,140	482,523	508,325	547,849
13.5					C. A. Participation			1	
13,6	Crossings - Waterways, Rail, etc. along Pipeline Corridors	6, 7, 5 A. 15 T		A Contraction of the second	Service and the service of the			2 	
13.7	Potential to Impact on Physical Infrastructure along Pipeline Corridors								
13.9	Presence of Public Utilities within WwTP	North Contraction	Referring the bits	A Carrow and a service					ACCEPTION AND A
13.10	Land Ownership and Titles along Pipeline Corridors		and the second second	a subserver a subserver and	The second second second second	A REAL PROPERTY AND A REAL PROPERTY AND A	a state and state	States to be the second second	the state of the state of the

1.1.~

13.11 Route Traffic Management	and the second second	and a share a start and			
13.12 Construction Flats along Pipeline Corridore					
13.13 Operation and Maintenance - WwTP, Pumping Stations & Pipeline ancillaries					

Phase 2 Alternative Sites Assessment and Route Selection - Matrix Assessment

Fourth Iteration on Matrix - List of Sub-Criteria assigned an 'amber' colour during the fourth iteration of the matrix

Ref	Environmental Criteria	Annsbrook	Baldurgan	Clonshagh	Cookstown	Cloghran	Newtowncorduff	Rathartan
1.0	Cultural Heritage	Annsbrook	Beidurgen	Clonshagh	Cookstown	Cloghran	Newtowncorduff	Retherten
1.1	Cultural Heritage -Sites							
1.1.2	Potential to Impact (direct/indirect) on RMPs (designated sites)	Direct: None Indirect: One imperceptible negative (Gracedieau DU007-015)	Direct: None Indirect: One imperceptible negative (DU007-016)	Direct: None Indirect: Three imperceptible negative (DU015-056, 057 & 059)	Direct: None Indirect: One slight negative (DU007-016)	Direct: None Indirect: One slight negative (DU014-010)	Direct: None Indirect: None	Direct: None Indirect: None
1.1.3	Potential to impact (direct/indirect) on RPS/NIAH (designated sites)	Direct: None Indirect: None	Direct: None Indirect: One imperceptible negative (RPS 323)	Direct: None Indirect: One imperceptible negative (RPS 792)	Direct: None Indirect: One slight negative (RPS 323)	Direct: None Indirect: One slight negative (RPS 605)	Direct: None Indirect: None	Direct: None Indirect: One moderate negative (RPS 246), one imperceptible negative (RPS 283)
1.1.4	Potential to impact (direct/indirect) on CH siles (previously unrecorded siles)	Direct: None Indirect: Four moderate negative (CH 26, 105,106,108)	Direct: None Indirect: Two, one moderate negative (CH 30), one slight negative (CH 32)	Direct: None Indirect: Three Imperceptible negative (CH 56, 65, 62)	Direct: None Indirect: Two slight negative (CH 30, CH 32)	Direct: None Indirect: None	Direct: None Indirect: Four imperceptible negative (CH 13, 14, 16, 17) & three slight negative (CH 11, 12, 24)	Direct: None Indirect: Three imperceptible negative (CH 2, 7, 10) & one slight negative (CH 8)
.12	Cultural Heritage -Pipelines							the state of the
1.3	Cultural Heritage - Marine Outfalls						la sector al	
2.0	Landscape & Visual	Annsbrook	Beldurgen	Clonshagh	Cookstown	Cloghran	Newtowncorduff	Rathartan
2.1	Landecape & Visual - Sitee							
2.1.1	Potential to impact on views from scenic routes (designation in Fingal CDP)	Moderate - scenic views located 1.2km NE and 1.3km SW have no visibility but hose 2.7km north within HSL zone have elevated clear view lowards site	Significant - one 0.5km N with clear views and one 0.5km SE also with clear views - also distant elevated views from scenic routes >5km N	Imperceptible - nearest scenic route 4km E and associated with coast	Significant - one 0.5km E with relatively clear views towards the site alforded from here - also distant elevated views from scenic routes >5km N	Imperceptible - nearest scenic route 3km NE and associated with coast	Significant - one 0.5km N and one 0.7km NW - clear views available from the nearest of these also longer distance (3km) elevated views from scenic routes to NW	Moderate - one located 0.5km S and atthough likely to be associated with coastal views it does afford an elevated but brief glimpse of the site in the opposite direction
2.1.2	Potential to Impact on areas of 'Highly Sensitive Landscape' (designation in Fingal CDP)	Moderate - HSL located 1.2km N elevated above with some intervisibility	Moderate - HSL located 1.5km N with some intervisibility from higher ground within the HSL	Slight - one 1.3km NE with limited intervisibility	Slight - HSL located 1.6km N with limited intervisibility	Slight - one 1km E with limited Intervisibility	Slight - elevated HSL zone located 0.7km NW but separated by M1 motorway	Slight - extensive coastal one located only 0.5km S but within a different landscape and viewing context
2.1.3	Potential to Impact on views from heritage/ tourist/amenity features	Slight - no such features identified in the immediate vicinity of site	Slight - no such features identified in the immediate vicinity of site	Moderate - Potential oblique views from upper storays of Bewleys Airport Hotel (0.5km W) as well as parity acceened views from the Hiltor Airport Hotel (1.3km SE) - also GAA grounds to S	Slight - no such features identified in the immediate vicinity of site	Slight - no such features identified in the immediate vicinity of site	Moderate - Pub located on nearest scenic route designation 0.5km NE overlooking the site - new M1 services 1km N - 8&B at Dunganstown 1km SE	Moderate - Baldungan Church on hill 2.5km N with extensive scanic views in the direction of the site
2.1.4	Potential to Impact on the character of the landscape character	Moderate - rural landscape charactee of strong integrity within and around the sile but motorway 1km E	Significant - open rural landscape character of high integrity within and around the site	Moderate - Sile has a rural landscape character of reasonable integrity but the surrounds are a peri- urban landscape of mixed land uses retaing to the urban fringe location	Significant - open rural landscape character of high integrity within and around the site	Moderate - The site itself is contained within a dense network of pastoral fields and hedgerows with nural HSL to the E however major transport infrastructure occurs immediately W and a quary and goll driving range is located directly E	Moderate - although the site itself is contained within a dense network of pastoral fields and hedgerows major transport infrastructure occurs immediately W and E	Moderate - open rural landscape character of relatively high integrity but localed near an urban fringe (Rush) - rail line to W does not strongly influence landscape character
22	Landacape & Visual - Pipelines	Enter and the						
23	Landacape & Visual - Marine Outialis			a a transfer of the second second	States and the second			

3.0	Ecology	Annsbrook	Baldurgan	Clonshagh	Cookstown	Cloghran	Newtowncorduff	Rethartan
3.1	Ecology - Sites							
3.1.1	Potential to impact on Natura 2000 Sites and Natural Heritage Areas	Slight: 4.1km upstream of Natura 2000 wetland sites Rogerstown Estuary SPA/SAC)	Estuary SPA/SAC and 7.0km	Slight: 4.6km upstream of Natura 2000 wetland sites (Baldoyle Bay SPA/SAC)	Slight: 7.0km upstream of Natura 2000 wetland sites(Malahide Estuary SPA/SAC)	Slight: 4.3km upstream of Natura 2000 welland sites (Bakdoyle Bay SPA/SAC)	Moderate: 2.9km upstream of Natura 2000 wetland sites Rogerstown Estuary SPA/SAC)	Significant: 1.0km upstream of Natura 2000 wetland sites Rogerstown Estuary SPA/SAC)
3.1.2	Potential to impact on Fingal Ecological Network Sites		Moderate: Site located 180m from Ballyboghill Stream ecological corridor, but access road crosses it.	Significant: Site abuts Mayne River ecological corridor	Slight: Site located 800m from Ballyboghill Stream ecological corridor.	Significant: Site abuts Sluice River ecological corridor	Significant: Site abuts Rath Little ecological corridor; Access road crosses Ballough Stream ecological corridor.	Imperceptible: Sile located more than 3km from Ballough Stream ecological corridor
3.1.3	Potential to impact protected species based on length of field boundary defined by hedgerow, which incorporates mature trees, within site, e.g. Badgers, Bats, Yellowhammer, Tree sparrow, Stock dove	Significant: 2.4km of hedges within the site	Slight: 0.1 km of hedges within the site	Moderate: 1,4km of hedges within the site	Slight: 0.9km of hedges within the site	Significant: 2.3km of hedges within the site	Significant: 3.4km of hedges within the site	Significant: 2.5km of hedges within the site
3.1.5	Potential to impact on a salmonid system	Moderate - The access road abuts the a tributary of the Ballyboghil River (main channel and tributaries) constitutes a salmonid system.	Moderate - The Ballyboghil River (main channel and tributaries) constitutes a salmonid system and the access road crosses IL However, the Donabate River constitutes a non- salmonid system.	Slight - The Mayne River constitites a non-salmonid system	Slight - The Donabate River constitites a non-salmonid system.	Moderate - The Sluice River (main channel and tributaries) constitutes a salmonid system.	Moderate - The Ballough River (main channel and tributaries) constitutes a salmonid system and the access road crosses it.	Slight - The Lusk River constitites a non-salmonid system
3.1.7	Potential to result in the loss of winter Greylag Goose Feeding Areas based in IWeBS Data.	Imperceptible - Outside the normal geographical range of the north Co Dublin winter Greylag Goose flock	Imperceptible - Outside the normal geographical range of the north Co Dublin winter Greytag Goose flock	Imperceptible - Outside the normal geographical range of the north Co- Dublin winter Greylag Goose flock	Imperceptible - Outside the normal geographical range of the north Co Dublin winter Greylag Goose flock	Imperceptible - Outside the normal geographical range of the north Co Dublin winter Greylag Goose flock	Imperceptible - Outside the normal geographical range of the north Co Dublin winter Greylag Goose flock	Moderate - Within the normal geographical range of the north Co Dublin winter Graylag Goose flock. Location is in an area considered likely to be used by the north Co Dublin winter Greylag Goose flock of occasion
3.2	Ecology - Pipelines			7.1.2.205	a system of the second second			
3.3	Ecology - Marine Outfall	Color Walt Road						
3.3.1	Potenital to impact on Natura 2000 Sites within survey area footprint	Moderate (main area avoids marine designations)	Moderate (main area avoids marine designations)	Significant (passes through Baldoyle SAC)	Moderate (main area avoids marine designations)	Significant (passes through Baldoyle SAC)	Moderate (main area avoids marine designations)	Moderate (main area avoids marine designations)
3.3.2	Potential to impact on Fingal Ecological Network Sites	Moderate Transfer pipeline can potentially pass through St. Catherine's Wood and/or Drumanagh Nature Development Areas, and must cross through Annex I habitats at the coastline (Rocky Sea Cliffs)	Moderate Transfer pipeline can potentially pass through St. Catherine's Wood and/or Drumanagh Nature Development Areas, and must cross through Annex I habitats at the coastline (Rocky Sea Cliffs)	Significant Transfer pipeline must pass through Baldoyle Coast Ecological Buffer Zone and Portmarnock Golf Course Nature Development Area, These sites are protected in the County Plan and serve to further protect the Baldoyle Bay SPA/SAC/pNHA.	Moderate Transfer pipeline can potentially pass through St. Catherine's Wood and/or Drumanagi Nature Development Areas, and must cross through Annex I habitats at the coastline (Rocky Sea Cliffs)	Significant Transfer pipeline must pase through Baldoyle Coast Ecological Buffer Zone and Portmamock Golf Course Nature Development Area. These sites are protected in the County Plan and sorve to further protect the Baldoyle Bay SPA/SAC/pNHA.	Moderate Transfer pipeline can potentially pass through SI. Catherine's Wood and/or Drumanagh Nature Development Areas, and must cross through Annex I habitats at the coastline (Rocky Sea Cliffs)	Moderate Transfer pipeline can potentialty pass through St. Catherine's Wood and/or Drumana, Nature Development Areas, and must cross through Annex I habitat at the coastline (Rocky Sea Clifts)
3.3.3	Potential to impact on other potectial annex 1 habitats (under the Habitats Directive) within the survey area footprint	Moderate (possible, dune habitats and biogenic reefs in north area)	Moderale (possible, dune habitats and biogenic reefs in north area)	Significant (saltmasch and zostera beds in Bardoyle Estuary)	Moderale (possible, dune habitals and biogenic reefs in north area)	Significant (saltmasch and zostera beds in Bardoyle Estuary)	Moderate (possible, dune habitats and biogenic reefs in north area)	Moderate (possible, dune habitats and biogenic reefs in north area)
3.3.5	Potential to impact on Intertidal habitats	Slight (isolated sensitve sites in some areas of coast)	Slight (isolated sensitive sites in some areas of coast)	Moderate (sensitive habitats in Estuary and on Velvet Strand)	Slight (isolated sensitve sites in some areas of coast)	Moderate (sensitive habitats in Estuary and on Velvet Strand)	Slight (isolated sensitve sites in some areas of coast)	Slight (isolated sensitve sites in some areas of coast)

4.0	Hydrology -	Annsbrook	Baldurgan	Clonshagh	Cookstown	Cloghran	Newtowncorduft	Rathertán
41	Hydrology - Sites							
4.1.1	Proximity to water bodies in terms of flooding and as an Indicator of sensitive surface water receptors	Slight: The Ballough River (water quality Q3/Q4) and Ballyboghill tributary (water quality Q3) are within 170m and 60m of the sile respectively, Medium importance. Will have permanent importance small proportion of attribute.	the site (all Q3), Medium importance.	Slight: Medium: Cuckoo River (north) within 50m and Mayne River and Mayne Tribulary (south) (waler quality Q3) within 370m of the site, Medium importance. Will have permanent impact on small proportion of attribute.	Moderate: Belinstown River (10m north) and Broadmeadow tributary (1km south) (water quality 0x3) of the site, High Importance. Will have permanent impact on small proportion of attribute.	Moderate: Sluice River (10m north) and Stuice tributary (290m south) of the site, High importance, Will have permanent impact on small proportion of attribute.	Moderate: Ballough tributary (180m east) and Ballough River (10m west) of the site (water quality 0.3). High importance. Will have permanent impact on small proportion of attribute.	Slight: Collinstown Stream (30m west) and Palmerstown Stream (120m southeast) of the site, Medium importance. Will have permanent impact on small proportion of attribute.
4.1.2	Culverting requirement - used to indicate impact on flood-prone watercourses due to reduced conveyance.	None: No new culvert required.	Moderate: Crossing Ballyboghill River, High importance. Will have permanent impact on small proportion of attribute.	None: No new culvert required	Imperceptible: Culvert might be required for a local minor tributary, Low importance. Will have permanent impact on small proportion of attribute.	None: No new culvert required	Slight: Crossing Ballough Tributary , Medium importance. Will have permanent impact on small proportion of attribute.	Slight: Crossing Collinstown Stream , Medium importance, Will have permanent impact on small proportion of attribute.
4.1.4	Potential Impact on ecologically important and designated sites.	Slight: The rivers discharge into the Rogerstown Estuary (SAC, SPA, PNHA, Ramsar and SNR) approx. 4.1km downstream, Medium importance. Will have permanent impact on small proportion of attribute.	Slight: The rivers discharge into Rogerstown Estuary (SAC, SPA, pNHA, Ramsar and SNR) and Malahide Bay (SAC, SPA and pNHA) approx. 5.3 and 7km downstream respectively, Medium importance. Will have permanent impact on small proportion of attribute.	Imperceptible: The Mayne River discharges into Baldoyle Estuary (SPA, SAC and pNHA) approx. 4.5km downstream, Low importance. Will have permanent impact on small proportion of attribute.	Imperceptible: The Belinstown River discharges into Malahide Bay and the Broadmeadow tributary discharges into Broadmeadow Estuary (SAC, SPA, pNHA) approx. 7 and Skm downstream respectively, Low importance. Will have permanent impact on small proportion of atribute.	Imperceptible: The river discharges into Baldoyle Estuary (SAC, SPA and pNHA) approx. 4.3km downstream, Low importance. Will have permanent impact on small proportion of attribute.	Silght: The river discharges into Rogerstown Estuary (SAC, SPA, PNHA, Ramsar and SNR) approx. 2.9km downstream, Medium importance. Will have permanent impact on small proportion of attribute.	Moderate: The Collinstown stream discharges into Rogerstown Estuary (SAC, SPA, NNHA, Ramsar and SNR) approx. 1km downstream, High importance. Will have permanent impact on small proportion of attribute.
42	Hydrology - Pipelines	and the second second			The set of	Contact States of the		a second and a second a
4.3	Hydrology - Marine Outfall	\$1.50° (* 1.50)	r - Alter of the second	and the second second	Rey Contract			
5.0	Hydrogeology -	Annabrook	Baldurgan	Clonshagh	Cookstown	Cloghran	Newtowncorduff	Rathartan
5.1	Hydrogeology - Sites							
5.1.3	GSI Groundwater Protection Response matrix	RI	R1	R1	R1	R2	R1	R1
5.2	Hydrogeology - Pipelines	Sector and the	With the state of the second	a fair a fair a fair	The same of the			
5.3	Hydrogeology - Marine Outfall	a la contra c		A CARLES AND A CARLES	et president Arts and			
6.0	Soils and Geology	Annsbrook	Bekkurgan	Clonshagh	Cookstown	Cloghran	Newtowncorduff	Rathertan
6.1	Soils and Geology - Sites							
8.2	Soils and Geology - Pipelines	N. Starting and						
6.3	Solls and Geology - Marine Outfall							

7.0	Agronomy & Agriculture - Sites	Annsbrook	Baldurgan	Clonshagh	Cookstown	Cloghran	Newtowncondulf	Rethertan
7.1	Approximate% Reduction in overall farm holding	36%	21%	28%, 18%,24 %	21%	8.6%, 49%, 9.6%, 26%	21%	30%, 16.75%, 100%,9.3%,34% 98%,19%
7.2	Farming Enterprise	Beef & Horticulture (The majority of the site is used for a beef enterprise)	Tillage, Potatoes & Horticulture	Horticulture & Tillage	Tillage, Horticulture, & Potatoes	Beel	Mixed livestock & tillage	Horticulture & Tillage, (intensive market gardening area)
7.3	Number of landowners impacted within site boundary	1 10 3	1103	4 to 6	1103	4 to 6	1 to 3	7 to 9
7.5	Severance based on site location within overall land holdings	Minor	Minor	Minor	Moderale	Minor	Minor	Moderate
7.8	Overall Impact	Moderate negative impact	Moderate negative impact	Moderate negative impact	Moderate negative impact	Moderate negative impact	Moderate negative impact	Major negative impact
8.0	Noise	Annebrook	Baldurgan	Clonshagh	Cookstown	Cloghran	Newtowncorduit	Rathertan
9.0	Air and Odour	Annsbrook	Baldurgan	Clonshagh	Cookstown	Cloghran	Newtowncorduft	Retherten
10.0	People and Communities	Annsbrook	Baklurgan	Clonshegh	Cookstown	Cloghran	Newtowncorduff	Rathertan
10.1	Number of residential & commercial buildings 300-500m from site boundary	44	n	83	53	116	33	131
10.4	Potential to impact on areas of Significant Population Densities	Lusk is c. 3.1km to the east and Ballyboughal (school) is 2.2km to the SW.	0.7km to the NW.	Belcamp and Damdale are c. 0.8km to the south. Dublin Aleport entrance and Terminal 1 are c. 2.1km and 2.4km to NW respectively.	Ballyboughal (houses at Dooroge) is c. 1.1km to the NW.	Swords is c. 1km to the north. A housing estate at Ballymacartle is c. 0.6km to the SE. Dublin Airport entrance is c. 1.1km to the SW.		Rush is c. 0.7km to the east and Lusk (settlement at Lough Common) is c. 1.8km to the west.
11.0	Traffic	Annsbrook	Bakkurgan	Clonshagh	Cookstown	Cloghmn	Newtowncorduff	Rethertan
11.1	Length of access road required	1230m access road required	580m access road required	320m access road required	930m access road required	290m access road required	640 access road required	620m access road required
11.2	Number of crossings required for access road	None	2 river/stream crossings	None	1 ditch/stream crossings	None	1 stream/river crossings	2 stream/river crossings
11.3	Potential Impact on landowners	Access road impacts on 6 fields	Access road impacts on 3 fields splitting one	Access road impacts on 2 fields however can follow existing track	Access road impacts on 5 fields	Access Road impacts on 2 field	Access Road impacts on 2 lields	2-3 fields impacted upon.
11.4	Works required to provide safe access entrance	Some local widening likely. Boundary treatments required for visibility so some additional landtake probable	Some local widening likely. Visibility ok.	Visibility ok. Can make use of existing field access. Some local road widening probable	Road would likely require widening. To achieve visibility would require significant landtake.	Road on embankment so would need to raise access road on approach to junction		Some local widening likely. Boundary treatments required for visibility so some additional landtake probable
11.5	Potential impact on surrounding local road network	Can access R132 after approx. 2km of travel on R129.	Can access R132 after approx. 2km of travel on R129.	Access onto local road however not far from N32	Access onto R108. Road not particularly suitable for HGVs. Travel distance to better road moderate	Access onto local road however not far from N32	Easy access to wide road (R132)	Access onto R128 and probable use of R127. Both Roads are not particularly suitable for HGVs
11.6	Frequency of accidents near entrance	1 accident (minor) near proposed entrance	None	None	None	None	4 accidents (3 minor 1 serious) near proposed entrance	1 accident (minor) approx. 200m from entrance
11.7	Frequency of accidents on surrounding network (indication of general road safety issues)	few accidents on surrounding roads	lew accidents on surrounding roads	High accident rate on N32 & R107 (including deaths)	few accidents on surrounding roads	High accident rate on N32 & R107 (Including deaths)	Several accidents on R132	Probable use of R127 south of Lusk with high accident rate. If this road wasn't to be used then slight to moderate rating
11.8	Road link impacted upon by all construction traffic (excluding major routes i.e. R132/N32)	2km (R129)	4km (R129)	450m (Clonshagh Rd)	Two options but both long (R108 & R129 7.8km, R108 & R125 6.9km)	Stockhole Lane / Clonshagh Rd could be used from either direction	None	5.2kms (R127)

12.0	Planning Policy	Annsbrook	Baldurgan	Clonshegh	Cookstown	Cloghran	Newtowncorduff	Retherten
12.2	Site Zoning	RU (Rural)	DII (Rural)	GB (Greenbelt) HT (High Tech)	RU (Rural)	GB (Greenbelt)	RU (Rural)	RU (Rural)
12.3	Airport Public Safety and Noise Zones on site	N/A	N/A	Outer PSZ Inner Noise Zone Outer Noise Zone	N/A	Inner PSZ Outer PSZ Inner Noise Zone Outer Noise Zone	NA	
12.7	Zoning present within 300m of site boundary	RU (Rural)	RU (Rural)	GB (Greenbelt) HT (High Tech) OS (Open Space) RA (New Residential)	RU (Rural)	GB (Greenbelt) GE (Enterprise)	RU (Rural) RC (Rural Cluster)	RU (Rural)
12.8	Airport Public Safety and Noise Zones within 300m of site boundary	NA	NA	Inner PSZ Outer PSZ Inner Noise Zone Outer Noise Zone	NA CARACTERIST	Inner PSZ Outer PSZ Inner Noise Zone Outer Noise Zone	NA	NA
13.0	Engineering Design - Pipelines	Annabrook	Beldurgan	Clonshagh	Cookstown	Cloghran	Hentowncorduff	Rathertan
13.1	Pipeline Length					100%在大学生		
13.1.6	Total Pipeline Lengths		the state of the state of the					
	Total Pipeline Length	47,850 m	47,850 m	30,600 m	47,900 m	34,300 m	47,850 m	46,900 m
13.2	Power Requirements	A STATE OF STATE		Dark Stores and Company			1.200 A	5 9 9
	Total Power Requirements	10,000 kW	9,700 kW	7,850 kW	9,600 kW	8,550 kW	9,300 kW	9,800 kW
13.3	Carbon Emissions	Service Construction						
	Total Carbon (tonnes CO2)	504,008	488,427	385,931	482,905	435,140	482,523	508,325
13.5	Access / Right of Way / Waylesves along Pipeline Corridors			March 19				
13.7	Potential to Impact on Physical Infrastructure along Pipeline Corridors		There was a					
13.9	Presence of Public Utilities within WwTP sites				Part and a second	a provident a series the st	Ref. The contract of the	
	Public Utilities within the Site	No known public utilities	2 number: ESB (MV) Overhead (10- 20kv)	1 number: ESB (MV) Overhead (38kv)	No known public utilities	No known public utilities	1 number: ESB (MV) Overhead (38kv)	No known public utilities
13.10	Land Ownership and Titles along Pipeline Contidors	Contraction of the						
13.11	A STR. PARAMENTS OF A CONTRACT OF STREET,	·						and an and a second s
13.12	Construction Risk along Pipeline Corridor							
13.13	Operation and Maintenance - WwTP, Pumping Stations & Pipeline ancillaries							

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Phase 2 Alternative Sites Assessment and Route Selection - Matrix Assessment

Fifth Iteration on Matrix - List of Sub-Criteria assigned an 'amber' colour during the fifth iteration of the matrix

Ref	Environmental Criteria	Annsbrook	Baldurgan	Clonshagh	Cookstown	Newtowncorduff
1.0	Cultural Heritage	Annsbrook	Baldurgan	Clonshagh	Cookstown	Newtowncorduff
1.1	Cultural Heritage -Sites					And the American State
1.1.2	(designated sites)	Direct: None Indirect: One imperceptible negative (Gracedieau DU007-015)	Direct: None Indirect: One imperceptible negative (DU007-016)	Direct: None Indirect: Three imperceptible negative (DU015-056, 057 & 059)	Direct: None Indirect: One slight negative (DU007-016)	Direct: None Indirect: None
1.1.3	Potential to impact (direct/indirect) on RPS/NIAH (designated sites)	Direct: None Indirect: None	Direct: None Indirect: One imperceptible negative (RPS 323)	Direct: None Indirect: One imperceptible negative (RPS 792)	Direct: None Indirect: One slight negative (RPS 323)	Direct: None Indirect: None
1.1.4		Direct: None Indirect: Four moderate negative (CH 26, 105,106,108)	Direct: None Indirect: Two, one moderate negative (CH 30), one slight negative (CH 32)	Direct: None Indirect: Three imperceptible negative (CH 56, 65, 62)	Direct: None Indirect: Two slight negative (CH 30, CH 32)	Direct: None Indirect: Four imperceptible negative (CH 13, 14, 16, 17) & three slight negative (CH 11, 12, 24)
1.1.5	Potential to impact (direct) on water courses and environs (areas of archaeological potential)	None	One (potentially significant)	None	Three (potentially significant)	One (potentially significant)
1.2	Cultural Heritage -Pipelines	· · · · · · · · · · · · · · · · · · ·				
1.3	Cultural Heritage - Marine Outfalls					

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2.0	Landecape & Visual	Annsbrook	Baldurgan	Clonshagh	Cookstown	Newtowncorduff
2.1	Landscape & Visual - Sites					
2.1.1	Potential to impact on views from scenic routes (designation in Fingal CDP)	Moderate - scenic views located 1.2km NE and 1.3km SW have no visibility but those 2.7km north within HSL zone have elevated clear view towards site	Significant - one 0.5km N with clear views and one 0.5km SE also with clear views - also distant elevated views from scenic routes >5km N	Imperceptible - nearest scenic route 4km E and associated with coast	afforded from here - also distant	Significant - one 0.5km N and one 0.7km NW - clear views available from the nearest of these also longer distance (3km) elevated views from scenic routes to NW
	Potential to impact on areas of 'Highly Sensitive Landscape' (designation in Fingal CDP)	Moderate - HSL located 1.2km N elevated above with some intervisibility	Moderate - HSL located 1.5km N with some intervisibility from higher ground within the HSL	Slight - one 1.3km NE with limited intervisibility	Slight - HSL located 1.6km N with limited intervisibility	Slight - elevated HSL zone located 0.7km NW but separated by M1 motorway
2.1.3	Potential to impact on views from heritage/ tourist/ amenity features	Slight - no such features identified in the immediate vicinity of site	Slight - no such features identified in the immediate vicinity of site	Moderate - Potential oblique views from upper storeys of Bewleys Airport Hotel (0.5km W) as well as partly screened views from the Hilton Airport Hotel (1.3km SE) - also GAA grounds to S	Slight - no such features identified in the immediate vicinity of site	Moderate - Pub located on nearest scenic route designation 0.5km NE overlooking the site - new M1 services 1km N - B&B at Dunganstown 1km SE
2.1.4	Potential to impact on the character of the landscape character	Moderate - rural landscape character of strong integrity within and around the site but motorway 1km E	Significant - open rural landscape character of high integrity within and around the site	Moderate - Site has a rural landscape character of reasonable integrity but the surrounds are a peri-urban landscape of mixed land uses relating to the urban fringe location		Moderate - although the site itself is contained within a dense network of pastoral fields and hedgerows major transport infrastructure occurs immediately W and E
2.1.5	Potential that landscape screening will be ineffective or contribute to landscape and visual impacts	Slight - This site can be well screened and integrated - particular attention needs to be paid to elevated scenic route and HSL designations to the north	Moderate - potential for effective screening to foreshorten views, conflict with open landscape character and prevailing hedgerow characteristics - particular attention needs to be paid to elevated scenic route and HSL designations to the N	Slight - This site can be well screened and integrated but particular attention needs to be paid to elevated views from Bewleys Airport hotel	Moderate - potential for effective screening to foreshorten views, conflict with open landscape character and prevailing hedgerow characteristics - particular attention needs to be paid to elevated scenic route and HSL designations to the north	Slight - This site can generally be well screened and integrated - particular attention needs to be paid to views from elevated overpass and scenic views to NW
2.1.12	Potential to disrupt landscape structure (hedgerows / field pattern etc.)	Significant - well defined geometric hedgerow/field pattern contained within site boundary.	Slight - large relatively undefined fields contained within site boundary	Slight - large somewhat irregular shaped fields with low hedgerows between	Slight - Large relatively undefined fields with low hedgerows around site	Significant - intensive and strongly defined hedgerow/field pattern contained within site boundary but surrounding lands more dispersed in structure
2.2	Landscape & Visual - Pipelines		State State & Alex		the thready and	
2.3	Landscape & Visual - Marine Outfalls					

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3.0	Ecology	Annsbrook	Baldurgan	Clonshagh	Cookstown	Newtowncorduff
3.1	Ecology - Sites					
3.1.1	Potential to impact on Natura 2000 Sites and Natural Heritage Areas	Slight: 4.1km upstream of Natura 2000 wetland sites Rogerstown Estuary SPA/SAC)	Estuary SPA/SAC and 7.0km	2000 wetland sites (Baldoyle Bay	2000 wetland sites(Malahide Estuary	Moderate: 2.9km upstream of Natura 2000 wetland sites Rogerstown Estuary SPA/SAC)
3.1.2	Potential to impact on Fingal Ecological Network Sites	Moderate: Site located 125m from Rath Little Stream ecological corridor	Moderate: Site located 180m from Ballyboghill Stream ecological corridor, but access road crosses it.	Significant: Site abuts Mayne River ecological corridor	Slight: Site located 800m from Ballyboghill Stream ecological	Significant: Site abuts Rath Little ecological corridor; Access road crosses Ballough Stream ecological corridor.
3.1.3	Potential to Impact protected species based on length of field boundary defined by hedgerow, which incorporates mature trees, within site, e.g. Badgers, Bats, Yellowhammer, Tree sparrow, Stock dove		Slight: 0.1km of hedges within the site	Moderate: 1.4km of hedges within the site	Slight: 0.9km of hedges within the site	Significant: 3.4km of hedges within the site
3.1.4	Potential to result in loss of habitats of high ecological value e.g. Annex I habitats (designated or not), ecological stepping stones or linking corridors	Slight: Site comprised of agriculturally improved, cultivated or arable land.	Slight: Site comprised of agriculturally improved, cultivated or arable land.	Moderate: Site comprised of agriculturally improved, cultivated or arable land.		Moderate: Site comprised of agriculturally improved, cultivated or arable land.
3.1.5	Potential to impact on a salmonid system	Moderate - The access road abuts the a tributary of the Ballyboghil River (main channel and tributaries) constitutes a salmonid system.	Moderate - The Ballyboghil River (main channel and tributaries) constitutes a salmonid system and the access road crosses it. However, the Donabate River constitutes a non- salmonid system.	Slight - The Mayne River constitites a non-salmonid system	Slight - The Donabate River constitites a non-salmonid system.	Moderate - The Ballough River (main channel and tributaries) constitutes a salmonid system and the access road crosses it.
3.1.9	Potential to result in significant loss of winter habitat for Lapwing and Golden Plover and other wader species outside of designated areas (Le. relatively large, flat open fields of ploughed or fallow arable land or pasture)	Moderate - site includes wet pasture suitable for Lapwing, Golden Plover or other winter waders	Moderate - site includes large arable fields suitable for Lapwing, Golden Plover or other winter waders	Moderate - site includes large pasture fields suitable for Lapwing, Golden Plover or other winter waders	Moderate - site includes large arable fields suitable for Lapwing, Golden Plover or other winter waders	Slight - smallish fields, unlikely to be used regularly by Lapwing and Golden Plover
3.2	Ecology - Pipelines	President State	Contraction of the second			

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3.3	Ecology - Marine Outfall		「大学になる」		のないの	
3.3.1			Moderate (main area avoids marine designations)	Significant (passes through Baldoyle SAC)		Moderate (main area avoids marine designations)
3.3.2	Potential to impact on Fingal Ecological	Catherine's Wood and/or Drumanagh Nature Development Areas, and must	potentially pass through St. Catherine's Wood and/or Drumanagh Nature Development Areas, and must	Ecological Buffer Zone and Portmarnock Golf Course Nature	potentially pass through St. Catherine's Wood and/or Drumanagh Nature Development Areas, and must	Moderate Transfer pipeline can potentially pass through St. Catherine's Wood and/or Drumanagh Nature Development Areas, and must cross through Annex I habitats at the coastline (Rocky Sea Cliffs)
3.3.3	Potential to impact on other potectial annex 1 habitats (under the Habitats Directive) within the survey area footprint	Moderate (possible, dune habitats and biogenic reefs in north area)	Moderate (possible, dune habitats and biogenic reefs in north area)	Significant (saltmasch and zostera beds in Bardoyle Estuary)	Moderate (possible, dune habitats and biogenic reefs in north area)	Moderate (possible, dune habitats and biogenic reefs in north area)
3.3.5	Potential to Impact on Intertidal habitats	Slight (isolated sensitve sites in some areas of coast)	Slight (isolated sensitve sites in some areas of coast)	Moderate (sensitive habitats in Estuary and on Velvet Strand)	Slight (isolated sensitve sites in some areas of coast)	Slight (isolated sensitve sites in some areas of coast)
4.0	Hydrology -	Annabrook	Baidurgan	Clonshagh	Cookstown	Newtowncorduff
4,1	Hydrology - Sites					
4.1.1	Proximity to water bodies in terms of flooding and as an indicator of sensitive surface water receptors	Slight: The Ballough River (water quality Q3/Q4) and Ballyboghill tributary (water quality Q3) are within 170m and 60m of the sile respectively, Medium importance. Will have permanent impact on small proportion of attribute.	Slight: Ballyboghill River (200m north), Ballyboghill tributary (40m west) (water quality Q3) and Belinstown tributary (60m south) of the site (all Q3), Medium importance. Will have permanent impact on small proportion of attribute.	Silght: Medium: Cuckoo River (north) within 50m and Mayne River and Mayne Tributary (south) (water quality Q3) within 370m of the site, Medium importance. Will have permanent impact on small proportion of attribute.	site, High Importance. Will have	Moderate: Ballough tributary (180m east) and Ballough River (10m west) of the site (water quality Q3), High importance. Will have permanent impact on small proportion of attribute.
4.1.2	Culverting requirement - used to indicate impact on flood-prone watercourses due to reduced conveyance.	None: No new culvert required,	Moderate: Crossing Ballyboghill River, High importance. Will have permanent impact on small proportion of attribute.	None: No new culvert required	Imperceptible: Culvert might be required for a local minor tributary, Low importance. Will have permanen impact on small proportion of attribute.	Slight: Crossing Ballough Tributary , Medium importance. Will have permanent impact on small proportio of attribute.
4.2	Hydrology - Pipelines					
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5.0	Hydrogeology -	Annabrook	Baldurgan	Clonshagh	Cookstown	Newtowncorduff
5.1	Hydrogeology - Sites					
5.2	Hydrogeology - Pipelines	es to reason where				
5.3	Hydrogeology - Marine Outfall					
6.0	Solls and Geology	Annsbrook	Baldurgan	Clonshagh	Cookstown	Newtowncorduff
6.1	Solis and Geology - Sites					
6,2	Solis and Geology - Pipelines					
6,3	Solis and Geology - Marine Outfall					
7.0	Agronomy & Agriculture - Sites	Annsbrook	Baldurgan	Clonshagh	Cookstown	Newtowncorduff
7.2	Farming Enterprise	Beef & Horticulture (The majority of the site is used for a beef enterprise)	Tillage, Potatoes & Horticulture	Horticulture & Tillage	Tillage, Horticulture, & Potatoes	Mixed livestock & tillage
7.3	Number of landowners impacted within site boundary	1 to 3	1 to 3	4 to 6	1 to 3	1 to 3
7.5	Severance based on site location within overall land holdings	Minor	Minor	Minor	Moderate	Minor
8.0	Noise	Annsbrook	Baldurgan	Clonshagh	Cookstown	Newtowncorduff
9.0	Air and Odour	Annsbrook	Baldurgan	Clonshagh	Cookstown	Newtowncorduff
10.0	People and Communities	Annsbrook	Bakkurgan	Clonshagh	Cookstown	Newtowncorduff
10.1	Number of residential & commercial buildings 300-500m from site boundary	44	21	83	53	33
10.4	Potential to impact on areas of Significant Population Densities	Lusk is c. 3.1km to the east and Ballyboughal (school) is 2.2km to the SW.	Ballyboughal (houses at Dooroge) is c. 0.7km to the NW.	Belcamp and Darndale are c. 0.8km to the south. Dublin Airport entrance and Terminal 1 are c. 2.1km and 2.4km to NW respectively.	Ballyboughal (houses at Dooroge) is c. 1.1km to the NW.	Lusk is c. 1.3km to the east.

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11.0	Traffic	Annsbrook	Baldurgan	Clonshagh	Cookstown	Newtowncorduff
11.1	Length of access road required	1230m access road required	580m access road required	320m access road required	930m access road required	640 access road required
11.2	Number of crossings required for access road	None	2 river/stream crossings	None	1 ditch/stream crossings	1 stream/river crossings
11.3	Potential Impact on landowners	Access road impacts on 6 fields	Access road impacts on 3 fields splitting one	Access road impacts on 2 fields however can follow existing track	Access road impacts on 5 fields	Access Road impacts on 2 fields
11.4	Works required to provide sale access entrance	Some local widening likely. Boundary treatments required for visibility so some additional landtake probable	Some local widening likely. Visibility ok.	Visibility ok. Can make use of existing field access. Some local road widening probable	Road would likely require widening. To achieve visibility would require significant landtake.	None, Wide road, good visibility
11.5	Potential impact on surrounding local road network	Can access R132 after approx. 2km of travel on R129.	Can access R132 after approx. 2km of travel on R129.	Access onto local road however not far from N32	Access onto R108, Road not particularly suitable for HGVs, Travel distance to better road moderate	Easy access to wide road (R132)
11.6	Frequency of accidents near entrance	1 accident (minor) near proposed entrance	None	None	None	4 accidents (3 minor 1 serious) near proposed entrance
11.7	Frequency of accidents on surrounding network (indication of general road safety issues)	lew accidents on surrounding roads	few accidents on surrounding roads	High accident rate on N32 & R107 (including deaths)	few accidents on surrounding roads	Several accidents on R132
11.8	Road link impacted upon by all construction traffic (excluding major routes i.e. R132/N32)	2km (R129)	4km (R129)	450m (Clonshagh Rd)	Two options but both long (R108 & R129 7.8km, R108 & R125 6.9km)	None
12.0	Planning Policy	Annsbrook	Baldurgan	Clonshagh	Cookstown	Newtowncorduff
12.2	Site Zoning	RV (Rural)	RU (Rural)	GB (Greenbelt) HT (High Tech)	RU (Rural)	RU (Rural)
12.7	Zoning present within 300m of site boundary	RU (Rural)	RU (Rural)	GB (Greenbelt) HT (High Tech) OS (Open Space) RA (New Residential)	RU (Rural)	RU (Rural) RC (Rural Cluster)
13.0	Engineering Design - Pipelines	Annsbrook	Baldurgan	Clonshagh	Cookstown	Newtowncorduff
13.1	Pipeline Length					
13.1.6	Total Pipeline Lengths			a star the same is not a	65 - Constant of the second	and a standard wear
	Total Pipeline Length	47,850 m	47,850 m	30,600 m	47,900 m	47,850 m
13.2	Power Requirements	North Constant Constant				Martin Contractor
	Total Power Requirements	10,000 kW	9,700 kW	7,850 kW	9,600 kW	9,300 kW

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13.3	Carbon Emissions	Maria Maria			And the second	
	Total Carbon (tonnes CO2)	504,008	488,427	385,931	482,905	482,523
13.5	Access / Right of Way / Wayleaves along Pipeline Corridors					
13.6	Crossings - Waterways, Rail, etc. along Pipeline Corridors					
13.7	Potential to Impact on Physical Infrastructure along Pipeline Corridors					
13.9	Presence of Public Utilities within WwTP sites					
	Public Utilities within the Site	No known public utilities	2 number: ESB (MV) Overhead (10- 20kv)	1 number: ESB (MV) Overhead (38kv)	No known public utilities	1 number: ESB (MV) Overhead (38kv)
13.10	Land Ownership and Titles along Pipeline Corridors					
13.11	Route Traffic Management					
13.12	Construction Risk along Pipeline Corridors	Anna an an anna an A				
13.13	Operation and Maintenance - WwTP, Pumping Stations & Pipeline ancillaries					

Southern Outfall Pipe



Northern Outfall Pipe











