Phase 2 Alternative Sites Assessment and Route Selection - Environmental & Technical Criteria Evaluation Matrix

Stage 2 of Criteria Evaluation (Sites, Pipeline Routes & Marine Outfall)

Ref	Environmental Criteria	Annsbrook	Baldurgan	Clonshagh	Cookstown	Cloghran	Newtowncorduff	Rathartan	Saucerstown	Tyrrelstown Little
1.0	**Cultural Heritage**	**Annsbrook**	**Baldurgan**	**Clonshagh**	**Cookstown**	**Cloghran**	**Newtowncorduff**	**Rathartan**	**Saucerstown**	**Tyrrelstown Little**
1.1	**Cultural Heritage -Sites**									
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:** None	**Direct:** None **Indirect:** One moderate negative (DU005-038)
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	**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 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)	**Direct:** None **Indirect:** None	**Direct:** None **Indirect:** One moderate negative (RPS 245)
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)	**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)	**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)**	None	One (potentially significant)	None	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	**Direct:** 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 townland boundaries (cultural heritage significance)**	Two moderate negative	None	One moderate negative	Two moderate negative	One moderate negative	One moderate negative	Two moderate negative	Two moderate negative	Two moderate negative
1.2	**Cultural Heritage -Pipelines**									
1.2.1	**Potential to impact on RMPs**	32 RMP sites located within corridor	32 RMP sites located within corridor	20 RMP sites located within corridor	32 RMP sites located within corridor	20 RMP sites located within corridor	32 RMP sites located within corridor	32 RMP siotes located within corridor	32RMP sites 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 corridor	No national monuments located within corridor	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/NIAH**	27 RPS and 12 NIAH sites located within corridor	27 RPS and 12 NIAH sites located within corridor	15 RPS and 6 NIAH sites located within corridor	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 impact on CH sites**	27 CH sites located within corridor	27 CH sites located within corridor	9 CH sites 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 corridor	22 demesne landscapes located within corridor	14 demesne landscapes located within corridor	22 demesne landscapes located within corridor	15 demesne landscapes located within corridor	22 demesne landscapes located within corridor	23 demesne landscapes located within corridor	23 demesne landscapes located within corridor	22 demesne landscapes located within corridor
1.2.6	**Potential to impact on ACA**	One ACA partially located within corridor	One ACA partially located within corridor	No ACA located within corridor	One ACA partially located within corridor	One ACA partially located within corridor	One ACA partially located within corridor	One ACA partially located within corridor	One ACA partially located within corridor	One ACA partially located within corridor
1.3	**Cultural Heritage - Marine Outfalls**									
1.3.1	**Potential to impact on RMPs**	11 RMP sites located within outfall area	11 RMP sites located within outfall area	No RMP sites located within outfall area	11 RMP sites located within outfall area	No RMP sites located within outfall area	11 RMP sites located within outfall area	11 RMP sites located within outfall area	11 RMP sites located within outfall area	11 RMP sites located within outfall area
1.3.2	**Potential to impact on National Monuments**	No national monuments located within outfall area	No national monuments located within outfall area	No national monuments located within outfall area	No national monuments located within outfall area	No national monuments located within outfall area	No national monuments located within outfall area	No national monuments located within outfall area	No national monuments located within outfall area	No national monuments located within outfall area
1.3.3	**Potential to impact on RPS/NIAH**	29 RPS/NIAH sites located within corridor	29 RPS/NIAH sites located within corridor	No RPS/NIAH sites located within corridor	29 RPS/NIAH sites located within corridor	No 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	29 RPS/NIAH sites located within corridor
1.3.4	**Potential to impact on CH sites**	12 CH sites located within outfall area	12 CH sites located within outfall area	1 CH site located within outfall area	12 CH sites located within outfall area	1 CH site located within outfall area	12 CH sites located within outfall area	12 CH sites located within outfall area	12 CH sites located within outfall area	12 CH sites located within outfall area
1.3.5	**Recorded shipwreck sites**	40 shipwrecks in and within vicinity of the outfall area	40 shipwrecks 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 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	40 shipwrecks in and within vicinity of the outfall area	40 shipwrecks in and within vicinity of the outfall area
1.3.6	**Potential to impact on inter-tidal archaeology (previously unknown)**	high (any coastal area should be considered of high archaeological potential	high (any coastal area should be considered of high archaeological potential	high (any coastal area should be considered of high archaeological potential	high (any coastal area should be considered of high archaeological potential	high (any coastal area should be considered of high archaeological potential	high (any coastal area should be considered of high archaeological potential	high (any coastal area should be considered of high archaeological potential	high (any coastal area should be considered of high archaeological potential	high (any coastal area should be considered of high archaeological potential

2.0	Landscape & Visual	Annsbrook	Baldurgan	Clonshagh	Cookstown	Cloghran	Newtowncorduff	Rathartan	Saucerstown	Tyrrelstown Little
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	Significant - one 0.5km E with relatively clear views towards the site afforded 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 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 another 0.8km W with no clear views	Significant - One 1.6km 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 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
2.1.3	**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	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	Moderate - Baldungan Church on hill 2.5km N with extensive scenic views in the direction of the site	Significant - Swords Golf Course adjacent to NW and Broadmeadow River and Linear Park runs just to E of site - two accommodation providers 0.6km N with potential views across Broadmeadow River	Significant - Baldungan Castle on hill 1.7km N with extensive scenic views in the direction of the site
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	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 rural HSL to the E however major transport infrastructure occurs immediately W and a quarry and golf 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 located near an urban fringe (Rush) - rail line to W does not strongly influence landscape character	Moderate - rural landscape and river in immediate context of site but two regional roads a golf course a school / community centre and a significant settlement make up the varied land use within 1km	Significant - open rural landscape character of high integrity for the site and its surrounds - rail line passes close to eastern boundary but does not strongly influence character
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 but it will be difficult to screen views from elevated M1 overpasses N and S	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	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 views from castle and scenic route to N and scenic route to S	Slight - This site can generally be well screened and integrated but particular attention needs to be paid to elevated views from scenic route to S and views across river to the N	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 views from castle and scenic route to N
2.1.6	**Potential to impact on views from settlements**	Imperceptible - Crossroads settlement (Ballyboghill) 2.5km W has no view of site	Moderate - Crossroads settlement (Ballyboghill) 1.5km NW and associated dwellings stretch southwards along R108 closer to the site (1km)	Slight - Densely populated Nth Dublin suburb of Darndale <1km S, other estates 1km N and E - No clear views afforded toward the site from any of these	Moderate - Crossroads settlement (Ballyboghill) 1.7km NW and associated dwellings stretch southwards along R108 closer to the site (1km)	Moderate - small estate settlement of Ballymacartle 1km SE also clear views available from an estate adjacent to the east of the M1/Swords junction	Slight - settlement of Lusk 1.5km E but no views available - small settlement of Dunganstown 1km SE may be afforded restricted views	Significant - sizeable coastal settlement of Rush 0.8km E	Significant - settlement of Swords 1km 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 lining regional 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 afforded from local road overpass 1km NE	Imperceptible - M1 passes 2.5km E and views of the scheme would not be afforded	Slight - M1 passes 1km W - clear views only afforded 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 filtered views of site through roadside screening will be afforded	Imperceptible - M1 5km W	Imperceptible - M1 2.5km E	Imperceptible - M1 4.5km W
2.1.9	**Potential to impact on views from Dublin - Belfast rail line**	Imperceptible - rail line 5km E	Imperceptible - rail line 6km E	Imperceptible - rail line 3.5km E	Imperceptible - rail line 6km E	Imperceptible - rail line 3km E	Imperceptible - rail line 3km E	Significant - rail line lies directly adjacent to W	Imperceptible - rail line 6km 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 glimpses may be afforded 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 at < 0.5km - clear views afforded from some sections and site access from R129	Slight / Significant - heavily used N32 national secondary road 0.3km to S and R107 regional road 1km E - neither has clear views towards site due to roadside screening - Note future malahide Rd realignment adjacent to site	Significant - R108 regional road 0.3km W and clear views afforded from some sections	Imperceptible - R107 regional road 2km E but no views available	Significant - slightly elevated R132 regional road (old N1) 0.5km E affords 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 0.5km S fleeting 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 aerial approach and vehicular egress**	Imperceptible - airport 10km S	Imperceptible - airport 8.5km S	Significant - airport 2km NW - clear views not afforded towards the site at ground level but it would be a prominent feature of the low level landing approach from the E	Imperceptible - airport 7.5km S	Significant - airport 1.5km SW - clear views afforded towards the site from elevated M1/airport access road interchange and it would be a prominent feature of the low level landing approach from the E	Imperceptible - airport 10km S	Imperceptible - airport >10km SW	Slight - airport 5km S but views likely to be available on Slight low landing approach from the E	Imperceptible - airport >10km SW
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	Moderate - intensive and strongly defined hedgerow/field pattern contained within site boundary but surrounding lands more dispersed in structure	Significant - intensive and strongly defined hedgerow/field pattern contained within site boundary but surrounding lands more dispersed in structure	Moderate - predominantly large fields defined by low hedgerows within site boundary	Moderate - several low meandering hedgerows contained within the site	Moderate - combination of large cropping fields in N half of site and smaller geometric pastoral fields in S half - low hedgerows
2.1.13	**Potential to impact on historic designed landscapes**	Moderate - Woodpark demesne 0.15km NE	Imperceptible - No demesne landscapes within or near 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 surrounded to the north and east by the site at the minimum setback (0.3km)	Slight - Abbeyville Estate 1km E	Imperceptible - No demesne landscapes within or near this site	Slight - Haystown Demesne 0.3km NE	Moderate - Saucerstown Demesne 0.2km W	Imperceptible - No demesne landscapes within or near this site

2.1.14	**Potential to impact on woodlands and significant tree groups**	Imperceptible - there are no woodlands contained within the site boundary	Imperceptible - there are no woodlands contained within the site boundary	Imperceptible - there are no woodlands contained within the site boundary	Imperceptible - there are no woodlands contained within the site boundary	Imperceptible - there are no woodlands contained within the site boundary	Imperceptible - there are no woodlands contained within the site boundary	Imperceptible - there are no woodlands contained within the site boundary	Imperceptible - there are no woodlands contained within the site boundary	Imperceptible - there are no woodlands contained within the site boundary
2.2	**Landscape & Visual - Pipelines**									
2.2.1	**Potential to impact on views from scenic routes (designation in Fingal CDP)**	A - Imperceptible - No scenic routes in the vicinity D -Significant - passes over two scenic routes and in close proximity to two others F -Slight - passes close to only one small section of scenic route west of Lusk	A - Imperceptible - No scenic routes in the vicinity D -Significant - passes over two scenic routes and in close proximity to two others F -Slight - passes close to only one small section of scenic route west of Lusk	A - Imperceptible - No scenic routes in the vicinity B -Imperceptible - No scenic routes in the vicinity G - Significant - Scenic route along eastern edge of this section at edge of Baldoyle Estuary	A - Imperceptible - No scenic routes in the vicinity D -Significant - passes over two scenic routes and in close proximity to two others F -Slight - passes close to only one small section of scenic route west of Lusk	A - Imperceptible - No scenic routes in the vicinity B -Imperceptible - No scenic routes in the vicinity C -Imperceptible - Nearest scenic route >1km away from NW end of this Pipeline corridor section on opposite side of a ridge. G - Significant - Scenic route along eastern edge of this section at edge of Baldoyle Estuary	A - Imperceptible - No scenic routes in the vicinity D -Significant - passes over two scenic routes and in close proximity to two others F -Slight - passes close to only one small section of scenic route west of Lusk	A - Imperceptible - No scenic routes in the vicinity D -Significant - passes over two scenic routes and in close proximity to two others E-Significant - crosses a scenic route just to the SE of Lusk	A - Imperceptible - No scenic routes in the vicinity D -Significant - passes over two scenic routes and in close proximity to two others E-Significant - crosses a scenic route just to the SE of Lusk	A - Imperceptible - No scenic routes in the vicinity D -Significant - passes over two scenic routes and in close proximity to two others F -Slight - passes close to only one small section of scenic route west of Lusk
2.2.2	**Potential to impact on areas of high landscape sensitivity (designation in Fingal CDP)**	A - Significant - at least half of this section of pipeline corridor runs through area of HLS D -Significant - passes through two HSL areas and also passes through a 'High Amenity' zoning objective area associated with the Swords Estuary / Broadmeadow River F -Slight - touches a HLS area at eastern tip of this pipeline section G - Significant Eastern end of this pipeline section is contained within an HSL which also has a 'High Amenity' zoning objective area	A - Significant - at least half of this section of pipeline corridor runs through area of HLS D -Significant - passes through two HSL areas and also passes through a 'High Amenity' zoning objective area associated with the Swords Estuary / Broadmeadow River F -Slight - touches a HLS area at eastern tip of this pipeline section G - Significant Eastern end of this pipeline section is contained within an HSL which also has a 'High Amenity' zoning objective area	A - Significant - at least half of this section of pipeline corridor runs through area of HLS B - Moderate - small pocket of HLS at eastern tip of this pipeline section G - Significant Eastern end of this pipeline section is contained within an HSL which also has a 'High Amenity' zoning objective area	A - Significant - at least half of this section of pipeline corridor runs through area of HLS D -Significant - passes through two HSL areas and also passes through a 'High Amenity' zoning objective area associated with the Swords Estuary / Broadmeadow River F -Slight - touches a HLS area at eastern tip of this pipeline section G - Significant Eastern end of this pipeline section is contained within an HSL which also has a 'High Amenity' zoning objective area	A - Significant - at least half of this section of pipeline corridor runs through area of HLS B - Moderate - small pocket of HLS at eastern tip of this pipeline section G - Significant Eastern end of this pipeline section is contained within an HSL which also has a 'High Amenity' zoning objective area	A - Significant - at least half of this section of pipeline corridor runs through area of HLS D -Significant - passes through two HSL areas and also passes through a 'High Amenity' zoning objective area associated with the Swords Estuary / Broadmeadow River F -Slight - touches a HLS area at eastern tip of this pipeline section G - Significant Eastern end of this pipeline section is contained within an HSL which also has a 'High Amenity' zoning objective area	A - Significant - at least half of this section of pipeline corridor runs through area of HLS D -Significant - passes through two HSL areas and also passes through a 'High Amenity' zoning objective area associated with the Swords Estuary / Broadmeadow River E-Significant - crosses a HSL area just to the SE of Lusk G - Significant Eastern end of this pipeline section is contained within an HSL which also has a 'High Amenity' zoning objective area	A - Significant - at least half of this section of pipeline corridor runs through area of HLS D -Significant - passes through two HSL areas and also passes through a 'High Amenity' zoning objective area associated with the Swords Estuary / Broadmeadow River E-Significant - crosses a HSL area just to the SE of Lusk G - Significant Eastern end of this pipeline section is contained within an HSL which also has a 'High Amenity' zoning objective area	A - Significant - at least half of this section of pipeline corridor runs through area of HLS D -Significant - passes through two HSL areas and also passes through a 'High Amenity' zoning objective area associated with the Swords Estuary / Broadmeadow River F -Slight - touches a HLS area at eastern tip of this pipeline section G - Significant Eastern end of this pipeline section is contained within an HSL which also has a 'High Amenity' zoning objective area
2.2.3	**Potential to impact on views from settlements**	A - Slight - Blanchardstown on opposite side of N3 road and Corduff >0.5km NW D -Significant - passes between the significant and closely associated settlements of Malahide and Swords F -Slight - largely avoids settlements - 1km north of Lusk at nearest point G - Moderate - passes between estates associated with Portmarnock and Baldoyle	A - Slight - Blanchardstown on opposite side of N3 road and Corduff >0.5km NW D -Significant - passes between the significant and closely associated settlements of Malahide and Swords F -Slight - largely avoids settlements - 1km north of Lusk at nearest point G - Moderate - passes between estates associated with Portmarnock and Baldoyle	A - Slight - Blanchardstown on opposite side of N3 road and Corduff >0.5km NW B -Slight - Dublin outskirts contained on opposite side of M50 and no significant settlements in the vicinity of this pipeline corridor section G - Moderate - passes between estates associated with Portmarnock and Baldoyle	A - Slight - Blanchardstown on opposite side of N3 road and Corduff >0.5km NW D -Significant - passes between the significant and closely associated settlements of Malahide and Swords F -Slight - largely avoids settlements - 1km north of Lusk at nearest point G - Moderate - passes between estates associated with Portmarnock and Baldoyle	A - Slight - Blanchardstown on opposite side of N3 road and Corduff >0.5km NW B -Slight - Dublin outskirts contained on opposite side of M50 and no significant settlements in the vicinity of this pipeline corridor section G - Moderate - passes between estates associated with Portmarnock and Baldoyle	A - Slight - Blanchardstown on opposite side of N3 road and Corduff >0.5km NW D -Significant - passes between the significant and closely associated settlements of Malahide and Swords F -Slight - largely avoids settlements - 1km north of Lusk at nearest point G - Moderate - passes between estates associated with Portmarnock and Baldoyle	A - Slight - Blanchardstown on opposite side of N3 road and Corduff >0.5km NW D -Significant - passes between the significant and closely associated settlements of Malahide and Swords E-Moderate - passes just to the SE of Lusk and NW of Rush F -Slight - largely avoids settlements G - Moderate - passes between estates associated with Portmarnock and Baldoyle	A - Slight - Blanchardstown on opposite side of N3 road and Corduff >0.5km NW D -Significant - passes between the significant and closely associated settlements of Malahide and Swords E-Moderate - passes just to the SE of Lusk and NW of Rush F -Slight - largely avoids settlements G - Moderate - passes between estates associated with Portmarnock and Baldoyle	A - Slight - Blanchardstown on opposite side of N3 road and Corduff >0.5km NW D -Significant - passes between the significant and closely associated settlements of Malahide and Swords F -Slight - largely avoids settlements - 1km north of Lusk at nearest point G - Moderate - passes between estates associated with Portmarnock and Baldoyle
2.2.4	**Potential to impact on views from dwellings / local roads**	A - Moderate - a small number of dwellings lining local roads in the vicinity D -Moderate - passes across several local roads lined by rural dwellings but most affected dwellings associated with larger settlements F -Significant - crosses numerous local roads and several significant clusters of rural dwellings G - Slight - few single dwellings and local roads in the vicinity	A - Moderate - a small number of dwellings lining local roads in the vicinity D -Moderate - passes across several local roads lined by rural dwellings but most affected dwellings associated with larger settlements F -Significant - crosses numerous local roads and several significant clusters of rural dwellings G - Slight - few single dwellings and local roads in the vicinity	A - Moderate - a small number of dwellings lining local roads in the vicinity B -Moderate - a small number of dwellings lining local roads in the vicinity G - Slight - few single dwellings and local roads in the vicinity	A - Moderate - a small number of dwellings lining local roads in the vicinity D -Moderate - passes across several local roads lined by rural dwellings but most affected dwellings associated with larger settlements F -Significant - crosses numerous local roads and several significant clusters of rural dwellings G - Slight - few single dwellings and local roads in the vicinity	A - Moderate - a small number of dwellings lining local roads in the vicinity B -Moderate - a small number of dwellings lining local roads in the vicinity G - Slight - few single dwellings and local roads in the vicinity	A - Moderate - a small number of dwellings lining local roads in the vicinity D -Moderate - passes across several local roads lined by rural dwellings but most affected dwellings associated with larger settlements F -Significant - crosses numerous local roads and several significant clusters of rural dwellings G - Slight - few single dwellings and local roads in the vicinity	A - Moderate - a small number of dwellings lining local roads in the vicinity D -Moderate - passes across several local roads lined by rural dwellings but most affected dwellings associated with larger settlements E-Significant - crosses numerous local roads and several significant clusters of rural dwellings F -Significant - crosses numerous local roads and several significant clusters of rural dwellings G - Slight - few single dwellings and local roads in the vicinity	A - Moderate - a small number of dwellings lining local roads in the vicinity D -Moderate - passes across several local roads lined by rural dwellings but most affected dwellings associated with larger settlements E-Significant - crosses numerous local roads and several significant clusters of rural dwellings F -Significant - crosses numerous local roads and several significant clusters of rural dwellings G - Slight - few single dwellings and local roads in the vicinity	A - Moderate - a small number of dwellings lining local roads in the vicinity D -Moderate - passes across several local roads lined by rural dwellings but most affected dwellings associated with larger settlements F -Significant - crosses numerous local roads and several significant clusters of rural dwellings G - Slight - few single dwellings and local roads in the vicinity

2.2.5	**Potential to impact on views from motorways**	A - Significant - runs adjacent to M50 D -Significant - Clear elevated views from M1 as it passes over Broadmeadow River/Malahide Estuary F - Significant - crosses the M1 2km east of Lusk - M1 at grade for much of this section G - Imperceptible - M1/M50 interchange 3km W	A - Significant - runs adjacent to M50 D -Significant - Clear elevated views from M1 as it passes over Broadmeadow River/Malahide Estuary F - Significant - crosses the M1 2km east of Lusk - M1 at grade for much of this section G - Imperceptible - M1/M50 interchange 3km W	A - Significant - runs adjacent to M50 B- Significant - runs adjacent to M50 and crosses M1 G - Imperceptible - M1/M50 interchange 3km W	A - Significant - runs adjacent to M50 D -Significant - Clear elevated views from M1 as it passes over Broadmeadow River/Malahide Estuary F - Significant - crosses the M1 2km east of Lusk - M1 at grade for much of this section G - Imperceptible - M1/M50 interchange 3km W	A - Significant - runs adjacent to M50 B- Significant - runs adjacent to M50 and crosses M1 G - Imperceptible - M1/M50 interchange 3km W	A - Significant - runs adjacent to M50 D -Significant - Clear elevated views from M1 as it passes over Broadmeadow River/Malahide Estuary F - Significant - crosses the M1 2km east of Lusk - M1 at grade for much of this section G - Imperceptible - M1/M50 interchange 3km W	A - Significant - runs adjacent to M50 D -Significant - Clear elevated views from M1 as it passes over Broadmeadow River/Malahide Estuary E- Significant - crosses the M1 near R129 overpass - M1 at grade for much of this section G - Imperceptible - M1/M50 interchange 3km W	A - Significant - runs adjacent to M50 D -Significant - Clear elevated views from M1 as it passes over Broadmeadow River/Malahide Estuary E- Significant - crosses the M1 near R129 overpass - M1 at grade for much of this section G - Imperceptible - M1/M50 interchange 3km W	A - Significant - runs adjacent to M50 D -Significant - Clear elevated views from M1 as it passes over Broadmeadow River/Malahide Estuary F - Significant - crosses the M1 2km east of Lusk - M1 at grade for much of this section G - Imperceptible - M1/M50 interchange 3km W
2.2.6	**Potential to impact on views from other major roads (national or regional roads)**	A - Significant - runs between the N3 and N2 national roads D -Significant - Passes across the R107, R106, R132 and R108 regional roads F - Significant - crosses junction of R121 and R122, R125, R108, R129, R132, R127 and R128 G - Significant - links between R107 and R106 and crosses the R124, R123	A - Significant - runs between the N3 and N2 national roads D -Significant - Passes across the R107, R106, R132 and R108 regional roads F - Significant - crosses junction of R121 and R122, R125, R108, R129, R132, R127 and R128 G - Significant - links between R107 and R106 and crosses the R124, R123	A - Significant - runs between the N3 and N2 national roads B- Significant - crosses the R122, R108 R132 and R107 regional roads G - Significant - links between R107 and R106 and crosses the R124, R123	A - Significant - runs between the N3 and N2 national roads D -Significant - Passes across the R107, R106, R132 and R108 regional roads F - Significant - crosses junction of R121 and R122, R125, R108, R129, R132, R127 and R128 G - Significant - links between R107 and R106 and crosses the R124, R123	A - Significant - runs between the N3 and N2 national roads B- Significant - crosses the R122, R108 R132 and R107 regional roads G - Significant - links between R107 and R106 and crosses the R124, R123	A - Significant - runs between the N3 and N2 national roads D -Significant - Passes across the R107, R106, R132 and R108 regional roads F - Significant - crosses junction of R121 and R122, R125, R108, R129, R132, R127 and R128 G - Significant - links between R107 and R106 and crosses the R124, R123	A - Significant - runs between the N3 and N2 national roads D -Significant - Passes across the R107, R106, R132 and R108 regional roads E- Significant - crosses the R129, R132, R126 and R127 regional roads F - Significant - crosses junction of R121 and R122, R125, R108, R132, R127 and R128 G - Significant - links between R107 and R106 and crosses the R124, R123	A - Significant - runs between the N3 and N2 national roads D -Significant - Passes across the R107, R106, R132 and R108 regional roads E- Significant - crosses the R129, R132, R126 and R127 regional roads F - Significant - crosses junction of R121 and R122, R125, R108, R132, R127 and R128 G - Significant - links between R107 and R106 and crosses the R124, R123	A - Significant - runs between the N3 and N2 national roads D -Significant - Passes across the R107, R106, R132 and R108 regional roads F - Significant - crosses junction of R121 and R122, R125, R108, R129, R132, R127 and R128 G - Significant - links between R107 and R106 and crosses the R124, R123
2.2.7	**Potential to impact on views from Dublin - Belfast rail line**	A - Imperceptible - >10km separation distance D -Imperceptible - >10km separation distance F - Significant - crosses rail line between Rush and Skerries G - Significant - crosses rail line 1km west of Baldoyle Estuary	A - Imperceptible - >10km separation distance D -Imperceptible - >10km separation distance F - Significant - crosses rail line between Rush and Skerries G - Significant - crosses rail line 1km west of Baldoyle Estuary	A - Imperceptible - >10km separation distance B- Imperceptible - 1.5km separation distance G - Significant - crosses rail line 1km west of Baldoyle Estuary	A - Imperceptible - >10km separation distance D -Imperceptible - >10km separation distance F - Significant - crosses rail line between Rush and Skerries G - Significant - crosses rail line 1km west of Baldoyle Estuary	A - Imperceptible - >10km separation distance B- Imperceptible - 1.5km separation distance G - Significant - crosses rail line 1km west of Baldoyle Estuary	A - Imperceptible - >10km separation distance D -Imperceptible - >10km separation distance F - Significant - crosses rail line between Rush and Skerries G - Significant - crosses rail line 1km west of Baldoyle Estuary	A - Imperceptible - >10km separation distance D -Imperceptible - >10km separation distance E- Significant - crosses rail line at Rush and Lusk station G - Significant - crosses rail line 1km west of Baldoyle Estuary	A - Imperceptible - >10km separation distance D -Imperceptible - >10km separation distance E- Significant - crosses rail line at Rush and Lusk station G - Significant - crosses rail line 1km west of Baldoyle Estuary	A - Imperceptible - >10km separation distance D -Imperceptible - >10km separation distance F - Significant - crosses rail line between Rush and Skerries G - Significant - crosses rail line 1km west of Baldoyle Estuary
2.2.8	**Potential to impact on views from Dublin Airport including aerial approach & vehicular egress**	A - Slight - nearest aspect of Dublin Airport >1km away D -Slight - airport 3km west F - Slight - airport 2km West of nearest point G - Slight - Passes 0.5km north of Father Collins Park at Donaghmede	A - Slight - nearest aspect of Dublin Airport >1km away D -Slight - airport 3km west F - Slight - airport 2km West of nearest point G - Slight - Passes 0.5km north of Father Collins Park at Donaghmede	A - Slight - nearest aspect of Dublin Airport >1km away B- Moderate - passes adjacent to the southern boundary of the airfield G - Slight - Passes 0.5km north of Father Collins Park at Donaghmede	A - Slight - nearest aspect of Dublin Airport >1km away D -Slight - airport 3km west F - Slight - airport 2km West of nearest point G - Slight - Passes 0.5km north of Father Collins Park at Donaghmede	A - Slight - nearest aspect of Dublin Airport >1km away B- Moderate - passes adjacent to the southern boundary of the airfield G - Slight - Passes 0.5km north of Father Collins Park at Donaghmede	A - Slight - nearest aspect of Dublin Airport >1km away D -Slight - airport 3km west F - Slight - airport 2km West of nearest point G - Slight - Passes 0.5km north of Father Collins Park at Donaghmede	A - Slight - nearest aspect of Dublin Airport >1km away D -Slight - airport 3km west E- Slight - airport 5km south of nearest point F - Slight - airport 2km West of nearest point G - Slight - Passes 0.5km north of Father Collins Park at Donaghmede	A - Slight - nearest aspect of Dublin Airport >1km away D -Slight - airport 3km west E- Slight - airport 5km south of nearest point F - Slight - airport 2km West of nearest point G - Slight - Passes 0.5km north of Father Collins Park at Donaghmede	A - Slight - nearest aspect of Dublin Airport >1km away D -Slight - airport 3km west F - Slight - airport 2km West of nearest point G - Slight - Passes 0.5km north of Father Collins Park at Donaghmede
2.2.9	**Potential to impact on views from heritage/tourist features**	A - Slight - does not appear to be any such sites in the vicinity D -Significant - passes through Swords and Roganstown Golf courses at western end and along the Broadmeadows Linear Park F - Significant - Passes Dunsogly Church and castle ruins and crosses St Margrets Golf Course, Roganstown Golf course and close to Corrstown Golf Club G - Slight - Passes 0.5km north of Father Collins Park at Donaghmede	A - Slight - does not appear to be any such sites in the vicinity D -Significant - passes through Swords and Roganstown Golf courses at western end and along the Broadmeadows Linear Park F - Significant - Passes Dunsogly Church and castle ruins and crosses St Margrets Golf Course, Roganstown Golf course and close to Corrstown Golf Club G - Slight - Passes 0.5km north of Father Collins Park at Donaghmede	A - Slight - does not appear to be any such sites in the vicinity B - Moderate - passes through Silloge Park Golf Course and adjacent to Bewleys Airport Hotel. Cemetery also located at Dardistown G - Slight - Passes 0.5km north of Father Collins Park at Donaghmede	A - Slight - does not appear to be any such sites in the vicinity D -Significant - passes through Swords and Roganstown Golf courses at western end and along the Broadmeadows Linear Park F - Significant - Passes Dunsogly Church and castle ruins and crosses St Margrets Golf Course, Roganstown Golf course and close to Corrstown Golf Club G - Slight - Passes 0.5km north of Father Collins Park at Donaghmede	A - Slight - does not appear to be any such sites in the vicinity B - Moderate - passes through Silloge Park Golf Course and adjacent to Bewleys Airport Hotel. Cemetery also located at Dardistown G - Slight - Passes 0.5km north of Father Collins Park at Donaghmede	A - Slight - does not appear to be any such sites in the vicinity D -Significant - passes through Swords and Roganstown Golf courses at western end and along the Broadmeadows Linear Park F - Significant - Passes Dunsogly Church and castle ruins and crosses St Margrets Golf Course, Roganstown Golf course and close to Corrstown Golf Club G - Slight - Passes 0.5km north of Father Collins Park at Donaghmede	A - Slight - does not appear to be any such sites in the vicinity D -Significant - passes through Swords and Roganstown Golf courses at western end and along the Broadmeadows Linear Park E- Slight - does not appear to be any such sites in the vicinity F - Significant - Passes Dunsogly Church and castle ruins and crosses St Margrets Golf Course, Roganstown Golf course and close to Corrstown Golf Club G - Slight - Passes 0.5km north of Father Collins Park at Donaghmede	A - Slight - does not appear to be any such sites in the vicinity D -Significant - passes through Swords and Roganstown Golf courses at western end and along the Broadmeadows Linear Park E- Slight - does not appear to be any such sites in the vicinity F - Significant - Passes Dunsogly Church and castle ruins and crosses St Margrets Golf Course, Roganstown Golf course and close to Corrstown Golf Club G - Slight - Passes 0.5km north of Father Collins Park at Donaghmede	A - Slight - does not appear to be any such sites in the vicinity D -Significant - passes through Swords and Roganstown Golf courses at western end and along the Broadmeadows Linear Park F - Significant - Passes Dunsogly Church and castle ruins and crosses St Margrets Golf Course, Roganstown Golf course and close to Corrstown Golf Club G - Slight - Passes 0.5km north of Father Collins Park at Donaghmede

2.2.10	**Potential to disrupt landscape structure (treelines / hedgerows / field pattern etc.)**	A - Moderate - landscape is relatively unstructured and irregular along this pipeline 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 field patterns F - Significant - this corridor section passes almost entirely through fields and hedgerows G - Slight - Moderate - landscape is relatively unstructured and open along this pipeline corridor section but with some hedgerow field patterns	A - Moderate - landscape is relatively unstructured and irregular along this pipeline 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 field patterns F - Significant - this corridor section passes almost entirely through fields and hedgerows G - Slight - Moderate - landscape is relatively unstructured and open along this pipeline corridor section but with some hedgerow field patterns	A - Moderate - landscape is relatively unstructured and irregular along this pipeline corridor section but with some hedgerow field patterns B- Moderate - landscape is relatively unstructured and irregular along this pipeline corridor section but with some hedgerow field patterns G - Slight - Moderate - landscape is relatively unstructured and open along this pipeline corridor section but with some hedgerow field patterns	A - Moderate - landscape is relatively unstructured and irregular along this pipeline 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 field patterns F - Significant - this corridor section passes almost entirely through fields and hedgerows G - Slight - Moderate - landscape is relatively unstructured and open along this pipeline corridor section but with some hedgerow field patterns	A - Moderate - landscape is relatively unstructured and irregular along this pipeline corridor section but with some hedgerow field patterns B- Moderate - landscape is relatively unstructured and irregular along this pipeline corridor section but with some hedgerow field patterns G - Slight - Moderate - landscape is relatively unstructured and open along this pipeline corridor section but with some hedgerow field patterns	A - Moderate - landscape is relatively unstructured and irregular along this pipeline 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 field patterns F - Significant - this corridor section passes almost entirely through fields and hedgerows G - Slight - Moderate - landscape is relatively unstructured and open along this pipeline corridor section but with some hedgerow field patterns	A - Moderate - landscape is relatively unstructured and irregular along this pipeline 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 field patterns E- Significant - this corridor section passes almost entirely through fields and hedgerows F - Significant - this corridor section passes almost entirely through fields and hedgerows G - Slight - Moderate - landscape is relatively unstructured and open along this pipeline corridor section but with some hedgerow field patterns	A - Moderate - landscape is relatively unstructured and irregular along this pipeline 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 field patterns E- Significant - this corridor section passes almost entirely through fields and hedgerows F - Significant - this corridor section passes almost entirely through fields and hedgerows G - Slight - Moderate - landscape is relatively unstructured and open along this pipeline corridor section but with some hedgerow field patterns	A - Moderate - landscape is relatively unstructured and irregular along this pipeline 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 field patterns F - Significant - this corridor section passes almost entirely through fields and hedgerows G - Slight - Moderate - landscape is relatively unstructured and open along this pipeline corridor section but with some hedgerow field patterns
2.2.11	**Potential to impact on woodlands and significant tree groups**	A - Significant - heavily wooded Tolka River corridor crossed at SW end of pipeline section. DP objective to protect and preserve trees, woodlands and hedgerows in this area D -Moderate - some narrow sections of riparian woodland also DP objective to protect and preserve trees, woodlands and hedgerows in Swords estuary area F - Slight - some small patches of woodland within corridor but could be avoided G - Imperceptible - There do not appear to be any patches of woodland along this pipeline corridor section	A - Significant - heavily wooded Tolka River corridor crossed at SW end of pipeline section. DP objective to protect and preserve trees, woodlands and hedgerows in this area D -Moderate - some narrow sections of riparian woodland also DP objective to protect and preserve trees, woodlands and hedgerows in Swords estuary area F - Slight - some small patches of woodland within corridor but could be avoided G - Imperceptible - There do not appear to be any patches of woodland along this pipeline corridor section	A - Significant - heavily wooded Tolka River corridor crossed at SW end of pipeline section. DP objective to protect and preserve trees, woodlands and hedgerows in this area B- Imperceptible - There do not appear to be any patches of woodland along this pipeline corridor section G - Imperceptible - There do not appear to be any patches of woodland along this pipeline corridor section	A - Significant - heavily wooded Tolka River corridor crossed at SW end of pipeline section. DP objective to protect and preserve trees, woodlands and hedgerows in this area D -Moderate - some narrow sections of riparian woodland also DP objective to protect and preserve trees, woodlands and hedgerows in Swords estuary area F - Slight - some small patches of woodland within corridor but could be avoided G - Imperceptible - There do not appear to be any patches of woodland along this pipeline corridor section	A - Significant - heavily wooded Tolka River corridor crossed at SW end of pipeline section. DP objective to protect and preserve trees, woodlands and hedgerows in this area B- Imperceptible - There do not appear to be any patches of woodland along this pipeline corridor section C - Moderate - there appears to be a small patch of woodland at eastern end of this pipline section (Abbeyville Estate) G - Imperceptible - There do not appear to be any patches of woodland along this pipeline corridor section	A - Significant - heavily wooded Tolka River corridor crossed at SW end of pipeline section. DP objective to protect and preserve trees, woodlands and hedgerows in this area D -Moderate - some narrow sections of riparian woodland also DP objective to protect and preserve trees, woodlands and hedgerows in Swords estuary area F - Slight - some small patches of woodland within corridor but could be avoided G - Imperceptible - There do not appear to be any patches of woodland along this pipeline corridor section	A - Significant - heavily wooded Tolka River corridor crossed at SW end of pipeline section. DP objective to protect and preserve trees, woodlands and hedgerows in this area D -Moderate - some narrow sections of riparian woodland also DP objective to protect and preserve trees, woodlands and hedgerows in Swords estuary area E- Slight - some small patches of woodland within corridor but could be avoided F - Slight - some small patches of woodland within corridor but could be avoided G - Imperceptible - There do not appear to be any patches of woodland along this pipeline corridor section	A - Significant - heavily wooded Tolka River corridor crossed at SW end of pipeline section. DP objective to protect and preserve trees, woodlands and hedgerows in this area D -Moderate - some narrow sections of riparian woodland also DP objective to protect and preserve trees, woodlands and hedgerows in Swords estuary area E- Slight - some small patches of woodland within corridor but could be avoided F - Slight - some small patches of woodland within corridor but could be avoided G - Imperceptible - There do not appear to be any patches of woodland along this pipeline corridor section	A - Significant - heavily wooded Tolka River corridor crossed at SW end of pipeline section. DP objective to protect and preserve trees, woodlands and hedgerows in this area D -Moderate - some narrow sections of riparian woodland also DP objective to protect and preserve trees, woodlands and hedgerows in Swords estuary area F - Slight - some small patches of woodland within corridor but could be avoided G - Imperceptible - There do not appear to be any patches of woodland along this pipeline corridor section
2.2.12	**Potential to impact on rivers and streams**	A - Significant - Tolka River corridor crossed at SW end of pipeline section D -Significant - crosses the Broadmeadows River in at least 2 places F - Significant - crosses the Ward River and the Broadmeadows River G -Significant - crosses the Mayne River	A - Significant - Tolka River corridor crossed at SW end of pipeline section D -Significant - crosses the Broadmeadows River in at least 2 places F - Significant - crosses the Ward River and the Broadmeadows River G -Significant - crosses the Mayne River	A - Significant - Tolka River corridor crossed at SW end of pipeline section B -Imperceptible - there do not appear to be any notable rivers or streams along this pipeline corridor section G -Significant - crosses the Mayne River	A - Significant - Tolka River corridor crossed at SW end of pipeline section D -Significant - crosses the Broadmeadows River in at least 2 places F - Significant - crosses the Ward River and the Broadmeadows River G -Significant - crosses the Mayne River	A - Significant - Tolka River corridor crossed at SW end of pipeline section B -Imperceptible - there do not appear to be any notable rivers or streams along this pipeline corridor section G -Significant - crosses the Mayne River	A - Significant - Tolka River corridor crossed at SW end of pipeline section D -Significant - crosses the Broadmeadows River in at least 2 places F - Significant - crosses the Ward River and the Broadmeadows River G -Significant - crosses the Mayne River	A - Significant - Tolka River corridor crossed at SW end of pipeline section D -Significant - crosses the Broadmeadows River in at least 2 places E- Imperceptible - there do not appear to be any notable rivers or streams along this pipeline corridor section F - Significant - crosses the Ward River and the Broadmeadows River G -Significant - crosses the Mayne River	A - Significant - Tolka River corridor crossed at SW end of pipeline section D -Significant - crosses the Broadmeadows River in at least 2 places E- Imperceptible - there do not appear to be any noteable rivers or streams along this pipeline corridor section F - Significant - crosses the Ward River and the Broadmeadows River G -Significant - crosses the Mayne River	A - Significant - Tolka River corridor crossed at SW end of pipeline section D -Significant - crosses the Broadmeadows River in at least 2 places F - Significant - crosses the Ward River and the Broadmeadows River G -Significant - crosses the Mayne River

2.2.13	**Potential to impact on historic designed landscapes**	A - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section D -Significant - passes across corner of Abbeyville estate at eastern end of corridor F - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section G - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section	A - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section D -Significant - passes across corner of Abbeyville estate at eastern end of corridor F - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section G - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section	A - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section B - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section G - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section	A - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section D -Significant - passes across corner of Abbeyville estate at eastern end of corridor F - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section G - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section	A - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section B - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section G - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section	A - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section D -Significant - passes across corner of Abbeyville estate at eastern end of corridor F - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section G - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section	A - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section D -Significant - passes across corner of Abbeyville estate at eastern end of corridor E- Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section F - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section G - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section	A - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section D -Significant - passes across corner of Abbeyville estate at eastern end of corridor E- Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section F - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section G - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section	A - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section D -Significant - passes across corner of Abbeyville estate at eastern end of corridor F - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section G - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section
2.3	**Landscape & Visual - Marine Outfalls**										
2.3.1	**Potential to impact on views from scenic routes (designation in Fingal CDP)**	Significant - numerous scenic routes designated within this outfall study area that relate to views of the coast	Significant - numerous scenic routes designated within this outfall study area that relate to views of the coast	Significant - One significant length scenic route dissects this outfall study area	Significant - numerous scenic routes designated within this outfall study area that relate to views of the coast	Significant - One significant length scenic route dissects this outfall study area	Significant - numerous scenic routes designated within this outfall study area that relate to views of the coast	Significant - numerous scenic routes designated within this outfall study area that relate to views of the coast	Significant - numerous scenic routes designated within this outfall study area that relate to views of the coast	Significant - numerous scenic routes designated within this outfall study area that relate to views of the coast
2.3.2	**Potential to impact on Highly Sensitive Landscape (designation in Fingal CDP)**	Significant - entire coastal area of County Fingal subject to High Sensitivity zoning and High Amenity zoning objectives	Significant - entire coastal area of County Fingal subject to High Sensitivity zoning and High Amenity zoning objectives	Significant - entire coastal area of County Fingal subject to High Sensitivity zoning	Significant - entire coastal area of County Fingal subject to High Sensitivity zoning and High Amenity zoning objectives	Significant - entire coastal area of County Fingal subject to High Sensitivity zoning	Significant - entire coastal area of County Fingal subject to High Sensitivity zoning and High Amenity zoning objectives	Significant - entire coastal area of County Fingal subject to High Sensitivity zoning and High Amenity zoning objectives	Significant - entire coastal area of County Fingal subject to High Sensitivity zoning and High Amenity zoning objectives	Significant - entire coastal area of County Fingal subject to High Sensitivity zoning and High Amenity zoning objectives
2.3.3	**Potential to impact on coastal walks (indicated in Fingal CDP)**	Significant - four coastal walks indicated in this outfall study area presumably covering much of the subject coastline	Significant - four coastal walks indicated in this outfall study area presumably covering much of the subject coastline	Significant - One coastal walk indicated along this section of coastline	Significant - four coastal walks indicated in this outfall study area presumably covering much of the subject coastline	Significant - One coastal walk indicated along this section of coastline	Significant - four coastal walks indicated in this outfall study area presumably covering much of the subject coastline	Significant - four coastal walks indicated in this outfall study area presumably covering much of the subject coastline	Significant - four coastal walks indicated in this outfall study area presumably covering much of the subject coastline	Significant - four coastal walks indicated in this outfall study area presumably covering much of the subject coastline
2.3.4	**Potential to impact on bathing locations (indicated in Fingal CDP)**	Moderate - two bathing locations identified within this outfall study area but only one in the vicinity of a likely outfall location	Moderate - two bathing locations identified within this outfall study area but only one in the vicinity of a likely outfall location	Moderate - One bathing location identified that would apply to the whole of Velvet Strand which is crossed by the southern outfall	Moderate - two bathing locations identified within this outfall study area but only one in the vicinity of a likely outfall location	Moderate - One bathing location identified that would apply to the whole of Velvet Strand which is crossed by the southern outfall	Moderate - two bathing locations identified within this outfall study area but only one in the vicinity of a likely outfall location	Moderate - two bathing locations identified within this outfall study area but only one in the vicinity of a likely outfall location	Moderate - two bathing locations identified within this outfall study area but only one in the vicinity of a likely outfall location	Moderate - two bathing locations identified within this outfall study area but only one in the vicinity of a likely outfall location
2.3.5	**Potential to impact on views from settlements**	Significant - likely outfall locations directly adjacent to the north of Rush	Significant - likely outfall locations directly adjacent to the north of Rush	Moderate - Portmarnock just to the north of this outfall study area	Significant - likely outfall locations directly adjacent to the north of Rush	Moderate - Portmarnock just to the north of this outfall study area	Significant - likely outfall locations directly adjacent to the north of Rush	Significant - likely outfall locations directly adjacent to the north of Rush	Significant - likely outfall locations directly adjacent to the north of Rush	Significant - likely outfall locations directly adjacent to the north of Rush
2.3.6	**Potential to impact on views from dwellings / local roads**	Significant - numerous houses lining local roads in the vicinity of these outfall locations	Significant - numerous houses lining local roads in the vicinity of these outfall locations	Slight - few houses located in the vicinity of the outfall location -	Significant - numerous houses lining local roads in the vicinity of these outfall locations	Slight - few houses located in the vicinity of the outfall location -	Significant - numerous houses lining local roads in the vicinity of these outfall locations	Significant - numerous houses lining local roads in the vicinity of these outfall locations	Significant - numerous houses lining local roads in the vicinity of these outfall locations	Significant - numerous houses lining local roads in the vicinity of these outfall locations
2.3.7	**Potential to impact on views from major roads (national or regional roads)**	Moderate - R128 regional road runs parallel to coast between Rush and Skerries but set back by several hundred metres at nearest point to coast	Moderate - R128 regional road runs parallel to coast between Rush and Skerries but set back by several hundred metres at nearest point to coast	Significant - R106 regional road runs along coastline across the proposed outfall location	Moderate - R128 regional road runs parallel to coast between Rush and Skerries but set back by several hundred metres at nearest point to coast	Significant - R106 regional road runs along coastline across the proposed outfall location	Moderate - R128 regional road runs parallel to coast between Rush and Skerries but set back by several hundred metres at nearest point to coast	Moderate - R128 regional road runs parallel to coast between Rush and Skerries but set back by several hundred metres at nearest point to coast	Moderate - R128 regional road runs parallel to coast between Rush and Skerries but set back by several hundred metres at nearest point to coast	Moderate - R128 regional road runs parallel to coast between Rush and Skerries but set back by several hundred metres at nearest point to coast
2.3.8	**Potential to impact on views from Dublin Airport including aerial approach and vehicular egress**	Slight – Main low level approach to east-west runway >5km to the south	Slight – Main low level approach to east-west runway >5km to the south	Significant – Main low level approach to east-west runway directly above this study area	Slight – Main low level approach to east-west runway >5km to the south	Significant – Main low level approach to east-west runway directly above this study area	Slight – Main low level approach to east-west runway >5km to the south	Slight – Main low level approach to east-west runway >5km to the south	Slight – Main low level approach to east-west runway >5km to the south	Slight – Main low level approach to east-west runway >5km to the south
2.3.9	**Potential to impact on views from Dublin - Belfast rail line**	Imperceptible - rail line > 2km inland from nearest proposed outfall location	Imperceptible - rail line > 2km inland from nearest proposed outfall location	Slight - rail line approximately 1km inland from proposed outfall location	Imperceptible - rail line > 2km inland from nearest proposed outfall location	Slight - rail line approximately 1km inland from proposed outfall location	Imperceptible - rail line > 2km inland from nearest proposed outfall location	Imperceptible - rail line > 2km inland from nearest proposed outfall location	Imperceptible - rail line > 2km inland from nearest proposed outfall location	Imperceptible - rail line > 2km inland from nearest proposed outfall location
2.3.10	**Potential to impact on views from heritage/tourist features**	Significant - 2 piers, 2 Martello towers and numerous other features of heritage and/or tourist interest within the outfall study area	Significant - 2 piers, 2 Martello towers and numerous other features of heritage and/or tourist interest within the outfall study area	Significant - Internationally renowned Portmarnock Golf Links adjacent to outfall location	Significant - 2 piers, 2 Martello towers and numerous other features of heritage and/or tourist interest within the outfall study area	Significant - Internationally renowned Portmarnock Golf Links adjacent to outfall location	Significant - 2 piers, 2 Martello towers and numerous other features of heritage and/or tourist interest within the outfall study area	Significant - 2 piers, 2 Martello towers and numerous other features of heritage and/or tourist interest within the outfall study area	Significant - 2 piers, 2 Martello towers and numerous other features of heritage and/or tourist interest within the outfall study area	Significant - 2 piers, 2 Martello towers and numerous other features of heritage and/or tourist interest within the outfall study area
2.3.11	**Potential to Impact on Character of the Coastal Landscape**	Significant – A range of beaches, low seacliffs, a harbour, two Martello towers and an urban seafront contained within this Study Area	Significant – A range of beaches, low seacliffs, a harbour, two Martello towers and an urban seafront contained within this Study Area	Significant – Passes through both an enclosed estuarine environment, a dune landscape (golf course) and a beach	Significant – A range of beaches, low seacliffs, a harbour, two Martello towers and an urban seafront contained within this Study Area	Significant – Passes through both an enclosed estuarine environment, a dune landscape (golf course) and a beach	Significant – A range of beaches, low seacliffs, a harbour, two Martello towers and an urban seafront contained within this Study Area	Significant – A range of beaches, low seacliffs, a harbour, two Martello towers and an urban seafront contained within this Study Area	Significant – A range of beaches, low seacliffs, a harbour, two Martello towers and an urban seafront contained within this Study Area	Significant – A range of beaches, low seacliffs, a harbour, two Martello towers and an urban seafront contained within this Study Area

3.0	Ecology	Annsbrook	Baldurgan	Clonshagh	Cookstown	Cloghran	Newtowncorduff	Rathartan	Saucerstown	Tyrrelstown Little
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)	**Slight:** 5.3km upstream of Natura 2000 wetland sites Rogerstown Estuary SPA/SAC and 7.0km upstream of Natura 2000 wetland sites Malahide Estuary SPA/SAC	**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 wetland sites (Baldoyle 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)	**Moderate**: 3.0km upstream of Natura 2000 wetland sites (Malahide Estuary SPA/SAC)	**Moderate**: 2.2km 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 corridor.	**Significant**: Site abuts Sluice River ecological corridor	**Significant**: Site abuts Rath Little ecological corridor; Access road crosses Ballough Stream ecological corridor.	**Imperceptible**: Site located more than 3km from Ballough Stream ecological corridor	**Moderate:** Site located 250m from the Broadmeadow River ecological corridor	**Imperceptible**: Site 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**: 0.1km 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	**Moderate**: 1.4km of hedges within the site	**Significant**: 3.8km 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.	**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.	**Slight:** Site comprised of agriculturally improved, cultivated or arable land.	**Slight:** Site comprised of agriculturally improved, cultivated or arable land.	**Slight:** 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 constitutes a non-salmonid system	**Slight** - The Donabate River constitutes 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 constitutes a non-salmonid system	**Significant -** The Broadmeadow River (main channel and tributaries) constitutes a salmonid system and the access road crosses a tributary and site abuts a tributary.	**Imperceptible** - The Lusk River constitutes a non-salmonid system
3.1.6	**Potential to disturb birds which are Qualifying Interests in the SPA (either winthin or up to 1km outside the SPA's boundaries).**	**Moderate** - more than 1km from the boundary of any SPA. Any negative effect on birds which are Qualifying Features of an SPA are considered unlikely to be significant in terms of the Conservation Objectives of the SPA	**Moderate** - more than 1km from the boundary of any SPA. Any negative effect on birds which are Qualifying Features of an SPA are considered unlikely to be significant in terms of the Conservation Objectives of the SPA	**Moderate** - more than 1km from the boundary of any SPA. Any negative effect on birds which are Qualifying Features of an SPA are considered unlikely to be significant in terms of the Conservation Objectives of the SPA	**Moderate** - more than 1km from the boundary of any SPA. Any negative effect on birds which are Qualifying Features of an SPA are considered unlikely to be significant in terms of the Conservation Objectives of the SPA	**Moderate** - more than 1km from the boundary of any SPA. Any negative effect on birds which are Qualifying Features of an SPA are considered unlikely to be significant in terms of the Conservation Objectives of the SPA	**Moderate** - more than 1km from the boundary of any SPA. Any negative effect on birds which are Qualifying Features of an SPA are considered unlikely to be significant in terms of the Conservation Objectives of the SPA	**Moderate** - more than 1km from the boundary of any SPA. Any negative effect on birds which are Qualifying Features of an SPA are considered unlikely to be significant in terms of the Conservation Objectives of the SPA	**Moderate** - more than 1km from the boundary of any SPA. Any negative effect on birds which are Qualifying Features of an SPA are considered unlikely to be significant in terms of the Conservation Objectives of the SPA	**Moderate** - more than 1km from the boundary of any SPA. Any negative effect on birds which are Qualifying Features of an SPA are considered unlikely to be significant in terms of the Conservation Objectives of the SPA
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 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	**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 Greylag Goose flock. Location is in an area considered likely to be used by the north Co Dublin winter Greylag Goose flock on occasion	**Imperceptible** - Outside the normal geographical range of the north Co Dublin winter Greylag Goose flock	**Significant** - Within 'Skerries Grasslands' IWEBS area, likely to be a feeding site for the north Co Dublin winter Greylag Goose flock
3.1.8	**Potential to result in loss of breeding habitat for Annex I species Kingfisher**	**Slight** - watercourse present but no suitable breeding habitat for Kingfisher or high quality feeding habitat	**Slight -** watercourse present but no suitable breeding habitat for Kingfisher or high quality feeding habitat	**Slight -** watercourse present but no suitable breeding habitat for Kingfisher or high quality feeding habitat	**Slight** - watercourse present but no breeding habitat for Kingfisher nor high quality feeding habitat for Kingfisher	**Slight -** watercourse present but no suitable breeding habitat for Kingfisher or high quality feeding habitat	**Slight -** watercourse present but no suitable breeding habitat for Kingfisher or high quality feeding habitat	**Slight -** watercourse present but no suitable breeding habitat for Kingfisher or high quality feeding habitat	**Significant** - suitable breeding habitat and high quality feeding habitat for Kingfisher is present on the Broad Meadow River	**Slight -** watercourse present but no suitable breeding habitat for Kingfisher or high quality feeding habitat
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 (I.e. 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	**Slight -** smallish fields, unlikely to be used regularly by Lapwing and Golden Plover	**Moderate -** smallish fields, but proximity to Rogerstown Estuary increases likelihood of site being used by Lapwing and Golden Plover	**Significant** - site includes large wet fields close to the Broad Meadow River highly suitable for Lapwing, Golden Plover or other winter waders	**Significant** - site includes large arable fields and pastures suitable for Lapwing, Golden Plover or other winter waders

3.2	Ecology - Pipelines									
3.2.1	**Potential to impact on Natura 2000 Sites and Natural Heritage Areas**	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 D - 0.5km Malahide estuary SPA/SAC; 2.0km Baldoyle Bay SPA/SAC/pNHA F - Malahide Estuary SPA/SAC/pNHA; Rogerstown Estuary SPA/SAC/pNHA; Balcunnin Stream flows out to WFD coastal waters G - 0.5km Baldoyle Bay SAC/SPA/pNHA F - Also crosses Balcunnin Stream which flows out to WFD coastal waters	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 D - 0.5km Malahide estuary SPA/SAC; 2.0km Baldoyle Bay SPA/SAC/pNHA F - Malahide Estuary SPA/SAC/pNHA; Rogerstown Estuary SPA/SAC/pNHA; Balcunnin Stream flows out to WFD coastal waters G - 0.5km Baldoyle Bay SAC/SPA/pNHA F - Also crosses Balcunnin Stream which flows out to WFD coastal waters	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 B - 8.0km North Dublin BAY SAC and North Bull Island SPA; 4.5km Baldoyle Bay SAC/SPA/pNHA G - 0.5km Baldoyle Bay SAC/SPA/pNHA G - Also interfaces with Baldoyle Bay SAC/SPA/pNHA and Ramsar site	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 D - 0.5km Malahide estuary SPA/SAC; 2.0km Baldoyle Bay SPA/SAC/pNHA F - Malahide Estuary SPA/SAC/pNHA; Rogerstown Estuary SPA/SAC/pNHA; Balcunnin Stream flows out to WFD coastal waters G - 0.5km Baldoyle Bay SAC/SPA/pNHA F - Also crosses Balcunnin Stream which flows out to WFD coastal waters	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 B - 8.0km North Dublin BAY SAC and North Bull Island SPA; 4.5km Baldoyle Bay SAC/SPA/pNHA G - 0.5km Baldoyle Bay SAC/SPA/pNHA G - Also interfaces with Baldoyle Bay SAC/SPA/pNHA and Ramsar site	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 D - 0.5km Malahide estuary SPA/SAC; 2.0km Baldoyle Bay SPA/SAC/pNHA F - Malahide Estuary SPA/SAC/pNHA; Rogerstown Estuary SPA/SAC/pNHA; Balcunnin Stream flows out to WFD coastal waters G - 0.5km Baldoyle Bay SAC/SPA/pNHA F - Also crosses Balcunnin Stream which flows out to WFD coastal waters	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 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 F - Malahide Estuary SPA/SAC/pNHA; Rogerstown Estuary SPA/SAC/pNHA; Balcunnin Stream flows out to WFD coastal waters G - 0.5km Baldoyle Bay SAC/SPA/pNHA	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 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 F - Malahide Estuary SPA/SAC/pNHA; Rogerstown Estuary SPA/SAC/pNHA; Balcunnin Stream flows out to WFD coastal waters G - 0.5km Baldoyle Bay SAC/SPA/pNHA	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 D - 0.5km Malahide estuary SPA/SAC; 2.0km Baldoyle Bay SPA/SAC/pNHA F - Malahide Estuary SPA/SAC/pNHA; Rogerstown Estuary SPA/SAC/pNHA; Balcunnin Stream flows out to WFD coastal waters G - 0.5km Baldoyle Bay SAC/SPA/pNHA F - Also crosses Balcunnin Stream which flows out to WFD coastal waters
3.2.2	**Potential to impact upon ecological buffer zones or Nature Development Areas idenitifed in the Fingal Development Plan 2011 - 2017**	Impinges upon 6 ecological buffer zones (3 No. D; 3 No. G) Impinges upon four nature development areas Potentially impinges on 6 No. Nature Development Areas	Impinges upon 6 ecological buffer zones (3 No. D; 3 No. G) Impinges upon four nature development areas Potentially impinges on 6 No. Nature Development Areas	Impinges upon 3 ecological buffer zones (Route G) Impinges upon four nature development areas Crosses 1 No. nature development area Potentially impinges on 1 No. Nature Development Areas	Impinges upon 6 ecological buffer zones (3 No. D; 3 No. G) Impinges upon four nature development areas Potentially impinges on 6 No. Nature Development Areas	Impinges upon 3 ecological buffer zones (Route G) Impinges upon five nature development areas Crosses 1 No. nature development area Potentially impinges on 1 No. Nature Development Areas	Impinges upon 6 ecological buffer zones (3 No. D; 3 No. G) Impinges upon four nature development areas Potentially impinges on 6 No. Nature Development Areas	Impinges upon 6 ecological buffer zones (3 No. D; 3 No. G) Impinges upon four nature development areas Potentially impinges on 6 No. Nature Development Areas	Impinges upon 6 ecological buffer zones (3 No. D; 3 No. G) Impinges upon four nature development areas Potentially impinges on 6 No. Nature Development Areas	Impinges upon 6 ecological buffer zones (3 No. D; 3 No. G) Impinges upon four nature development areas Potentially impinges on 6 No. Nature Development Areas
3.2.3	**Potential to impact upon ecological corridor, nature development area or high value habitats**	Crosses 10 No. ecological corridors Potentially crosses 1 No. ecological corridor Impinges upon TPO sites Potentially impinges upon TPO areas Potentially crosses 36 rivers or streams Loss of hedgerow habitat along 41km	Crosses 10 No. ecological corridors Potentially crosses 1 No. ecological corridor Impinges upon TPO sites Potentially impinges upon TPO areas Potentially crosses 36 rivers or streams Loss of hedgerow habitat along 41km	Crosses 2 No. ecological corridors Potentially crosses 1 No. ecological corridor Impinges upon TPO sites Crosses 1 No. TPO site Potentially crosses 4 rivers or streams Potentially crosses one area of deciduous woodland Loss of hedgerow habitat along 17km	Crosses 10 No. ecological corridors Potentially crosses 1 No. ecological corridor Impinges upon TPO sites Potentially impinges upon TPO areas Potentially crosses 36 rivers or streams Loss of hedgerow habitat along 41km	Crosses 2 No. ecological corridors Potentially crosses 1 No. ecological corridor Impinges upon TPO sites Crosses 1 No. TPO site Potentially crosses 6 No rivers or streams Potentially crosses 1 No. area of deciduous woodland Loss of hedgerow habitat along 20km	Crosses 10 No. ecological corridors Potentially crosses 1 No. ecological corridor Impinges upon TPO sites Potentially impinges upon TPO areas Potentially crosses 36 rivers or streams Loss of hedgerow habitat along 41km	Crosses 12 No. ecological corridors Potentially crosses 1 No. ecological corridor Impinges upon TPO sites Potentially impinges upon TPO areas Potentially crosses 45 rivers or streams Loss of hedgerow habitat along 54km	Crosses 12 No. ecological corridors Potentially crosses 1 No. ecological corridor Impinges upon TPO sites Potentially impinges upon TPO areas Potentially crosses 45 rivers or streams Loss of hedgerow habitat along 54km	Crosses 10 No. ecological corridors Potentially crosses 1 No. ecological corridor Impinges upon TPO sites Potentially impinges upon TPO areas Potentially crosses 36 rivers or streams Loss of hedgerow habitat along 41km
3.2.4	**Potential to impact on a salmonid system**	Crosses 8 No. salmonid systems.	Crosses 8 No. salmonid systems.	Crosses 2 No. salmonid systems.	Crosses 8 No. salmonid systems.	Crosses 3 No. salmonid systems.	Crosses 8 No. salmonid systems.	Crosses 9 No. salmonid systems.	Crosses 9 No. salmonid systems.	Crosses 8 No. salmonid systems.
3.2.5	**Potential for significant loss of breeding habitat for scarce or declining passerine species & Yellowhammer, Tree Sparrow, Spotted Flycatcher**	Portions of the route with good mature hedgerows, trees, scrub and rough grassland likely to be suitable for breeding habitat for Yellowhammer, Tree Sparrow and Spotted Flycatcher	Portions of the route with good mature hedgerows, trees, scrub and rough grassland likely to be suitable for breeding habitat for Yellowhammer, Tree Sparrow and Spotted Flycatcher	Portions of the route with good mature hedgerows, trees, scrub and rough grassland likely to be suitable for breeding habitat for Yellowhammer, Tree Sparrow and Spotted Flycatcher	Portions of the route with good mature hedgerows, trees, scrub and rough grassland likely to be suitable for breeding habitat for Yellowhammer, Tree Sparrow and Spotted Flycatcher	Portions of the route with good mature hedgerows, trees, scrub and rough grassland likely to be suitable for breeding habitat for Yellowhammer, Tree Sparrow and Spotted Flycatcher	Portions of the route with good mature hedgerows, trees, scrub and rough grassland likely to be suitable for breeding habitat for Yellowhammer, Tree Sparrow and Spotted Flycatcher	Portions of the route with good mature hedgerows, trees, scrub and rough grassland likely to be suitable for breeding habitat for Yellowhammer, Tree Sparrow and Spotted Flycatcher	Portions of the route with good mature hedgerows, trees, scrub and rough grassland likely to be suitable for breeding habitat for Yellowhammer, Tree Sparrow and Spotted Flycatcher	Portions of the route with good mature hedgerows, trees, scrub and rough grassland likely to be suitable for breeding habitat for Yellowhammer, Tree Sparrow and Spotted Flycatcher
3.2.6	**Potential to impact on the breeding habitat for Annex 1 species Kingfisher**	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 River where possible suitable habitat for breeding kingfisher occurs	No suitable riparian habitat for breeding kingfisher	Portion of route D located along the Broadmeadow River where possible suitable habitat for breeding kingfisher occurs	No suitable riparian habitat for breeding kingfisher	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 River where possible suitable habitat for breeding kingfisher occurs Crosses Ballough River which is unlikely to have suitable riparian habitat for breeding kingfisher	Portion of route D located along the Broadmeadow River where possible suitable habitat for breeding kingfisher occurs Crosses Ballough River which is unlikely to have suitable riparian habitat for breeding kingfisher	Portion of route D located along the Broadmeadow River where possible suitable habitat for breeding kingfisher occurs
3.2.7	**Potential for the significant loss of winter habitat for Lapwing and Golden Plover, and other wader species outside of designated areas (I.e. relatively large, flat open fields of ploughed or fallow arable land or pasture)**	Temporary loss of areas of wet grassland, arable or pasture fields that are possibly suitable wintering habitat for Lapwing and Golden Plover	Temporary loss of areas of wet grassland, arable or pasture fields that are possibly suitable wintering habitat for Lapwing and Golden Plover	Temporary loss of areas of wet grassland, arable or pasture fields that are possibly suitable wintering habitat for Lapwing and Golden Plover	Temporary loss of areas of wet grassland, arable or pasture fields that are possibly suitable wintering habitat for Lapwing and Golden Plover	Temporary loss of areas of wet grassland, arable or pasture fields that are possibly suitable wintering habitat for Lapwing and Golden Plover	Temporary loss of areas of wet grassland, arable or pasture fields that are possibly suitable wintering habitat for Lapwing and Golden Plover	Temporary loss of areas of wet grassland, arable or pasture fields that are possibly suitable wintering habitat for Lapwing and Golden Plover	Temporary loss of areas of wet grassland, arable or pasture fields that are possibly suitable wintering habitat for Lapwing and Golden Plover	Temporary loss of areas of wet grassland, arable or pasture fields that are possibly suitable wintering habitat for Lapwing and Golden Plover
3.2.8	**Potential to impact on IWeBS identified areas of importance to birds adjacent to Malahide Estuary**	Portion of route located within Malahide Estuary IWEBS area Portion of route located within 'Skerries Grasslands' IWEBS area	Portion of route located within Malahide Estuary IWEBS area Portion of route located within 'Skerries Grasslands' IWEBS area	No IWEB areas located on pipeline route	Portion of route located within Malahide Estuary IWEBS area Portion of route located within 'Skerries Grasslands' IWEBS area	No IWEB areas located on pipeline route	Portion of route located within Malahide Estuary IWEBS area Portion of route located within 'Skerries Grasslands' IWEBS area	Portion of route located within Malahide Estuary IWEBS area Portion of 2 No. routes located within 'Skerries Grasslands' IWEBS area	Portion of route located within Malahide Estuary IWEBS area Portion of 2 No. routes located within 'Skerries Grasslands' IWEBS area	Portion of route located within Malahide Estuary IWEBS area Portion of route located within 'Skerries Grasslands' IWEBS area

3.3	**Ecology - Marine Outfall**									
3.3.1	**Potential 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)	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 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 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)	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)
3.3.3	**Potential to impact on other potential 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 Baldoyle Estuary)	Moderate (possible, dune habitats and biogenic reefs in north area)	Significant (saltmasch and zostera beds in Baldoyle Estuary)	Moderate (possible, dune habitats and biogenic reefs in north area)	Moderate (possible, dune habitats and biogenic reefs in north area)	Moderate (possible, dune habitats and biogenic reefs in north area)	Moderate (possible, dune habitats and biogenic reefs in north area)
3.3.4	**Potential to impact on subtidal habitats**	Imperceptible (no sensitive habitats expected)	Imperceptible (no sensitive habitats expected)	Imperceptible (no sensitive habitats expected)	Imperceptible (no sensitive habitats expected)	Imperceptible (no sensitive habitats expected)	Imperceptible (no sensitive habitats expected)	Imperceptible (no sensitive habitats expected)	Imperceptible (no sensitive habitats expected)	Imperceptible (no sensitive habitats expected)
3.3.5	**Potential to impact on intertidal habitats**	Slight (isolated sensitive 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 sensitive sites in some areas of coast)	Moderate (sensitive habitats in Estuary and on Velvet Strand)	Slight (isolated sensitive sites in some areas of coast)	Slight (isolated sensitive sites in some areas of coast)	Slight (isolated sensitive sites in some areas of coast)	Slight (isolated sensitive sites in some areas of coast)
3.3.6	**Potential to impact on water quality and bathing waters designated under the Bathing Water Directive**	Slight (to be determined following hydrodynamic modelling)	Slight (to be determined following hydrodynamic modelling)	Moderate (to be determined following hydrodynamic modelling)	Slight (to be determined following hydrodynamic modelling)	Moderate (to be determined following hydrodynamic modelling)	Slight (to be determined following hydrodynamic modelling)	Slight (to be determined following hydrodynamic modelling)	Slight (to be determined following hydrodynamic modelling)	Slight (to be determined following hydrodynamic modelling)
3.3.7	**Potential to impact on water quality and neighbouring shellfish waters designated under the Shellfish Waters Directive**	Slight (to be determined following hydrodynamic modelling)	Slight (to be determined following hydrodynamic modelling)	Slight (to be determined following hydrodynamic modelling)	Slight (to be determined following hydrodynamic modelling)	Slight (to be determined following hydrodynamic modelling)	Slight (to be determined following hydrodynamic modelling)	Slight (to be determined following hydrodynamic modelling)	Slight (to be determined following hydrodynamic modelling)	Slight (to be determined following hydrodynamic modelling)
3.3.8	**Potential to impact on water quality and inshore fishing grounds based on regional fisheries datasets**	Slight (majority of shellfish fisheries in rocky shoreland areas away from expected final diffuser position)	Slight (majority of shellfish fisheries in rocky shoreland areas away from expected final diffuser position)	Slight (sandier substrate has fewer shellfish fishing grounds)	Slight (majority of shellfish fisheries in rocky shoreland areas away from expected final diffuser position)	Slight (sandier substrate has fewer shellfish fishing grounds)	Slight (majority of shellfish fisheries in rocky shoreland areas away from expected final diffuser position)	Slight (majority of shellfish fisheries in rocky shoreland areas away from expected final diffuser position)	Slight (majority of shellfish fisheries in rocky shoreland areas away from expected final diffuser position)	Slight (majority of shellfish fisheries in rocky shoreland areas away from expected final diffuser position)
3.3.9	**Potential to impact on transient protected marine species (cetaceans and salmonids), which may pass through the affected area within the survey area footprint**	Imperceptible during construction None during operation	Imperceptible during construction None during operation	Imperceptible during construction None during operation	Imperceptible during construction None during operation	Imperceptible during construction None during operation	Imperceptible during construction None during operation	Imperceptible during construction None during operation	Imperceptible during construction None during operation	Imperceptible during construction None during operation
3.3.10	**Potential to impact on important marine bird feeding areas**	Moderate - (to be determined following hydrodynamic modelling). Impact magnitude will depending on organic enrichment predictions, the precise location, seasonal timing and nature of works, may potentially result in impacts on sites and on the birds they support in foraging locations away from the sites.	Moderate - (to be determined following hydrodynamic modelling). Impact magnitude will depending on organic enrichment predictions, the precise location, seasonal timing and nature of works, may potentially result in impacts on sites and on the birds they support in foraging locations away from the sites.	Moderate - (to be determined following hydrodynamic modelling). Impact magnitude will depending on organic enrichment predictions, the precise location, seasonal timing and nature of works, may potentially result in impacts on sites and on the birds they support in foraging locations away from the sites.	Moderate - (to be determined following hydrodynamic modelling). Impact magnitude will depending on organic enrichment predictions, the precise location, seasonal timing and nature of works, may potentially result in impacts on sites and on the birds they support in foraging locations away from the sites.	Moderate - (to be determined following hydrodynamic modelling). Impact magnitude will depending on organic enrichment predictions, the precise location, seasonal timing and nature of works, may potentially result in impacts on sites and on the birds they support in foraging locations away from the sites.	Moderate - (to be determined following hydrodynamic modelling). Impact magnitude will depending on organic enrichment predictions, the precise location, seasonal timing and nature of works, may potentially result in impacts on sites and on the birds they support in foraging locations away from the sites.	Moderate - (to be determined following hydrodynamic modelling). Impact magnitude will depending on organic enrichment predictions, the precise location, seasonal timing and nature of works, may potentially result in impacts on sites and on the birds they support in foraging locations away from the sites.	Moderate - (to be determined following hydrodynamic modelling). Impact magnitude will depending on organic enrichment predictions, the precise location, seasonal timing and nature of works, may potentially result in impacts on sites and on the birds they support in foraging locations away from the sites.	Moderate - (to be determined following hydrodynamic modelling). Impact magnitude will depending on organic enrichment predictions, the precise location, seasonal timing and nature of works, may potentially result in impacts on sites and on the birds they support in foraging locations away from the sites.

4.0	Hydrology -	Annsbrook	Baldurgan	Clonshagh	Cookstown	Cloghran	Newtowncorduff	Rathartan	Saucerstown	Tyrrelstown Little
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 site 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.	***Slight:*** 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.	***Moderate:*** Belinstown River (10m north) and Broadmeadow tributary (1km south) (water quality Q3) of the site, High Importance. Will have permanent impact on small proportion of attribute.	***Moderate:*** Sluice River (10m north) and Sluice 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 Q3), 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.	***Significant:*** Broadmeadow tributaries (water quality Q3) are within 10m of the site; the site is surrounded by tributaries almost throughout its perimeter, High importance. Will have permanent impact on small proportion of attribute. Will have permanent impact on a significant proportion of attribute.	***Imperceptible:*** Collinstown Stream (120 southwest), Rush Town Stream (360m southeast) and Balcunnin Stream (930m north) of the site, Low 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.	***Slight:*** Crossing BroadmeadowTributary, Medium importance. Will have permanent impact on small proportion of attribute.	***None:*** No new culvert required.
4.1.3	**Area prone to flooding (based on historical data and predicted flood extents adjacent to the site as well as up and downstream locations)**	***Imperceptible:*** No flooding to the site from the Ballough and Ballyboghill rivers. The Ballyboghill has extensive overland flooding approx. 3km downstream, Low importance. Will have permanent impact on small proportion of attribute.	***Slight:*** Ballyboghill have overland flooding approx. 200m to the north of the site. The Belinstown has extensive overland flooding approx. 2km downstream, medium importance. Will have permanent impact on small proportion of attribute.	***Imperceptible:*** No flooding from the Mayne / Cuckoo Rivers to the site. The Mayne has history of flooding; and predicted overland flooding approx. 2km downstream, Low importance. Will have permanent impact on small proportion of attribute.	***Imperceptible:*** The Belinstown has extensive predicted overland flooding (both tidal & fluvial) and recurrence historic flooding approx. 3.5km downstream, Low importance. Will have permanent impact on small proportion of attribute.	***Slight:*** No flooding from the Sluice River at the site. The Sluice has history of flooding and predicted overland flooding approx. 0.5km upstream and 2km downstream, Medium importance. Will have permanent impact on small proportion of attribute.	***Imperceptible:*** No flooding from Ballough River. The eastern tributary was not modelled in FEM FRAMS, but has a history of flooding upstream, Low importance. Will have permanent impact on small proportion of attribute.	***Imperceptible:*** No flooding from the Collinstown Stream and Palmerstown Stream close to the site. History of flooding at downstream locations, Low importance. Will have permanent impact on small proportion of attribute.	***Moderate:*** The Broadmeadow River flooding extent is adjacent to the site boundary, High importance. Will have permanent impact on small proportion of attribute.	***Imperceptible:*** No flooding from the Collinstown and Rush Town Stream to the site. History of flooding at downstream locations, Low 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. 4.6km 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 5km downstream respectively, Low importance. Will have permanent impact on small proportion of attribute.	***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.	***Slight:*** 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, pNHA, Ramsar and SNR) approx. 1km downstream, High importance. Will have permanent impact on small proportion of attribute.	***Imperceptible:*** The Broadmeadow River discharges into the Broadmeadow Estuary (SAC, SPA, pNHA) approx. 3km downstream, Low importance. Will have permanent impact on small proportion of attribute.	***Slight:*** The Collinstown Stream discharges into Rogerstown Estuary and Rush Town Stream discharges into the Irish sea (unpolluted water quality) approx. 2.2km downstream, Medium importance. Will have permanent impact on small proportion of attribute.
4.2	**Hydrology - Pipelines**									
4.2.1	**Proximity to water bodies in terms of flooding and as an indicator of sensitive surface water receptors**	18 river catchments and some coastal areas	18 river catchments and some coastal areas	7 river catchments and some coastal areas	18 river catchments and some coastal areas	9 river catchments and some coastal areas	18 river catchments and some coastal areas	28 river catchments and some coastal areas	28 river catchments and some coastal areas	18 river catchments and some coastal areas
4.2.2	**Culverting requirement - used to indicate impact on flood-prone watercourses due to reduced conveyance.**	36 crossings	36 crossings	6 crossings	36 crossings	11 crossings	36 crossings	45 crossings	45 crossings	36 crossings
4.2.3	**Area prone to flooding (based on historical data and predicted flood extents adjacent to the site as well as up and downstream locations)**	A - Historic flooding in Tolka in the vicinity of the pipeline corridor; D - Extensive flooding on the corridor. Overland flooding on the Sluice and Broadmeadow F - Historic flooding on the corridor. Overland flooding on the Broadmeadow, Belinstown and Ballyboughill crossings G - Historic flooding on the Mayne River (Fluvial and tidal near Mayne Bridge)	A - Historic flooding in Tolka in the vicinity of the pipeline corridor; D - Extensive flooding on the corridor. Overland flooding on the Sluice and Broadmeadow F - Historic flooding on the corridor. Overland flooding on the Broadmeadow, Belinstown and Ballyboughill crossings G - Historic flooding on the Mayne River (Fluvial and tidal near Mayne Bridge)	A - Historic flooding in Tolka in the vicinity of the pipeline corridor; B - Historic flooding where route crosses the Mayne River G - Historic flooding on the Mayne River (Fluvial and tidal near Mayne Bridge)	A - Historic flooding in Tolka in the vicinity of the pipeline corridor; D - Extensive flooding on the corridor. Overland flooding on the Sluice and Broadmeadow F - Historic flooding on the corridor. Overland flooding on the Broadmeadow, Belinstown and Ballyboughill crossings G - Historic flooding on the Mayne River (Fluvial and tidal near Mayne Bridge)	A - Historic flooding in Tolka in the vicinity of the pipeline corridor; B - Historic flooding where route crosses the Mayne River C - Some overland flooding along Sluice River G - Historic flooding on the Mayne River (Fluvial and tidal near Mayne Bridge)	A - Historic flooding in Tolka in the vicinity of the pipeline corridor; D - Extensive flooding on the corridor. Overland flooding on the Sluice and Broadmeadow F - Historic flooding on the corridor. Overland flooding on the Broadmeadow, Belinstown and Ballyboughill crossings G - Historic flooding on the Mayne River (Fluvial and tidal near Mayne Bridge)	A - Historic flooding in Tolka in the vicinity of the pipeline corridor; D - Extensive flooding on the corridor. Overland flooding on the Sluice and Broadmeadow E - Overland flooding on the Broadmeadow, Bellinstown and Ballyboughill crossings F - Historic flooding on the corridor. Overland flooding on the Broadmeadow crossings G - Historic flooding on the Mayne River (Fluvial and tidal near Mayne Bridge)	A - Historic flooding in Tolka in the vicinity of the pipeline corridor; D - Extensive flooding on the corridor. Overland flooding on the Sluice and Broadmeadow E - Overland flooding on the Broadmeadow, Bellinstown and Ballyboughill crossings F - Historic flooding on the corridor. Overland flooding on the Broadmeadow crossings G - Historic flooding on the Mayne River (Fluvial and tidal near Mayne Bridge)	A - Historic flooding in Tolka in the vicinity of the pipeline corridor; D - Extensive flooding on the corridor. Overland flooding on the Sluice and Broadmeadow F - Historic flooding on the corridor. Overland flooding on the Broadmeadow, Belinstown and Ballyboughill crossings G - Historic flooding on the Mayne River (Fluvial and tidal near Mayne Bridge)
4.2.4	**Potential Impact on ecologically important and designated sites.**	Route passes close to Broadmeadow Estuary (SPA/SAC/pNHA); Rogerstown Estuary (SAC/SPA/pNAH/Ramsar/SNR); Baldoyle Estuary (SPA/SAC/pNHA)	Route passes close to Broadmeadow Estuary (SPA/SAC/pNHA); Rogerstown Estuary (SAC/SPA/pNAH/Ramsar/SNR); Baldoyle Estuary (SPA/SAC/pNHA)	2 routes pass close to Baldoyle Estuary (SPA/SAC/pNHA)	Route passes close to Broadmeadow Estuary (SPA/SAC/pNHA); Rogerstown Estuary (SAC/SPA/pNAH/Ramsar/SNR); Baldoyle Estuary (SPA/SAC/pNHA)	3 routes pass close to Baldoyle Estuary (SPA/SAC/pNHA); Broadmeadow Estuary (SAC/SPA/pNHA)	Route passes close to Broadmeadow Estuary (SPA/SAC/pNHA); Rogerstown Estuary (SAC/SPA/pNAH/Ramsar/SNR); Baldoyle Estuary (SPA/SAC/pNHA)	2 routes pass close to Broadmeadow Estuary (SPA/SAC/pNHA); 2 routes pass close to Rogerstown Estuary (SAC/SPA/pNHA/Ramsar/SNR); Baldoyle Estuary (SPA/SAC/pNHA)	2 routes pass close to Broadmeadow Estuary (SPA/SAC/pNHA); 2 routes pass close to Rogerstown Estuary (SAC/SPA/pNHA/Ramsar/SNR); Baldoyle Estuary (SPA/SAC/pNHA)	Route passes close to Broadmeadow Estuary (SPA/SAC/pNHA); Rogerstown Estuary (SAC/SPA/pNHA/Ramsar/SNR); Baldoyle Estuary (SPA/SAC/pNHA)

4.3	**Hydrology - Marine Outfall**									
4.3.1	**Proximity to water bodies in terms of flooding and as an indicator of sensitive surface water receptors**	Rush coastal area; Rogerstown Estuary (SAC/SPA/pNHA)	Rush coastal area; Rogerstown Estuary (SAC/SPA/pNHA)	Baldoyle estuary (SPA/SAC/pNHA)	Rush coastal area; Rogerstown Estuary (SAC/SPA/pNHA)	Baldoyle estuary (SPA/SAC/pNHA)	Rush coastal area; Rogerstown Estuary (SAC/SPA/pNHA)	Rush coastal area; Rogerstown Estuary (SAC/SPA/pNHA)	Rush coastal area; Rogerstown Estuary (SAC/SPA/pNHA)	Rush coastal area; Rogerstown Estuary (SAC/SPA/pNHA)
4.3.2	**Potential to impact on shellfish waters**	study area is not located within the designated shellfish waters	study area is not located within the designated shellfish waters	study area is not located within the designated shellfish waters	study area is not located within the designated shellfish waters	study area is not located within the designated shellfish waters	study area is not located within the designated shellfish waters	study area is not located within the designated shellfish waters	study area is not located within the designated shellfish waters	study area is not located within the designated shellfish waters
4.3.3	**Area prone to flooding (based on historical data and predicted flood extents adjacent to the site as well as up and downstream locations)**	2 No. Historic flooding locations in the study area; some coastal flooding between Drumanagh and Breakwater	2 No. Historic flooding locations in the study area; some coastal flooding between Drumanagh and Breakwater	2 No. Historic flooding locations near the study area; extensive coastal flooding near the north and south western part of the study area	2 No. Historic flooding locations in the study area; some coastal flooding between Drumanagh and Breakwater	2 No. Historic flooding locations near the study area; extensive coastal flooding near the north and south western part of the study area	2 No. Historic flooding locations in the study area; some coastal flooding between Drumanagh and Breakwater	2 No. Historic flooding locations in the study area; some coastal flooding between Drumanagh and Breakwater	2 No. Historic flooding locations in the study area; some coastal flooding between Drumanagh and Breakwater	2 No. Historic flooding locations in the study area; some coastal flooding between Drumanagh and Breakwater
4.3.4	**Potential Impact on ecologically important and designated sites.**	Rogerstown Estuary (SAC/SPA/pNHA/Ramsar/SNR); 2 recreational bathing sites (good water quality); outfall into unpolluted coastal water	Rogerstown Estuary (SAC/SPA/pNHA/Ramsar/SNR); 2 recreational bathing sites (good water quality); outfall into unpolluted coastal water	Baldoyle Estuary (SPA/SAC/pNHA)	Rogerstown Estuary (SAC/SPA/pNHA/Ramsar/SNR); 2 recreational bathing sites (good water quality); outfall into unpolluted coastal water	Baldoyle Estuary (SPA/SAC/pNHA)	Rogerstown Estuary (SAC/SPA/pNHA/Ramsar/SNR); 2 recreational bathing sites (good water quality); outfall into unpolluted coastal water	Rogerstown Estuary (SAC/SPA/pNHA/Ramsar/SNR); 2 recreational bathing sites (good water quality); outfall into unpolluted coastal water	Rogerstown Estuary (SAC/SPA/pNHA/Ramsar/SNR); 2 recreational bathing sites (good water quality); outfall into unpolluted coastal water	Rogerstown Estuary (SAC/SPA/pNHA/Ramsar/SNR); 2 recreational bathing sites (good water quality); outfall into unpolluted coastal water
5.0	**Hydrogeology -**	**Annsbrook**	**Baldurgan**	**Clonshagh**	**Cookstown**	**Cloghran**	**Newtowncorduff**	**Rathartan**	**Saucerstown**	**Tyrrelstown Little**
5.1	**Hydrogeology - Sites**									
5.1.1	**Aquifer Classification - importance of the groundwater resource to a given area**	**Moderate:** Locally Important Bedrock Aquifer underlies site, Medium importance. Will have permanent impact on a significant proportion of attribute.	**Moderate:** Locally Important Bedrock Aquifer underlies site, Medium importance. Will have permanent impact on a significant proportion of attribute.	**Moderate:** Poor Bedrock Aquifer and Locally Important Bedrock Aquifer underlies site, Medium importance. Will have permanent impact on a significant proportion of attribute.	**Moderate:** Locally Important Bedrock Aquifer underlies site, Medium importance. Will have permanent impact on a significant proportion of attribute.	**Slight:** Poor Bedrock Aquifer underlies site, Low importance. Will have permanent impact on a significant proportion of attribute.	**Moderate:** Locally Important Bedrock Aquifer underlies site, Medium importance. Will have permanent impact on a significant proportion of attribute.	**Moderate:** Locally Important Bedrock Aquifer underlies site, Medium importance. Will have permanent impact on a significant proportion of attribute.	**Moderate:** Poor Bedrock Aquifer and Locally Important Bedrock Aquifer underlies site, Medium importance. Will have permanent impact on a significant proportion of attribute.	**Moderate:** Locally Important Bedrock Aquifer underlies site, Medium importance. Will have permanent impact on a significant proportion of attribute.
5.1.2	**Vulnerability Classification - potential for groundwater contamination**	**Slight:** Low Vulnerability, Low importance. Will have permanent impact on a significant proportion of attribute.	**Slight:** Low Vulnerability, Low importance. Will have permanent impact on a significant proportion of attribute.	**Slight:** Low Vulnerability, Low importance. Will have permanent impact on a significant proportion of attribute.	**Slight:** Low Vulnerability, Low importance. Will have permanent impact on a significant proportion of attribute.	**Moderate:** Low to High Vulnerability, Predominantly Low, Medium importance. Will have permanent impact on a significant proportion of attribute.	**Slight:** Low Vulnerability, Low importance. Will have permanent impact on a significant proportion of attribute.	**Slight:** Low Vulnerability, Low importance. Will have permanent impact on a significant proportion of attribute.	**Moderate:** Low to High Vulnerability, Predominantly Moderate, Medium importance. Will have permanent impact on a significant proportion of attribute.	**Slight:** Low Vulnerability, Low importance. Will have permanent impact on a significant proportion of attribute.
5.1.3	**GSI Groundwater Protection Response matrix**	**R1**	**R1**	**R1**	**R1**	**R2**	**R1**	**R1**	**R2**	**R1**
5.1.4	**Groundwater Supplies - identification of water supply springs and bored wells based on GSI, EPA & FCC records**	**None:** No Groundwater Supplies within 500m however unconfirmed information from FCC suggests the possibility of additional groundwater abstraction points and wells nearby (Appendix A). If present, well would be of Low importance and would have a permanent impact on a significant proportion of attribute.	**Slight:** 1x Spring; St. Bridget's Well 400m South. Unconfirmed information from FCC suggests the possibility of additional groundwater abstraction points and wells nearby (Appendix A). Low importance. Will have permanent impact on a significant proportion of attribute.	**None:** No Groundwater Supplies within 500m	**Slight:** 1x Spring; St. Bridget's Well 210m South East. Unconfirmed information from FCC suggests the possibility of additional groundwater abstraction points and wells nearby (Appendix A). Low importance. Will have permanent impact on a significant proportion of attribute.	**None:** No Groundwater Supplies within 500m	**Slight:** 1x bored well; for agriculture and domestic use with good yields 510m North. Unconfirmed information from FCC suggests the possibility of additional groundwater abstraction points and wells nearby (Appendix A). Low importance. Will have permanent impact on a significant proportion of attribute.	**None:** No Groundwater Supplies within 500m. Unconfirmed information from FCC suggests the possibility of additional groundwater abstraction points and wells nearby (Appendix A). If present, well(s) would be of Low importance and would have a permanent impact on a significant proportion of attribute.	**None:** No Groundwater Supplies within 500m	**None:** No Groundwater Supplies within 500m. Unconfirmed information from FCC suggests the possibility of additional groundwater abstraction points and wells nearby (Appendix A). Low importance. Will have permanent impact on a significant proportion of attribute.
5.1.5	**Groundwater Source Protection Area's and Zones of Contribution as per available GSI & EPA data**	**None:** No SPA's or ZOC's in close proximity	**None:** No SPA's or ZOC's in close proximity	**None:** No SPA's or ZOC's in close proximity	**None:** No SPA's or ZOC's in close proximity	**None:** No SPA's or ZOC's in close proximity	**None:** No SPA's or ZOC's in close proximity	**None:** No SPA's or ZOC's in close proximity	**None:** No SPA's or ZOC's in close proximity	**None:** No SPA's or ZOC's in close proximity
5.1.6	**Identification of hydrogeological features from the GSI Karst database**	***None:*** No Karst Feature within 2km	***None:*** 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.	***None:*** No Karst Feature within 2km	***Slight:*** 1x spring; St. Doolaghs Well 2km 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 1.8km north east to south east of the site, Low importance. Will have permanent impact on a significant proportion of attribute.	***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:*** No Karst Feature within 2km	***Slight:*** 1x spring; Bog Well 700m west of the site, Low importance. Will have permanent impact on a significant proportion of attribute.

5.2	**Hydrogeology - Pipelines**									
5.2.1	**Aquifer Classification - importance of the groundwater resource to a given area**	Poor Bedrock Aquifer and Locally Important Bedrock Aquifer underlies the route	Poor Bedrock Aquifer and Locally Important Bedrock Aquifer underlies the route	Poor Bedrock Aquifer and Locally Important Bedrock Aquifer underlies the route	Poor Bedrock Aquifer and Locally Important Bedrock Aquifer underlies the route	Poor Bedrock Aquifer and Locally Important Bedrock Aquifer underlies the route	Poor Bedrock Aquifer and Locally Important Bedrock Aquifer underlies the route	Poor Bedrock Aquifer and Locally Important Bedrock Aquifer underlies the route	Poor Bedrock Aquifer and Locally Important Bedrock Aquifer underlies the route	Poor Bedrock Aquifer and Locally Important Bedrock Aquifer underlies the route
5.2.2	**Vulnerability Classification - potential for groundwater contamination**	A - predominantly high D - predominantly high F - predominantly low G - predominantly 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 low G - predominantly low	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
5.2.3	**Groundwater Supplies - identification of water supply springs and bored wells based on GSI, EPA & FCC records**	1 No. well with a moderate yield 4 No. bored wells with good yields 1 No. spring with good yields Possible additional groundwater abstraction points and wells nearby	1 No. well with a moderate yield 4 No. bored wells with good yields 1 No. spring with good yields Possible additional groundwater abstraction points and wells nearby	1 No. well with a moderate yield 6 No. bored wells with moderate to good yields 1 No. spring with moderate to good yield.	1 No. well with a moderate yield 4 No. bored wells with good yields 1 No. spring with good yields Possible additional groundwater abstraction points and wells nearby	1 No. well with a moderate yield 6 No. bored wells with moderate to good yields 1 No. spring with moderate to good yield.	1 No. well with a moderate yield 4 No. bored wells with good yields 1 No. spring with good yields Possible additional groundwater abstraction points and wells nearby	1 No. well with a moderate yield 10 No. bored wells with good yields 1 No. spring with moderate to good yield. Possible additional groundwater abstraction points and wells nearby	1 No. well with a moderate yield 10 No. bored wells with good yields 1 No. spring with moderate to good yield. Possible additional groundwater abstraction points and wells nearby	1 No. well with a moderate yield 4 No. bored wells with good yields 1 No. spring with good yields Possible additional groundwater abstraction points and wells nearby
5.2.4	**Groundwater Source Protection Area's and Zones of Contribution as per available GSI & EPA data**	No source protection areas or zones of contribution in close proximity	No source protection areas or zones of contribution in close proximity	No source protection areas or zones of contribution in close proximity	No source protection areas or zones of contribution in close proximity	No source protection areas or zones of contribution in close proximity	No source protection areas or zones of contribution in close proximity	No source protection areas or zones of contribution in close proximity	No source protection areas or zones of contribution in close proximity	No source protection areas or zones of contribution in close proximity
5.2.5	**Identification of hydrogeological features from the GSI Karst database**	2 No. springs within the corridor	2 No. springs within the corridor		2 No. springs within the corridor		2 No. springs within the corridor	4 No. springs within the corridor	4 No. springs within the corridor	2 No. springs within the corridor
5.3	**Hydrogeology - Marine Outfall**									
5.3.1	**Aquifer Classification - importance of the groundwater resource to a given area**	Poor Bedrock Aquifer and Locally Important Bedrock Aquifer	Poor Bedrock Aquifer and Locally Important Bedrock Aquifer	Poor Bedrock Aquifer	Poor Bedrock Aquifer and Locally Important Bedrock Aquifer	Poor Bedrock Aquifer	Poor Bedrock Aquifer and Locally Important Bedrock Aquifer	Poor Bedrock Aquifer and Locally Important Bedrock Aquifer	Poor Bedrock Aquifer and Locally Important Bedrock Aquifer	Poor Bedrock Aquifer and Locally Important Bedrock Aquifer
5.3.2	**Vulnerability Classification - potential for groundwater contamination**	predominantly low	predominantly low	predominantly high	predominantly low	predominantly high	predominantly low	predominantly low	predominantly low	predominantly low
5.3.3	**Groundwater Supplies - identification of water supply springs and bored wells based on GSI, EPA & FCC records**	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	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 500m	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 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
5.3.4	**Groundwater Source Protection Area's and Zones of Contribution as per available GSI & EPA data**	No source protection areas or zones of contribution in close proximity	No source protection areas or zones of contribution in close proximity	No source protection areas or zones of contribution in close proximity	No source protection areas or zones of contribution in close proximity	No source protection areas or zones of contribution in close proximity	No source protection areas or zones of contribution in close proximity	No source protection areas or zones of contribution in close proximity	No source protection areas or zones of contribution in close proximity	No source protection areas or zones of contribution in close proximity
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 features within 500m of the outfall 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	Soils and Geology	Annsbrook	Baldurgan	Clonshagh	Cookstown	Cloghran	Newtowncorduff	Rathartan	Saucerstown	Tyrrelstown Little
6.1	**Soils and Geology - Sites**									
6.1.1	**Potential to impact on Geological Heritage Sites/County Geological Sites**	**Imperceptible:** 3.4km to Walshestown Stream Section (IGH 9), 3.7km to Nags Head Quarry (IGH 8), 8km to Feltrim Hill Quarry (IGH 8, 3)	**Imperceptible:** 4.8km to Nags Head Quarry (IGH 8), 5.2km to Walshestown Stream Section (IGH 9)	**Imperceptible:** 1.8km to Feltrim Quarry (IGH 8, 3)	**Imperceptible:** 5.5km to Nags Head Quarry (IGH 8), 6.1km to Walshestown Stream Section (IGH 9), 7.5km to Feltrim Hill Quarry (IGH 8, 3)	**Imperceptible:** 0.5km to Feltrim Hill Quarry (IGH 8, 3), 5.3km to Malahide Point (IGH 13), 5.0km Malahide Coast (IGH 3)	**Imperceptible:** 3.6km to Walshestown Stream Section (IGH 9), 4.7km to Nags Head Quarry (IGH 8)	**Imperceptible:** 1.8km to Skerries to Rush Coast (IGH 3, 8)	**Imperceptible:** 5.2km to Feltrim Hill Quarry (IGH 8, 3), 6.8km to Malahide Point (IGH 13)	**Imperceptible:** 1.4km Curkeen Hill Quarry (IGH 3, 8), 2.0km Milverton Quarry (IGH 8), 2.4km to Skerries to Rush Coast (IGH 3, 8)
6.1.2	**Potential to interact with contaminated land**	**Imperceptible:** No history of contamination identified. Agricultural land may be a source of nitrates.	**Imperceptible:** No history of contamination identified. Agricultural land may be a source of nitrates.	**Imperceptible:** Belcamp Lane (Moderate) - approx 400m to site, St. Doolaghs Quarries (Low) - approx 850m to site	**Imperceptible:** Sand & Gravel Pit - approx 650m to site	**Imperceptible:** No history of contamination identified. Agricultural land may be a source of nitrates.	**Imperceptible:** No history of contamination identified. Agricultural land may be a source of nitrates.	**Imperceptible:** Train line 100m from site. Agricultural land may be a source of nitrates.	**Imperceptible:** No history of contamination identified. Agricultural land may be a source of nitrates.	**Imperceptible:** Train line approx. 500m from site. Agricultural land may be a source of nitrates.
6.1.3	**Potential to sterilize mineral resource**	**Imperceptible:** No known mineral resources or registered quarries nearby	**Imperceptible:** No known mineral resources or registered quarries nearby	**Imperceptible:** No known mineral resources or registered quarries nearby	**Imperceptible:** No known mineral resources or registered quarries nearby	**Imperceptible:** 500m to Feltrim Hill Quarry	**Imperceptible**	**Imperceptible**	**Imperceptible**	**Imperceptible**
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 that bedrock is at least 10 mbgl across the site. Confirm using ground investigation (rotary coring)	**Imperceptible -** confirm using ground investigation (rotary coring)	**Imperceptible -** confirm using ground investigation (rotary coring)	**Imperceptible -** confirm using ground investigation (rotary coring)	**Slight negative -** confirm using ground investigation (rotary coring)	**Imperceptible:** Confirm using ground investigation (rotary coring)	**Imperceptible -** confirm using ground investigation (rotary coring)	**Slight negative:** 30% Shallow Bedrock . Confirm using ground investigation (rotary coring)	**Imperceptible -** confirm using ground investigation (rotary coring)
6.1.5	**Potential impact on karst features**	**Imperceptible:** No karst features identified	**Imperceptible:** No karst features identified	**Imperceptible:** No karst features identified	**Imperceptible:** No karst features identified	**Imperceptible:** 25% Shallow Bedrock	**Imperceptible:** No karst features identified	**Imperceptible:** No karst features identified	**Imperceptible:** No karst features identified	**Imperceptible:** 770m to Harlakes Well Karst Feature
6.1.6	**Potential to encounter soft ground**	**Imperceptible:** No alluvial deposits mapped within site boundaries however proximity to river indicates soft silts may be present in the northern and southeastern part of the site. Ground investigation to confirm	**Imperceptible:** No alluvial deposits mapped within site boundaries however proximity to river indicates soft silts may be present in the north, south and west of the site. Ground investigation to confirm	**Imperceptible:** No alluvial deposits mapped within site boundaries however proximity to river indicates soft silts may be present in the north of the site. Ground investigation to confirm	**Imperceptible:** No alluvial deposits mapped within the site boundary. Presence of a river along the northern boundary indicates alluvium (including soft silts) may be present. Ground investigation to confirm	**Imperceptible:** No alluvial deposits mapped within site boundaries however proximity to river indicates soft silts may be present in the north of the site. Ground investigation to confirm	**Imperceptible:** No alluvial deposits mapped within the site boundary. Presence of a river near the south east and south west corners indicate alluvium (including soft silts) may be present. Ground investigation to confirm	**Imperceptible:** No alluvial deposits mapped within site boundaries however proximity to river indicates soft silts may be present in the south west of the site. Ground investigation to confirm	**Slight negative: 25**% Alluvium Deposits. Potential for soft ground in northeastern corner. Ground investigation to confirm	**Imperceptible:** No alluvial deposits mapped. Soft ground unlikely to be encountered.
6.1.7	**Soils Types**	Pre dominant Grey Brown Podzolics (BMinDW , deep well drained, basic soils); Along Streams some Surface/ Groundwater gleys (BminPD, deep poorly drained, basic soils) and Alluvium (AlluvMIN)	Grey Brown Podzolics (BMinDW, deep well drained, basic soils), Acidic surface water / groundwater gleys (AminPD, poorly drained, acidic soils) and Basic surface water/ groundwater gleys (BminPD, poorly drained, basic soils)	Grey Brown Podzolics (BMinDW, deep well drained, basic soils) and Basic surface water / groundwater gleys (BminPD, poorly drained, basic soils)	Grey Brown Podzolics (BMinDW, deep well drained, basic soils), Acidic surface water / groundwater gleys (AminPD, poorly drained, acidic soils) and Basic surface water/ groundwater gleys (BminPD, poorly drained, basic soils)	Grey Brown Podzolics (BMinDW, deep well drained, basic soils), Basic surface water / groundwater gleys (BminPD, poorly drained, basic soils) and Renzinas/Lithosols (Shallow, well drained, basic soils)	Grey Brown Podzolics (BMinDW, deep well drained, basic soils) and Basic surface water / groundwater gleys (BminPD, poorly drained, basic soils)	Grey Brown Podzolics (BMinDW, deep well drained, basic soils) and Basic surface water / groundwater gleys (BminPD, poorly drained, basic soils)	Renzinas/Lithosols (Shallow, well drained, basic soils), Grey Brown Podzolics (BMinDW, deep well drained, basic soils), Basic surface water / groundwater gleys (BminPD, poorly drained, basic soils).	Grey Brown Podzolics (BMinDW, deep well drained, basic soils) and Basic surface water / groundwater gleys (BminPD, poorly drained, basic soils)
6.1.8	**Sub Soil Types**	Limestone Till	Limestone Till	Limestone Till; limestone gravels	Limestone Till	Limestone Till; limestone gravels	Limestone Tills (Irish Sea Basin Tills)	Limestone Tills (Irish Sea Tills). [Note Alluvium within LandParcel, outside site, adjacent to stream]	Limestone Gravels in centre of site. Limestone Tills at southern end [Note: Northern half of LandParcel has Alluvium associated with BroadMeadow river]	Sandstone & Shale Till
6.1.9	**Depth to rock**	indicative 5-10m	indicative 5-10m	indicative 5-10m	indicative 5-10m	indicative 3-10m	indicative 3-10m	indicative 3-10m	indicative 3-10m	indicative 3-10m

6.2	**Soils and Geology - Pipelines**									
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 No.	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.
6.2.3	**Potential to sterilize mineral resource**	3 No	3 No	2 No.	3 No	2 No.	3 No	3 No.	3 No.	3 No
6.2.4	**Potential to encounter shallow bedrock during construction (interactions with other disciplines during construction - noise, dust etc)**	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 surface)	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 surface)	A - 95% shallow bedrock (15% bedrock at surface) B - 5% Shallow bedrock (0% bedrock at surface) G - 5% shallow bedrock (0% at surface)	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 surface)	A - 95% shallow bedrock (15% bedrock at surface) B - 5% Shallow bedrock (0% bedrock at surface) C - 65% shallow bedrock (5% at surface) G - 5% shallow bedrock (0% at surface)	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 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)	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)	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 surface)
6.2.5	**Potential impact on karst features**	2 No.	2 No.	No karst features within corridor	2 No.	No karst features within corridor	2 No.	2 No.	2 No.	2 No.
6.2.6	**Potential to encounter soft ground**	A - 1% Alluvium deposits D - Small area of lithosols/Peats (basic); 10% of alluvium deposits F - 5% Alluvium deposits G - 10% Alluvium Deposits	A - 1% Alluvium deposits D - Small area of lithosols/Peats (basic); 10% of alluvium deposits F - 5% Alluvium deposits G - 10% Alluvium Deposits	A - 1% Alluvium deposits B - 1% Alluvium deposits G - 10% Alluvium Deposits	A - 1% Alluvium deposits D - Small area of lithosols/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 D - Small area of lithosols/Peats (basic); 10% of alluvium deposits F - 5% Alluvium deposits G - 10% Alluvium Deposits	A - 1% Alluvium deposits D - Small area of lithosols/Peats (basic); 10% of alluvium deposits E - 10% of alluvium deposits F - 5% Alluvium deposits G - 10% Alluvium Deposits	A - 1% Alluvium deposits D - Small area of lithosols/Peats (basic); 10% of alluvium deposits E - 10% of alluvium deposits F - 5% Alluvium deposits G - 10% Alluvium Deposits	A - 1% Alluvium deposits D - Small area of lithosols/Peats (basic); 10% of alluvium deposits F - 5% Alluvium deposits G - 10% Alluvium Deposits
6.3	**Soils and Geology - Marine Outfall**									
6.3.1	**Potential to impact on Geological Heritage Sites/County Geological Sites**	2 No	2 No	No Geological Heritage Sites within corridor	2 No	No Geological Heritage Sites within corridor	2 No	2 No	2 No	2 No
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.
6.3.3	**Potential to sterilize mineral resource**	No mineral resource within corridor	No mineral resource within corridor	No mineral resource within corridor	No mineral resource within corridor	No mineral resource within corridor	No mineral resource within corridor	No mineral resource within corridor	No mineral resource within corridor	No mineral resource within corridor
6.3.4	**Potential to encounter shallow bedrock during construction (interactions with other disciplines during construction - noise, dust etc)**	5% shallow bedrock (2% bedrock at surface)	5% shallow bedrock (2% bedrock at surface)	15% shallow bedrock	5% shallow bedrock (2% bedrock at surface)	15% shallow bedrock	5% shallow bedrock (2% bedrock at surface)	5% shallow bedrock (2% bedrock at surface)	5% shallow bedrock (2% bedrock at surface)	5% shallow bedrock (2% bedrock at surface)
6.3.5	**Potential impact on karst features**	3 No.	3 No.	No karst features 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% Alluvium deposits	1% Alluvium deposits	15% Alluvium deposits	1% Alluvium deposits	15% Alluvium deposits	1% Alluvium deposits	1% Alluvium deposits	1% Alluvium deposits	1% Alluvium deposits
7.0	**Agronomy & Agriculture - Sites**	**Annsbrook**	**Baldurgan**	**Clonshagh**	**Cookstown**	**Cloghran**	**Newtowncorduff**	**Rathartan**	**Saucerstown**	**Tyrrelstown Little**
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%15%51%	31%
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	Beef	Mixed livestock & tillage	Horticulture & Tillage, (intensive market gardening area)	Tillage, Potatoes& Horticulture	Beef (site is located in an intensive market gardening area)
7.3	**Number of landowners impacted within site boundary**	1 to 3	1 to 3	4 to 6	1 to 3	4 to 6	1 to 3	7 to 9	1 to 3	1 to 3
7.4	**Land Quality**	Good	Good	Good	Good	Good	Good	Good	Good	Good
7.5	**Severance based on site location within overall land holdings**	Minor	Minor	Minor	Moderate	Minor	Minor	Moderate	Minor	Imperceptible
7.6	**Potential Impacts on landholdings**	Reduction in farm size, field angulation, removal of trees and hedgerows, impact on land drainage, impact on existing farm roadway	Reduction in farm size, field angulation, impact on land drainage, impact on existing farm roadway	Reduction in farm size, field angulation, impact on land drainage, impact on existing farm roadway	Reduction in farm size, field angulation, impact on land drainage,	Reduction in farm size, field angulation, impact on land drainage	Reduction in farm size, field angulation, removal of trees and hedgerows, impact on land drainage,	Reduction in farm size, field angulation, removal of hedgerows, impact on land drainage, impact on existing farm roadway	Reduction in farm size, field angulation, removal of hedgerows, impact on land drainage,	Reduction in farm size, field angulation, removal of trees and hedgerows, impact on land drainage
7.7	**Crop rotation practiced**	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	No
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	Moderate negative impact

8.0	Noise	Annsbrook	Baldurgan	Clonshagh	Cookstown	Cloghran	Newtowncorduff	Rathartan	Saucerstown	Tyrrelstown Little
8.1	**Potential for Construction phase noise impact at Sensitive receptors**	26 dwellings (PIR weighted) within 0.5km	6 dwelling (PIR weighted) within 0.5km	37 dwellings (PIR weighted) within 0.5km	7 dwellings (PIR weighted) within 0.5km	15 dwellings (PIR weighted) within 0.5km	40 dwellings (PIR weighted) within 0.5km	22 dwellings (PIR weighted) within 0.5km	57 dwellings (PIR weighted) within 0.5km	8 dwellings (PIR weighted) within 0.5km
8.2	**Potential for Operational phase noise impact at Sensitive receptors**	Facility shall reach 55 db(A) Daytime and 45 db(A) night at closest receptor	Facility shall reach 55 db(A) Daytime and 45 db(A) night at closest receptor	Facility shall reach 55 db(A) Daytime and 45 db(A) night at closest receptor	Facility shall reach 55 db(A) Daytime and 45 db(A) night at closest receptor	Facility shall reach 55 db(A) Daytime and 45 db(A) night at closest receptor	Facility shall reach 55 db(A) Daytime and 45 db(A) night at closest receptor	Facility shall reach 55 db(A) Daytime and 45 db(A) night at closest receptor	Facility shall reach 55 db(A) Daytime and 45 db(A) night at closest receptor	Facility shall reach 55 db(A) Daytime and 45 db(A) night at closest receptor
8.3	**Existing Ambient Noise Climate in the Area (significant noise sources)**	Relatively rural climate, within 1km of the M1 Motorway	Relatively rural farmland area	Close to M50 and M1 Motorways, under mina runway flight path for Dublin Airport.	Relatively rural farmland area	Borders M1 Motorway, under projected flight pat of planned parallel runway at Dublin Airport.	Borders M1 Motorway and N1 National Primary road.	Borders DART line	Rural Area, no significant noise sources.	Rural area, borders DART line
8.4	**Construction Phase Impact rating**	slight	imperceptible	slight	imperceptible	slight	slight	slight	slight	imperceptible
8.5	**Operational Phase Impact rating**	slight	imperceptible	slight	imperceptible	slight	slight	slight	slight	imperceptible
9.0	**Air and Odour**	**Annsbrook**	**Baldurgan**	**Clonshagh**	**Cookstown**	**Cloghran**	**Newtowncorduff**	**Rathartan**	**Saucerstown**	**Tyrrelstown Little**
9.1	**Potential for Construction phase Air Quality impact at Sensitive receptors**	13 dwellings (H_2S dispersion factor) within 1km	10 dwellings (H_2S dispersion factor) within 1km	15 dwellings (H_2S dispersion factor) within 1km	10 dwellings (H_2S dispersion factor) within 1km	87 dwellings (H_2S dispersion factor) within 1km	19 dwellings (H_2S dispersion factor) within 1km	29 dwellings (H_2S dispersion factor) within 1km	142 dwellings (H_2S dispersion factor) within 1km	10 dwellings (H_2S dispersion factor) within 1km
9.2	**Potential for Operational phase Air Quality impact at Sensitive receptors**	Facility shall reach appropriate Air quality at standards at emission points	Facility shall reach appropriate Air quality at standards at emission points	Facility shall reach appropriate Air quality at standards at emission points	Facility shall reach appropriate Air quality at standards at emission points	Facility shall reach appropriate Air quality at standards at emission points	Facility shall reach appropriate Air quality at standards at emission points	Facility shall reach appropriate Air quality at standards at emission points	Facility shall reach appropriate Air quality at standards at emission points	Facility shall reach appropriate Air quality at standards at emission points
9.3	**Potential for Odour impacts at operational phase**	13 dwellings (H_2S dispersion factor) within 1km	10 dwellings (H_2S dispersion factor) within 1km	15 dwellings (H_2S dispersion factor) within 1km	10 dwellings (H_2S dispersion factor) within 1km	87 dwellings (H_2S dispersion factor) within 1km	19 dwellings (H_2S dispersion factor) within 1km	29 dwellings (H_2S dispersion factor) within 1km	142 dwellings (H_2S dispersion factor) within 1km	10 dwellings (H_2S dispersion factor) within 1km
9.4	**Potential for Odour impacts at Construction phase**	No Odour impacts anticipated during construction phase	No Odour impacts anticipated during construction phase	No Odour impacts anticipated during construction phase	No Odour impacts anticipated during construction phase	No Odour impacts anticipated during construction phase	No Odour impacts anticipated during construction phase	No Odour impacts anticipated during construction phase	No Odour impacts anticipated during construction phase	No Odour impacts anticipated during construction phase
9.5	**Proximity to EPA Waste Licensed facility**	No EPA waste licensed facilities within 1km of proposed locations	No EPA waste licensed facilities within 1km of proposed locations	No EPA waste licensed facilities within 1km of proposed locations	No EPA waste licensed facilities within 1km of proposed locations	No EPA waste licensed facilities within 1km of proposed locations	No EPA waste licensed facilities within 1km of proposed locations	No EPA waste licensed facilities within 1km of proposed locations	No EPA waste licensed facilities within 1km of proposed locations	No EPA waste licensed facilities within 1km of proposed locations
9.6	**Proximity to EPA IPPC Licensed Intensive Agriculture facility**	No EPA IPPC licensed Intensive Agri facilities within 1km of proposed locations	No EPA IPPC licensed Intensive Agri facilities within 1km of proposed locations	No EPA IPPC licensed Intensive Agri facilities within 1km of proposed locations	No EPA IPPC licensed Intensive Agri facilities within 1km of proposed locations	No EPA IPPC licensed Intensive Agri facilities within 1km of proposed locations	No EPA IPPC licensed Intensive Agri facilities within 1km of proposed locations	No EPA IPPC licensed Intensive Agri facilities within 1km of proposed locations	No EPA IPPC licensed Intensive Agri facilities within 1km of proposed locations	No EPA IPPC licensed Intensive Agri facilities within 1km of proposed locations
9.70	**EPA Air Quality Zone Classification**	ZONE D Rest of the Country(Rural Air Quality classification)	ZONE D Rest of the Country(Rural Air Quality classification)	ZONE A Dublin City(Urban Air Quality Classification)	ZONE D Rest of the Country(Rural Air Quality classification)	ZONE A Dublin City(Urban Air Quality Classification)	ZONE D Rest of the Country(Rural Air Quality classification)	ZONE D Rest of the Country(Rural Air Quality classification)	ZONE D Rest of the Country(Rural Air Quality classification)	ZONE D Rest of the Country(Rural Air Quality classification)
9.8	**Wind rose Assessment**	Sparse population within 500m in direction of prevailing winds, closest pop centre in this direction: Lusk is at >2km distance	Sparse population within 500m in direction of prevailing winds, closest pop centre in this direction: is at >5km distance	Sparse population within 500m in direction of prevailing winds, closest pop centre in this direction: Balgriffin is at 1km distance	Sparse population within 500m in direction of prevailing winds, closest pop centre in this direction: is at >5km distance	Sparse population within 500m in direction of prevailing winds, closest pop centre in this direction: Feltrim is at 2km distance	Sparse population within 500m in direction of prevailing winds, closest pop centre in this direction: Lusk is at 2km distance	Sparse population within 500m in direction of prevailing winds, closest pop centre in this direction: Rush is at 0.7km distance	Sparse population within 500m in direction of prevailing winds, closest pop centre in this direction: is at >5km distance	Sparse population within 500m in direction of prevailing winds, closest pop centre in this direction: Rush is at 1km distance
9.9	**Construction Phase Impact rating**	imperceptible	imperceptible	imperceptible	imperceptible	slight	imperceptible	imperceptible	slight	imperceptible
9.10	**Operational Phase Impact rating**	imperceptible	imperceptible	imperceptible	imperceptible	slight	imperceptible	imperceptible	slight	imperceptible
10.0	**People and Communities**	**Annsbrook**	**Baldurgan**	**Clonshagh**	**Cookstown**	**Cloghran**	**Newtowncorduff**	**Rathartan**	**Saucerstown**	**Tyrrelstown Little**
10.1	**Number of residential & commercial buildings 300-500m from site boundary**	44	21	83	53	116	33	131	66	50
10.2	**Number of residential & commercial buildings 500m - 1km from site boundary**	66	82	1,443	59	629	205	728	948	74
10.3	**Potential to impact on known community amenities and facilities within 1km from site boundary.**	Ballyboghill Hedgerow Round (Sli na Sceacha) - c. 480m to the SW.	Ballyboghill Hedgerow Round (Sli na Sceacha) - c. 280m to the east.	Football grounds c. 700m to the NW, Darndale and Belcamp Parks c. 800m to the SW and SE respectively and Innisfail GAA club c. 500m to the south.	Swords Roganstown golf club c. 990m to the south and Ballyboghill Hedgerow Round c. 980m to the NE.	Playground c. 800m to the north (Nevinstown East) and National Show Centre c. 580m to the west.	None	A 7-a-side football pitch c. 920m to the east.	A school complex c. 400m to south, Swords and Roganstown golf course c. 290m to the NW, Broadmeadow linear park c. 320m to east and demesne parkland c. 620m to the SW.	None
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.	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.	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	Annsbrook	Baldurgan	Clonshagh	Cookstown	Cloghran	Newtowncorduff	Rathartan	Saucerstown	Tyrrelstown 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 road**	None	2 river/stream crossings	None	1 ditch/stream crossings	None	1 stream/river crossings	2 stream/river crossings	1 stream/river	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 2 fields	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	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 minimal landtake. Can use existing field access.
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 can access N32 after 0.5km	Access onto R108. Road not particularly suitable for HGVs. Travel distance to better road moderate	Access onto local road however can access N32 after 2.0km	Easy access to wide road (R132)	Access onto R128 and probable use of R127. Both Roads are not particularly suitable for HGVs	Access onto R125 which is ok. 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
11.6	**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	4 accidents (all minor) located near entrance	None
11.7	**Frequency of accidents on surrounding network (indication of general road safety issues)**	few accidents on surrounding roads	few 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	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 (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)	3.25km (R125)	6.8km (R127 & R128)
12.0	**Planning Policy**	**Annsbrook**	**Baldurgan**	**Clonshagh**	**Cookstown**	**Cloghran**	**Newtowncorduff**	**Rathartan**	**Saucerstown**	**Tyrrelstown Little**
12.1	**Existing Land Use on Site**	Agricultural	Agricultural	Agricultural	Agricultural	Agricultural	Agricultural	Agricultural	Agricultural	Agricultural
12.2	**Site Zoning**	RU (Rural)	RU (Rural)	GB (Greenbelt) HT (High Tech)	RU (Rural)	GB (Greenbelt)	RU (Rural)	RU (Rural)	OS (Open Space) GB (Greenbelt)	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	N/A	N/A	N/A	N/A
12.4	**Local Objectives on Site**	None	None	432 (Prepare Masterplan)	None	None	None	None	GIM8 (new regional park)	None
12.5	**Other Local Objectives on Site**	None	None	Road objectives	None	None	None	None	Road objective	None
12.6	**Land Uses present within 300m of site boundary**	Agricultural	Agricultural	Agricultural Open Space Urban Commercial	Agricultural	Agricultural	Agricultural Motorway	Agricultural Rural Residential Railway Line	Agricultural, Rural Residential Open Space	Agricultural, Rural Residential
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)	OS (Open Space) GB (Greenbelt) RU (Rural) RA (New Residential)	RU (Rural)
12.8	**Airport Public Safety and Noise Zones within 300m of site boundary**	N/A	N/A	Inner PSZ Outer PSZ Inner Noise Zone Outer Noise Zone	N/A	Inner PSZ Outer PSZ Inner Noise Zone Outer Noise Zone	N/A	N/A	N/A	N/A
12.9	**Local Objectives within 300m of site boundary**	180 (2 dwellings)	None	432 (prepare roads masterplan)	None	374 (nursing facility)	None	141 (agri-tourism)	GIM8 (active recreational hub)	GIM7 (historic landscape study)
12.10	**Other Local Objectives present within 300m of site boundary**	None	None	Road objectives	None	Indicative Cycle / Pedestrian Route	None	None	Road objective	None
12.11	**Land Uses present within 1km of Land Parcel Boundary**	Agricultural Rural Residential Rural Commercial Motorway	Agricultural Rural Residential (including Village) Rural Commercial	Agricultural Open Space Urban Residential Urban Commercial Hotel Burial Ground	Agricultural Rural Residential (including Village) Rural Commercial	Agricultural Open Space Quarrying Urban Residential Traveller Acc. Airport / Commercial Motorway	Agricultural Rural Residential Rural Commercial Urban Residential Motorway	Agricultural Rural Residential Rural Commercial Urban Residential Open Space Railway Line	Agricultural, Rural Residential Open Space Urban Residential	Agricultural, Rural Residential Rural Commercial Railway

12.12	**Zoning present within 1km of Land Parcel Boundary**	RU (Rural) RC (Rural Cluster) RB (Rural Business)	RU (Rural) RV (Rural Village) GB (Green Belt)	GB (Greenbelt) HT (High Tech) OS (Open Space) RA (New Residential) RS (Residential)	RU (Rural) GB (Greenbelt) RV (Rural Village)	GB (Greenbelt) GE (Enterprise) DA (Dublin Airport) OS (Open Space) RS (Residential)	RU (Rural) RB (Rural Business) RC (Rural Cluster) GE (Enterprise) RA (New Residential) RS (Residential)	RU (Rural) RB (Rural Business) RC (Rural Cluster) RS (Residential) TC (Town Centre) OS (Open Space) HA (High Amenity)	OS (Open Space) GB (Greenbelt) RU (Rural) RA (New Residential) RS (Residential) CI (Community)	RU (Rural) HA (High Amenity) RC (Rural Cluster)
12.13	**Airport Public Safety and Noise Zones within 1km of land parcel boundary**	N/A	N/A	Outer PSZ Inner Noise Zone Outer Noise Zone	N/A	Inner PSZ Outer PSZ Inner Noise Zone Outer Noise Zone	N/A	N/A	N/A	N/A
12.14	**Local Objectives within 1km of Land Parcel Boundary**	144 (ELV facility) 180 (2 dwellings) 203 (sports facility) 214 (1 dwelling) 219 (employment opportunity)	203 (sports facility) 219 (employment opportunity) 228 (1 dwelling)	383 (local shop) 411 (foot path) 413 (nursing home) 423 (prepare office masterplan) 432 (prepare roads masterplan) 436 (cemetery) 439 (high tech uses) 442 (FRA required) 443 (local shops) 446 (riverside walk)	228 (1 dwelling) 258 (tourism complex)	346 and 347 (access to residential estate) 374 (nursing facility) 375 and 376 (protect trees, develop tourism complex at Abbeyville) 383 (local shop) GIM1 (active recreation hub)	145, 148, 149, 152,, 156, 158, 156, 158, 159, 160, 161, 163, 164 (all relating to development of western edge of Lusk)	141 (agri-tourism) 176 (study on use of lands) 197, 200, 202, 204, 206, 207, 208, 209, 210, 211 (all relating to development of western areas of Rush)	GIM1 (active recreational hub) GIM 8 (new regional park)	111 (house extension) 131 (single dwelling) 141 (agri-tourism) GIM1 (recreation hub)
12.15	**Other Local Objectives present within 1km of Land Parcel Boundary**	None	Preserved Views to north and southeast	None	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 - Pipelines**	**Annsbrook**	**Baldurgan**	**Clonshagh**	**Cookstown**	**Cloghran**	**Newtowncorduff**	**Rathartan**	**Saucerstown**	**Tyrrelstown Little**
13.1	**Pipeline Length**									
13.1.1	Length from 9C to WWTP Site (Total)	19,800 m	17,550 m	11,800 m	16,450 m	15,450 m	21,150 m	27,350 m	16,200 m	26,450 m
	Length of Gravity Pipe from 9C to WWTP Site (Total)	5,800 m	3,550 m	8,250 m	2,450 m	11,900 m	7,150 m	13,350 m	2,630 m	12,450 m
	Gravity Pipe from 9C to WWTP Site (Length as Open Cut)	800 m	800 m	5,750 m	800 m	5,900 m	800 m	800 m	800 m	800 m
	Gravity Pipe from 9C to WWTP Site (Length as Tunnel)	5,000 m	2,750 m	2,500 m	1,650 m	6,000 m	6,350 m	12,550 m	1,830 m	11,650 m
	Length of Pumped Main (Total)	14,000 m	14,000 m	3,550 m	14,000 m	3,550 m	14,000 m	14,000 m	13,570 m	14,000 m
	Length of Pumped Main (Length as Open Cut)	13,500 m	13,500 m	3,550 m	13,500 m	3,550 m	13,500 m	13,500 m	13,070 m	13,500 m
	Length of Pumped Main (Length as Tunnel)	500 m	500 m	0 m	500 m	0 m	500 m	500 m	500 m	500 m
13.1.2	Length from North Dublin to WWTP Site	15,150 m	15,150 m	5,600 m	15,150 m	5,600 m	15,150 m	11,650 m	12,650 m	15,150 m
	Length as Gravity from North Dublin to WWTP Site	0 m	0 m	0 m	0 m	0 m	0 m	0 m	0 m	0 m
	Length as Pumped Main from North Dublin to WWTP Site	15,150 m	15,150 m	5,600 m	15,150 m	5,600 m	15,150 m	11,650 m	12,650 m	15,150 m
	Pumped Main from ND to WWTP Site (Length as Open Cut)	14,650 m	14,650 m	5,600 m	14,650 m	5,600 m	14,650 m	10,850 m	12,150 m	14,650 m
	Pumped Main from ND to WWTP Site (Length as Tunnel)	500 m	500 m	0 m	500 m	0 m	500 m	800 m	500 m	500 m
13.1.3	Length from WWTP Site to Coast	10,400 m	12,650 m	7,200 m	13,800 m	7,250 m	9,050 m	5,400 m	16,500 m	3,800 m
	WWTP Site to Coast (Length as Tunnel)	8,400 m	12,650 m	2,500 m	13,800 m	3,500 m	8,550 m	3,000 m	15,700 m	100 m
	WWTP Site to Coast (Length as Open Cut)	2,000 m	0 m	4,700 m	0 m	3,750 m	500 m	2,400 m	800 m	3,700 m
13.1.4	Length of Marine Outfall Pipeline	2,500 m	2,500 m	6,000 m	2,500 m	6,000 m	2,500 m	2,500 m	2,500 m	2,500 m
13.1.5	Water Depth of Outfall Pipeline (End)	21 m	21 m	26 m	21 m	26 m	21 m	21 m	21 m	21 m
13.1.6	**Total Pipeline Lengths**									
	Total Length as Open Cut	30,950 m	28,950 m	19,600 m	28,950 m	18,800 m	29,450 m	27,550 m	26,820 m	32,650 m
	Total Length as Tunnel	14,400 m	16,400 m	5,000 m	16,450 m	9,500 m	15,900 m	16,850 m	18,530 m	12,750 m
	Total Length in Marine	2,500 m	2,500 m	6,000 m	2,500 m	6,000 m	2,500 m	2,500 m	2,500 m	2,500 m
	Total Pipeline Length	**47,850 m**	**47,850 m**	**30,600 m**	**47,900 m**	**34,300 m**	**47,850 m**	**46,900 m**	**47,850 m**	**47,900 m**

13.2	**Power Requirements**									
	Power Requirement from 9C to WWTP Site	7,000 kW	6,700 kW	5,450 kW	6,600 kW	6,250 kW	6,750 kW	7,200 kW	5,050 kW	7,950 kW
	Power Requirement from North Dublin to WWTP Site	3,000 kW	3,000 kW	2,400 kW	3,000 kW	2,300 kW	2,550 kW	2,600 kW	2,050 kW	2,550 kW
	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**									
	Total embodied Carbon	56,029	57,247	35,947	57,325	42,225	56,942	56,613	58,544	55,072
	Total Lifetime Operational Carbon	447,979	431,180	349,984	425,580	392,915	425,580	451,713	321,052	492,777
	Total Carbon (tonnes CO2)	**504,008**	**488,427**	**385,931**	**482,905**	**435,140**	**482,523**	**508,325**	**379,596**	**547,849**
13.4	**Health and Safety**									
		No Significant Differences	No Significant Differences	No Significant Differences	No Significant Differences	No Significant Differences	No Significant Differences	No Significant Differences	No Significant Differences	No Significant Differences
13.5	**Access / Right of Way / Wayleaves along Pipeline Corridors**									
	Potential restrictions Along Pipeline Corridors to WwTP Sites	11	11	8	11	8	11	12	12	11
13.6	**Crossings - Waterways, Rail, etc. along Pipeline Corridors**									
	Main River Crossings	7	7	2	7	2	7	7	7	7
	Stream Crossings	4	4	0	4	0	4	4	4	4
	Golf Courses	0	0	2	0	2	0	0	0	0
	Canal Crossings	0	0	0	0	0	0	0	0	0
	Motorway Crossings	2	2	1	2	1	2	2	2	2
	National Road Crossings	1	1	1	1	1	1	1	1	1
	Regional Road Crossings	15	15	10	15	10	15	15	15	15
	Railway Crossings	2	2	1	2	1	2	2	2	2
	Total Crossings	**31**	**31**	**17**	**31**	**17**	**31**	**31**	**31**	**31**
13.7	**Potential to Impact on Physical Infrastructure along Pipeline Corridors**									
		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 Roads
13.8	**Potential to Impact on Strategic Utility Services along Pipeline Corridors**									
		No Significant Differences	No Significant Differences	No Significant Differences	No Significant Differences	No Significant Differences	No Significant Differences	No Significant Differences	No Significant Differences	No Significant Differences
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	No known public utilities	1 number: ESB (MV) Overhead (38kv)	No known public utilities	1 Number: ESB (MV) Overhead (38kv). 2 Number: ESB (MV) Overhead (10-20kv)	1 Number: Gas line
13.10	**Land Ownership and Titles along Pipeline Corridors**									
		Most Ownerships	Most Ownerships	Least Ownerships	Most Ownerships	Least Ownerships	Most Ownerships	Most Ownerships	Most Ownerships	Most Ownerships
13.11	**Route Traffic Management**									
		Moderate Impact during Construction stage	Moderate Impact during Construction stage	Imperceptible Impact during Construction stage	Moderate Impact during Construction stage	Imperceptible Impact during Construction stage	Moderate Impact during Construction stage	Moderate Impact during Construction stage	Moderate Impact during Construction stage	Moderate Impact during Construction stage
		No Impact After Construction Stage	No Impact After Construction Stage	No Impact After Construction Stage	No Impact After Construction Stage	No Impact After Construction Stage	No Impact After Construction Stage	No Impact After Construction Stage	No Impact After Construction Stage	No Impact After Construction Stage
13.12	**Construction Risk along Pipeline Corridors**									
		(1) Deep Tunnel to Site, (2) Deep Tunnel to Coast.	(1) Deep Tunnel to Site, (2) Deep Tunnel to Coast.	(1) Deep Tunnel to Site, (2) Difficult Sea Outfall.	(1) Deep Tunnel to Site, (2) Deep Tunnel to Coast.	(1) Deep Tunnel to Site, (2) Difficult Sea Outfall.	(1) Deep Tunnel to Site, (2) Deep Tunnel to Coast.	(1) Deep Tunnel to Site	(1) Deep Tunnel to Site, (2) Deep Tunnel to Coast.	(1) Deep Tunnel to Site
		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 Bedrock	Most Variability in Depth to Bedrock	Most Variability in Depth to Bedrock	Most Variability in Depth to Bedrock	Most Variability in Depth to Bedrock
									Significantly larger diameter outfall pipe required.	
13.13	**Operation and Maintenance - WwTP, Pumping Stations & Pipeline ancillaries**									
		Most Issues	Most Issues	Least Issues	Most Issues	Least Issues	Most Issues	Most Issues	Most Issues	Most Issues

Phase 2 Alternative Sites Assessment and Route Selection - Environmental & Technical Criteria Evaluation Matrix

Stage 2 of Criteria Evaluation (Sites, Pipeline Routes & Marine Outfall) - Refinement of Matrix by Removal of Non-Differentiating Sub - Criteria

Ref	Environmental Criteria	Annsbrook	Baldurgan	Clonshagh	Cookstown	Cloghran	Newtowncorduff	Rathartan	Saucerstown	Tyrrelstown Little
1.0	**Cultural Heritage**	**Annsbrook**	**Baldurgan**	**Clonshagh**	**Cookstown**	**Cloghran**	**Newtowncorduff**	**Rathartan**	**Saucerstown**	**Tyrrelstown Little**
1.1	**Cultural Heritage -Sites**									
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:** None	**Direct:** None **Indirect:** One moderate negative (DU005-038)
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	**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 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)	**Direct:** None **Indirect:** None	**Direct:** None **Indirect:** One moderate negative (RPS 245)
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)	**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)	**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)**	None	One (potentially significant)	None	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	**Direct:** 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 townland boundaries (cultural heritage significance)**	Two moderate negative	None	One moderate negative	Two moderate negative	One moderate negative	One moderate negative	Two moderate negative	Two moderate negative	Two moderate negative
1.2	**Cultural Heritage -Pipelines**									
1.2.1	**Potential to impact on RMPs**	32 RMP sites located within corridor	32 RMP sites located within corridor	20 RMP sites located within corridor	32 RMP sites located within corridor	20 RMP sites located within corridor	32 RMP sites located within corridor	32 RMP siotes located within corridor	32RMP sites 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 corridor	No national monuments located within corridor	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/NIAH**	27 RPS and 12 NIAH sites located within corridor	27 RPS and 12 NIAH sites located within corridor	15 RPS and 6 NIAH sites located within corridor	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 impact on CH sites**	27 CH sites located within corridor	27 CH sites located within corridor	9 CH sites 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	**Potenital to impact on historic designed landscapes**	22 demesne landscapes located within corridor	22 demesne landscapes located within corridor	14 demesne landscapes located within corridor	22 demesne landscapes located within corridor	15 demesne landscapes located within corridor	22 demesne landscapes located within corridor	23 demesne landscapes located within corridor	23 demesne landscapes located within corridor	22 demesne landscapes located within corridor
1.3	**Cultural Heritage - Marine Outfalls**									
1.3.1	**Potential to impact on RMPs**	11 RMP sites located within outfall area	11 RMP sites located within outfall area	No RMP sites located within outfall area	11 RMP sites located within outfall area	No RMP sites located within outfall area	11 RMP sites located within outfall area	11 RMP sites located within outfall area	11 RMP sites located within outfall area	11 RMP sites located within outfall area
1.3.3	**Potential to impact on RPS/NIAH**	29 RPS/NIAH sites located within corridor	29 RPS/NIAH sites located within corridor	No RPS/NIAH sites located within corridor	29 RPS/NIAH sites located within corridor	No 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	29 RPS/NIAH sites located within corridor
1.3.4	**Potential to impact on CH sites**	12 CH sites located within outfall area	12 CH sites located within outfall area	1 CH site located within outfall area	12 CH sites located within outfall area	1 CH site located within outfall area	12 CH sites located within outfall area	12 CH sites located within outfall area	12 CH sites located within outfall area	12 CH sites located within outfall area
1.3.5	**Recorded shipwreck sites**	40 shipwrecks in and within vicinity of the outfall area	40 shipwrecks 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 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	40 shipwrecks in and within vicinity of the outfall area	40 shipwrecks in and within vicinity of the outfall area

2.0	Landscape & Visual	Annsbrook	Baldurgan	Clonshagh	Cookstown	Cloghran	Newtowncorduff	Rathartan	Saucerstown	Tyrrelstown Little
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	Significant - one 0.5km E with relatively clear views towards the site afforded 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 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 ocassional open and elevated views over site and another 0.8km W with no clear views	Significant - One 1.6km 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 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
2.1.3	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	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	Moderate - Baldungan Church on hill 2.5km N with extensive scenic views in the direction of the site	Significant - Swords Golf Course adjacent to NW and Broadmeadow River and Linear Park runs just to E of site - two accomodation providers 0.6km N with potential views across Broadmeadow River	Significant - Baldungan Castle on hill 1.7km N with extensive scenic views in the direction of the site
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 resonable integrity but the surrounds are a peri-urban landscape of mixed land uses relating 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 rural HSL to the E however major transport infrastructure occurs immediately W and a quarry and golf 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 located near an urban fringe (Rush) - rail line to W does not strongly influence landscape character	Moderate - rural landcape and river in immediate context of site but two regional roads a golf course a school / community centre and a significant settlement make up the varied land use within 1km	Significant - open rural landscape character of high integrity for the site and its surrounds - rail line passes close to eastern boundary but does not strongly influence character
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 but it will be difficult to screen views from elevated M1 overpasses N and S	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	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 views from castle and scenic route to N and scenic route to S	Slight - This site can generally be well screened and integrated but particular attention needs to be paid to elevated views from scenic route to S and views across river to the N	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 views from castle and scenic route to N
2.1.6	Potential to impact on views from settlements	Imperceptible - Crossroads settlement (Ballyboghill) 2.5km W has no view of site	Moderate - Crossroads settlement (Ballyboghill) 1.5km NW and associated dwellings stretch southwards along R108 closer to the site (1km)	Slight - Densely populated Nth Dublin suburb of Darndale <1km S, other estates 1km N and E - No clear views afforded toward the site from any of these	Moderate - Crossroads settlement (Ballyboghill) 1.7km NW and associated dwellings stretch southwards along R108 closer to the site (1km)	Moderate - small estate settlement of Ballymacartle 1km SE also clear views available from an estate adjacent to the east of the M1/Swords junction	Slight - settlement of Lusk 1.5km E but no views available - small settlement of Dunganstown 1km SE may be afforded restricted views	Significant - sizeable coastal settlement of Rush 0.8km E	Significant - settlement of Swords 1km 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 lining regional 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 afforded from local road ovepass 1km NE	Imperceptible - M1 passes 2.5km E and views of the scheme would not be afforded	Slight - M1 passes 1km W - clear views only afforded 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 filtered views of site through roadside screening will be afforded	Imperceptible - M1 5km W	Imperceptible - M1 2.5km E	Imperceptible - M1 4.5km W
2.1.9	Potential to impact on views from Dublin - Belfast rail line	Imperceptible - rail line 5km E	Imperceptible - rail line 6km E	Imperceptible - rail line 3.5km E	Imperceptible - rail line 6km E	Imperceptible - rail line 3km E	Imperceptible - rail line 3km E	Significant - rail line lies directly adjacent to W	Imperceptible - rail line 6km 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 glimpses may be afforded 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 at < 0.5km - clear views afforded from some sections and site access from R129	Slight / Significant - heavily used N32 national secondary road 0.3km to S and R107 regional road 1km E - neither has clear views towards site due to roadside screening - Note future malahide Rd realignment adjacent to site	Significant - R108 regional road 0.3km W and clear views afforded from some sections	Imperceptible - R107 regional road 2km E but no views available	Significant - slightly elevated R132 regional road (old N1) 0.5km E affords 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 0.5km S fleeting 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 aerial approach and vehicular egress	Imperceptible - airport 10km S	Imperceptible - airport 8.5km S	Significant - airport 2km NW - clear views not afforded towards the site at ground level but it would be a prominent feature of the low level landing approach from the E	Imperceptible - airport 7.5km S	Significant - airport 1.5km SW - clear views afforded towards the site from elevated M1/airport access road interchange andit would be a prominent feature of the low level landing approach from the E	Imperceptible - airport 10km S	Imperceptible - airport >10km SW	Slight - airport 5km S but views likely to be available on Slight low landing approach from the E	Imperceptible - airport >10km SW
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	Moderate - intensive and strongly defined hedgerow/field pattern contained within site boundary but surrounding lands more dispersed in structure	Significant - intensive and strongly defined hedgerow/field pattern contained within site boundary but surrounding lands more dispersed in structure	Moderate - predominantly large fields defined by low hedgerows within site boundary	Moderate - several low meandering hedgerows contained within the site	Moderate - combination of large cropping fields in N half of site and smaller geometric pastoral fields in S half - low hedgerows
2.1.13	Potential to impact on historic designed landscapes	Moderate - Woodpark demesne 0.15km NE	Imperceptible - No demesne landscapes within or near 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 surrounded to the north and east by the site at the minimum setback (0.3km)	Slight - Abbeyville Estate 1km E	Imperceptible - No demesne landscapes within or near this site	Slight - Haystown Demesne 0.3km NE	Moderate - Saucerstown Demesne 0.2km W	Imperceptible - No demesne landscapes within or near this site

2.2	Landscape & Visual - Pipelines									
2.2.10	**Potential to disrupt landscape structure (treelines / hedgerows / field pattern etc.)**	A - Moderate - landscape is relatively unstructured and irregular along this pipeline 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 field patterns F - Significant - this corridor section passes almost entirely through fields and hedgerows G - Slight - Moderate - landscape is relatively unstructured and open along this pipeline corridor section but with some hedgerow field patterns	A - Moderate - landscape is relatively unstructured and irregular along this pipeline 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 field patterns F - Significant - this corridor section passes almost entirely through fields and hedgerows G - Slight - Moderate - landscape is relatively unstructured and open along this pipeline corridor section but with some hedgerow field patterns	A - Moderate - landscape is relatively unstructured and irregular along this pipeline corridor section but with some hedgerow field patterns B- Moderate - landscape is relatively unstructured and irregular along this pipeline corridor section but with some hedgerow field patterns G - Slight - Moderate - landscape is relatively unstructured and open along this pipeline corridor section but with some hedgerow field patterns	A - Moderate - landscape is relatively unstructured and irregular along this pipeline 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 field patterns F - Significant - this corridor section passes almost entirely through fields and hedgerows G - Slight - Moderate - landscape is relatively unstructured and open along this pipeline corridor section but with some hedgerow field patterns	A - Moderate - landscape is relatively unstructured and irregular along this pipeline corridor section but with some hedgerow field patterns B- Moderate - landscape is relatively unstructured and irregular along this pipeline corridor section but with some hedgerow field patterns G - Slight - Moderate - landscape is relatively unstructured and open along this pipeline corridor section but with some hedgerow field patterns	A - Moderate - landscape is relatively unstructured and irregular along this pipeline 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 field patterns F - Significant - this corridor section passes almost entirely through fields and hedgerows G - Slight - Moderate - landscape is relatively unstructured and open along this pipeline corridor section but with some hedgerow field patterns	A - Moderate - landscape is relatively unstructured and irregular along this pipeline 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 field patterns E- Significant - this corridor section passes almost entirely through fields and hedgerows F - Significant - this corridor section passes almost entirely through fields and hedgerows G - Slight - Moderate - landscape is relatively unstructured and open along this pipeline corridor section but with some hedgerow field patterns	A - Moderate - landscape is relatively unstructured and irregular along this pipeline 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 field patterns E- Significant - this corridor section passes almost entirely through fields and hedgerows F - Significant - this corridor section passes almost entirely through fields and hedgerows G - Slight - Moderate - landscape is relatively unstructured and open along this pipeline corridor section but with some hedgerow field patterns	A - Moderate - landscape is relatively unstructured and irregular along this pipeline 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 field patterns F - Significant - this corridor section passes almost entirely through fields and hedgerows G - Slight - Moderate - landscape is relatively unstructured and open along this pipeline corridor section but with some hedgerow field patterns
2.2.13	**Potential to impact on historic designed landscapes**	A - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section D -Significant - passes across corner of Abbeyville estate at eastern end of corridor F - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section G - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section	A - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section D -Significant - passes across corner of Abbeyville estate at eastern end of corridor F - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section G - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section	A - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section B - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section G - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section	A - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section D -Significant - passes across corner of Abbeyville estate at eastern end of corridor F - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section G - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section	A - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section B - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section G - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section	A - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section D -Significant - passes across corner of Abbeyville estate at eastern end of corridor F - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section G - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section	A - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section D -Significant - passes across corner of Abbeyville estate at eastern end of corridor E- Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section F - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section G - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section	A - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section D -Significant - passes across corner of Abbeyville estate at eastern end of corridor E- Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section F - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section G - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section	A - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section D -Significant - passes across corner of Abbeyville estate at eastern end of corridor F - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section G - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section

2.3	**Landscape & Visual - Marine Outfalls**									
3.0	**Ecology**	**Annsbrook**	**Baldurgan**	**Clonshagh**	**Cookstown**	**Cloghran**	**Newtowncorduff**	**Rathartan**	**Saucerstown**	**Tyrrelstown Little**
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)	**Slight:** 5.3km upstream of Natura 2000 wetland sites Rogerstown Estuary SPA/SAC and 7.0km upstream of Natura 2000 wetland sites Malahide Estuary SPA/SAC	**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 wetland sites (Baldoyle 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)	**Moderate**: 3.0km upstream of Natura 2000 wetland sites (Malahide Estuary SPA/SAC)	**Moderate**: 2.2km 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 corridor.	**Significant**: Site abuts Sluice River ecological corridor	**Significant**: Site abuts Rath Little ecological corridor; Access road crosses Ballough Stream ecological corridor.	**Imperceptible**: Site located more than 3km from Ballough Stream ecological corridor	**Moderate:** Site located 250m from the Broadmeadow River ecological corridor	**Imperceptible**: Site 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**: 0.1km 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	**Moderate**: 1.4km of hedges within the site	**Significant**: 3.8km 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.	**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.	**Slight:** Site comprised of agriculturally improved, cultivated or arable land.	**Slight:** Site comprised of agriculturally improved, cultivated or arable land.	**Slight:** 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 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	**Significant -** The Broadmeadow River (main channel and tributaries) constitutes a salmonid system and the access road crosses a tributary and site abuts a tributary.	**Imperceptible** - 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 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	**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 Greylag Goose flock. Location is in an area considered likely to be used by the north Co Dublin winter Greylag Goose flock on occasion	**Imperceptible** - Outside the normal geographical range of the north Co Dublin winter Greylag Goose flock	**Significant** - Within 'Skerries Grasslands' IWEBS area, likely to be a feeding site for the north Co Dublin winter Greylag Goose flock
3.1.8	**Potential to result in loss of breeding habitat for Annex I species Kingfisher**	**Slight** - watercourse present but no suitable breeding habitat for Kingfisher or high quality feeding habitat	**Slight -** watercourse present but no suitable breeding habitat for Kingfisher or high quality feeding habitat	**Slight -** watercourse present but no suitable breeding habitat for Kingfisher or high quality feeding habitat	**Slight** - watercourse present but no breeding habitat for Kingfisher nor high quality feeding habitat for Kingfisher	**Slight -** watercourse present but no suitable breeding habitat for Kingfisher or high quality feeding habitat	**Slight -** watercourse present but no suitable breeding habitat for Kingfisher or high quality feeding habitat	**Slight -** watercourse present but no suitable breeding habitat for Kingfisher or high quality feeding habitat	**Significant** - suitable breeding habitat anf high quality feeding habitat for Kingfisher is present on the Broad Meadow River	**Slight -** watercourse present but no suitable breeding habitat for Kingfisher or high quality feeding habitat
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 (I.e. 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	**Slight -** smallish fields, unlikely to be used regularly by Lapwing and Golden Plover	**Moderate -** smallish fields, but proximity to Rogerstown Estuary increases liklihood of site being used by Lapwing and Golden Plover	**Significant** - site includes large wet fields close to the Broad Meadow River highly suitable for Lapwing, Golden Plover or other winter waders	**Significant** - site includes large arable fields and pastures suitable for Lapwing, Golden Plover or other winter waders

3.2	Ecology - Pipelines									
3.2.1	**Potenital to impact on Natura 2000 Sites and Natural Heritage Areas**	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 D - 0.5km Malahide estuary SPA/SAC; 2.0km Baldoyle Bay SPA/SAC/pNHA F - Malahide Estuary SPA/SAC/pNHA; Rogerstown Estuary SPA/SAC/pNHA; Balcunnin Stream flows out to WFD coastal waters G - 0.5km Baldoyle Bay SAC/SPA/pNHA F - Also crosses Balcunnin Stream which flows out to WFD coastal waters	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 D - 0.5km Malahide estuary SPA/SAC; 2.0km Baldoyle Bay SPA/SAC/pNHA F - Malahide Estuary SPA/SAC/pNHA; Rogerstown Estuary SPA/SAC/pNHA; Balcunnin Stream flows out to WFD coastal waters G - 0.5km Baldoyle Bay SAC/SPA/pNHA F - Also crosses Balcunnin Stream which flows out to WFD coastal waters	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 B - 8.0km North Dublin BAY SAC and North Bull Island SPA; 4.5km Baldoyle Bay SAC/SPA/pNHA G - 0.5km Baldoyle Bay SAC/SPA/pNHA G - Also interfaces with Baldoyle Bay SAC/SPA/pNHA and Ramsar site	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 D - 0.5km Malahide estuary SPA/SAC; 2.0km Baldoyle Bay SPA/SAC/pNHA F - Malahide Estuary SPA/SAC/pNHA; Rogerstown Estuary SPA/SAC/pNHA; Balcunnin Stream flows out to WFD coastal waters G - 0.5km Baldoyle Bay SAC/SPA/pNHA F - Also crosses Balcunnin Stream which flows out to WFD coastal waters	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 B - 8.0km North Dublin BAY SAC and North Bull Island SPA; 4.5km Baldoyle Bay SAC/SPA/pNHA G - 0.5km Baldoyle Bay SAC/SPA/pNHA G - Also interfaces with Baldoyle Bay SAC/SPA/pNHA and Ramsar site	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 D - 0.5km Malahide estuary SPA/SAC; 2.0km Baldoyle Bay SPA/SAC/pNHA F - Malahide Estuary SPA/SAC/pNHA; Rogerstown Estuary SPA/SAC/pNHA; Balcunnin Stream flows out to WFD coastal waters G - 0.5km Baldoyle Bay SAC/SPA/pNHA F - Also crosses Balcunnin Stream which flows out to WFD coastal waters	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 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 F - Malahide Estuary SPA/SAC/pNHA; Rogerstown Estuary SPA/SAC/pNHA; Balcunnin Stream flows out to WFD coastal waters G - 0.5km Baldoyle Bay SAC/SPA/pNHA	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 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 F - Malahide Estuary SPA/SAC/pNHA; Rogerstown Estuary SPA/SAC/pNHA; Balcunnin Stream flows out to WFD coastal waters G - 0.5km Baldoyle Bay SAC/SPA/pNHA	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 D - 0.5km Malahide estuary SPA/SAC; 2.0km Baldoyle Bay SPA/SAC/pNHA F - Malahide Estuary SPA/SAC/pNHA; Rogerstown Estuary SPA/SAC/pNHA; Balcunnin Stream flows out to WFD coastal waters G - 0.5km Baldoyle Bay SAC/SPA/pNHA F - Also crosses Balcunnin Stream which flows out to WFD coastal waters
3.2.2	**Potential to impact upon ecological buffer zones or Nature Development Areas idenitifed in the Fingal Development Plan 2011 - 2017**	Impinges upon 6 ecological buffer zones (3 No. D; 3 No. G) Impinges upon four nature developoment areas Potenitally impinges on 6 No. Nature Development Areas	Impinges upon 6 ecological buffer zones (3 No. D; 3 No. G) Impinges upon four nature developoment areas Potenitally impinges on 6 No. Nature Development Areas	Impinges upon 3 ecological buffer zones (Route G) Impinges upon four nature developoment areas Crosses 1 No. nature development area Potenitally impinges on 1 No. Nature Development Areas	Impinges upon 6 ecological buffer zones (3 No. D; 3 No. G) Impinges upon four nature developoment areas Potenitally impinges on 6 No. Nature Development Areas	Impinges upon 3 ecological buffer zones (Route G) Impinges upon five nature developoment areas Crosses 1 No. nature development area Potenitally impinges on 1 No. Nature Development Areas	Impinges upon 6 ecological buffer zones (3 No. D; 3 No. G) Impinges upon four nature developoment areas Potenitally impinges on 6 No. Nature Development Areas	Impinges upon 6 ecological buffer zones (3 No. D; 3 No. G) Impinges upon four nature developoment areas Potenitally impinges on 6 No. Nature Development Areas	Impinges upon 6 ecological buffer zones (3 No. D; 3 No. G) Impinges upon four nature developoment areas Potenitally impinges on 6 No. Nature Development Areas	Impinges upon 6 ecological buffer zones (3 No. D; 3 No. G) Impinges upon four nature developoment areas Potenitally impinges on 6 No. Nature Development Areas
3.2.3	**Potential to impact upon ecological corridor, nature development area or high value habitats**	Crosses 10 No. ecological corridors Potentially crosses 1 No. ecological corridor Impinges upon TPO sites Potentially impinges upon TPO areas Potentially crosses 36 rivers or streams Loss of hedgerow habitat along 41km	Crosses 10 No. ecological corridors Potentially crosses 1 No. ecological corridor Impinges upon TPO sites Potentially impinges upon TPO areas Potentially crosses 36 rivers or streams Loss of hedgerow habitat along 41km	Crosses 2 No. ecological corridors Potentially crosses 1 No. ecological corridor Impinges upon TPO sites Crosses 1 No. TPO site Potentially crosses 4 rivers or streams Potentially crosses one area of deciduous woodland Loss of hedgerow habitat along 17km	Crosses 10 No. ecological corridors Potentially crosses 1 No. ecological corridor Impinges upon TPO sites Potentially impinges upon TPO areas Potentially crosses 36 rivers or streams Loss of hedgerow habitat along 41km	Crosses 2 No. ecological corridors Potentially crosses 1 No. ecological corridor Impinges upon TPO sites Crosses 1 No. TPO site Potentially crosses 6 No rivers or streams Potentially crosses 1 No. area of deciduous woodland Loss of hedgerow habitat along 20km	Crosses 10 No. ecological corridors Potentially crosses 1 No. ecological corridor Impinges upon TPO sites Potentially impinges upon TPO areas Potentially crosses 36 rivers or streams Loss of hedgerow habitat along 41km	Crosses 12 No. ecological corridors Potentially crosses 1 No. ecological corridor Impinges upon TPO sites Potentially impinges upon TPO areas Potentially crosses 45 rivers or streams Loss of hedgerow habitat along 54km	Crosses 12 No. ecological corridors Potentially crosses 1 No. ecological corridor Impinges upon TPO sites Potentially impinges upon TPO areas Potentially crosses 45 rivers or streams Loss of hedgerow habitat along 54km	Crosses 10 No. ecological corridors Potentially crosses 1 No. ecological corridor Impinges upon TPO sites Potentially impinges upon TPO areas Potentially crosses 36 rivers or streams Loss of hedgerow habitat along 41km
3.2.4	**Potenitial to impact on a salmonid system**	Crosses 8 No. salmonid systems.	Crosses 8 No. salmonid systems.	Crosses 2 No. salmonid systems.	Crosses 8 No. salmonid systems.	Crosses 3 No. salmonid systems.	Crosses 8 No. salmonid systems.	Crosses 9 No. salmonid systems.	Crosses 9 No. salmonid systems.	Crosses 8 No. salmonid systems.
3.2.6	**Potential to impact on the breeding habitat for Annex 1 species Kingfisher**	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 River where possible suitable habitat for breeding kingfisher occurs	No suitable riparian habitat for breeding kingfisher	Portion of route D located along the Broadmeadow River where possible suitable habitat for breeding kingfisher occurs	No suitable riparian habitat for breeding kingfisher	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 River where possible suitable habitat for breeding kingfisher occurs Crosses Ballough River which is unlikely to have suitable riparian habitiat for breeding kingfisher	Portion of route D located along the Broadmeadow River where possible suitable habitat for breeding kingfisher occurs Crosses Ballough River which is unlikely to have suitable riparian habitiat for breeding kingfisher	Portion of route D located along the Broadmeadow River where possible suitable habitat for breeding kingfisher occurs
3.2.8	**Potential to impact on IWeBS identified areas of importance to birds adjacent to Malahide Estuary**	Portion of route located within Malahide Estuary IWEBS area Portion of route located within 'Skerries Grasslands' IWEBS area	Portion of route located within Malahide Estuary IWEBS area Portion of route located within 'Skerries Grasslands' IWEBS area	No IWEB areas located on pipeline route	Portion of route located within Malahide Estuary IWEBS area Portion of route located within 'Skerries Grasslands' IWEBS area	No IWEB areas located on pipeline route	Portion of route located within Malahide Estuary IWEBS area Portion of route located within 'Skerries Grasslands' IWEBS area	Portion of route located within Malahide Estuary IWEBS area Portion of 2 No. routes located within 'Skerries Grasslands' IWEBS area	Portion of route located within Malahide Estuary IWEBS area Portion of 2 No. routes located within 'Skerries Grasslands' IWEBS area	Portion of route located within Malahide Estuary IWEBS area Portion of route located within 'Skerries Grasslands' IWEBS area

3.3	**Ecology - Marine Outfall**									
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)	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 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 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)	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)
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)	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)	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)	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)	Slight (isolated sensitve sites in some areas of coast)	Slight (isolated sensitve sites in some areas of coast)
3.3.6	**Potential to impact on water quality and bathing waters designated under the Bathing Water Directive**	Slight (to be determined following hydrodynamic modelling)	Slight (to be determined following hydrodynamic modelling)	Moderate (to be determined following hydrodynamic modelling)	Slight (to be determined following hydrodynamic modelling)	Moderate (to be determined following hydrodynamic modelling)	Slight (to be determined following hydrodynamic modelling)	Slight (to be determined following hydrodynamic modelling)	Slight (to be determined following hydrodynamic modelling)	Slight (to be determined following hydrodynamic modelling)
4.0	**Hydrology -**	**Annsbrook**	**Baldurgan**	**Clonshagh**	**Cookstown**	**Cloghran**	**Newtowncorduff**	**Rathartan**	**Saucerstown**	**Tyrrelstown Little**
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 site 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.	***Slight:*** 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.	***Moderate:*** Belinstown River (10m north) and Broadmeadow tributary (1km south) (water quality Q3) of the site, High Importance. Will have permanent impact on small proportion of attribute.	***Moderate:*** Sluice River (10m north) and Sluice 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 Q3), 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.	***Significant:*** Broadmeadow tributaries (water quality Q3) are within 10m of the site; the site is surrounded by tributaries almost throughout its perimeter, High importance. Will have permanent impact on small proportion of attribute. Will have permanent impact on a significant proportion of attribute.	***Imperceptible:*** Collinstown Stream (120 southwest), Rush Town Stream (360m southeast) and Balcunnin Stream (930m north) of the site, Low 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.	***Slight:*** Crossing BroadmeadowTributary, Medium importance. Will have permanent impact on small proportion of attribute.	***None:*** No new culvert required.
4.1.3	**Area prone to flooding (based on historical data and predicted flood extents adjacent to the site as well as up and downstream locations)**	***Imperceptible:*** No flooding to the site from the Ballough and Ballyboghill rivers. The Ballyboghill has extensive overland flooding approx. 3km downstream, Low importance. Will have permanent impact on small proportion of attribute.	***Slight:*** Ballyboghill have overland flooding approx. 200m to the north of the site. The Belinstown has extensive overland flooding approx. 2km downstream, medium importance. Will have permanent impact on small proportion of attribute.	***Imperceptible:*** No flooding from the Mayne / Cuckoo Rivers to the site. The Mayne has history of flooding; and predicted overland flooding approx. 2km downstream, Low importance. Will have permanent impact on small proportion of attribute.	***Imperceptible:*** The Belinstown has extensive predicted overland flooding (both tidal & fluvial) and recurrence historic flooding approx. 3.5km downstream, Low importance. Will have permanent impact on small proportion of attribute.	***Slight:*** No flooding from the Sluice River at the site. The Sluice has history of flooding and predicted overland flooding approx. 0.5km upstream and 2km downstream, Medium importance. Will have permanent impact on small proportion of attribute.	***Imperceptible:*** No flooding from Ballough River. The eastern tributary was not modelled in FEM FRAMS, but has a history of flooding upstream, Low importance. Will have permanent impact on small proportion of attribute.	***Imperceptible:*** No flooding from the Collinstown Stream and Palmerstown Stream close to the site. History of flooding at downstream locations, Low importance. Will have permanent impact on small proportion of attribute.	***Moderate:*** The Broadmeadow River flooding extent is adjacent to the site boundary, High importance. Will have permanent impact on small proportion of attribute.	***Imperceptible:*** No flooding from the Collinstown and Rush Town Stream to the site. History of flooding at downstream locations, Low 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. 4.6km 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 5km downstream respectively, Low importance. Will have permanent impact on small proportion of attribute.	***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.	***Slight:*** 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, pNHA, Ramsar and SNR) approx. 1km downstream, High importance. Will have permanent impact on small proportion of attribute.	***Imperceptible:*** The Broadmeadow River discharges into the Broadmeadow Estuary (SAC, SPA, pNHA) approx. 3km downstream, Low importance. Will have permanent impact on small proportion of attribute.	***Slight:*** The Collinstown Stream discharges into Rogerstown Estuary and Rush Town Stream discharges into the Irish sea (unpolluted water quality) approx. 2.2km downstream, Medium importance. Will have permanent impact on small proportion of attribute.
4.2	**Hydrology - Pipelines**									
4.2.1	**Proximity to water bodies in terms of flooding and as an indicator of sensitive surface water receptors**	18 river catchments and some coastal areas	18 river catchments and some coastal areas	7 river catchments and some coastal areas	18 river catchments and some coastal areas	9 river catchments and some coastal areas	18 river catchments and some coastal areas	28 river catchments and some coastal areas	28 river catchments and some coastal areas	18 river catchments and some coastal areas
4.3	**Hydrology - Marine Outfall**									

5.0	Hydrogeology -	Annsbrook	Baldurgan	Clonshagh	Cookstown	Cloghran	Newtowncorduff	Rathartan	Saucerstown	Tyrrelstown Little
5.1	**Hydrogeology - Sites**									
5.1.1	**Aquifer Classification - importance of the groundwater resource to a given area**	**Moderate:** Locally Important Bedrock Aquifer underlies site, Medium importance. Will have permanent impact on a significant proportion of attribute.	**Moderate:** Locally Important Bedrock Aquifer underlies site, Medium importance. Will have permanent impact on a significant proportion of attribute.	**Moderate:** Poor Bedrock Aquifer and Locally Important Bedrock Aquifer underlies site, Medium importance. Will have permanent impact on a significant proportion of attribute.	**Moderate:** Locally Important Bedrock Aquifer underlies site, Medium importance. Will have permanent impact on a significant proportion of attribute.	**Slight:** Poor Bedrock Aquifer underlies site, Low importance. Will have permanent impact on a significant proportion of attribute.	**Moderate:** Locally Important Bedrock Aquifer underlies site, Medium importance. Will have permanent impact on a significant proportion of attribute.	**Moderate:** Locally Important Bedrock Aquifer underlies site, Medium importance. Will have permanent impact on a significant proportion of attribute.	**Moderate:** Poor Bedrock Aquifer and Locally Important Bedrock Aquifer underlies site, Medium importance. Will have permanent impact on a significant proportion of attribute.	**Moderate:** Locally Important Bedrock Aquifer underlies site, Medium importance. Will have permanent impact on a significant proportion of attribute.
5.1.2	**Vulnerability Classification - potential for groundwater contamination**	**Slight:** Low Vulnerability, Low importance. Will have permanent impact on a significant proportion of attribute.	**Slight:** Low Vulnerability, Low importance. Will have permanent impact on a significant proportion of attribute.	**Slight:** Low Vulnerability, Low importance. Will have permanent impact on a significant proportion of attribute.	**Slight:** Low Vulnerability, Low importance. Will have permanent impact on a significant proportion of attribute.	**Moderate:** Low to High Vulnerability, Predominantly Low, Medium importance. Will have permanent impact on a significant proportion of attribute.	**Slight:** Low Vulnerability, Low importance. Will have permanent impact on a significant proportion of attribute.	**Slight:** Low Vulnerability, Low importance. Will have permanent impact on a significant proportion of attribute.	**Moderate:** Low to High Vulnerability, Predominantly Moderate, Medium importance. Will have permanent impact on a significant proportion of attribute.	**Slight:** Low Vulnerability, Low importance. Will have permanent impact on a significant proportion of attribute.
5.1.3	**GSI Groundwater Protection Response matrix**	**R1**	**R1**	**R1**	**R1**	**R2**	**R1**	**R1**	**R2**	**R1**
5.1.4	**Groundwater Supplies - identification of water supply springs and bored wells based on GSI, EPA & FCC records**	**None:** No Groundwater Supplies within 500m however unconfirmed information from FCC suggests the possibility of additional groundwater abstraction points and wells nearby (Appendix A). If present, well would be of Low importance and would have a permanent impact on a significant proportion of attribute.	**Slight:** 1x Spring; St. Bridget's Well 400m South. Unconfirmed information from FCC suggests the possibility of additional groundwater abstraction points and wells nearby (Appendix A). Low importance. Will have permanent impact on a significant proportion of attribute.	**None:** No Groundwater Supplies within 500m	**Slight:** 1x Spring; St. Bridget's Well 210m South East. Unconfirmed information from FCC suggests the possibility of additional groundwater abstraction points and wells nearby (Appendix A). Low importance. Will have permanent impact on a significant proportion of attribute.	**None:** No Groundwater Supplies within 500m	**Slight:** 1x bored well; for agriculture and domestic use with good yields 510m North. Unconfirmed information from FCC suggests the possibility of additional groundwater abstraction points and wells nearby (Appendix A). Low importance. Will have permanent impact on a significant proportion of attribute.	**None:** No Groundwater Supplies within 500m. Unconfirmed information from FCC suggests the possibility of additional groundwater abstraction points and wells nearby (Appendix A). If present, well(s) would be of Low importance and would have a permanent impact on a significant proportion of attribute.	**None:** No Groundwater Supplies within 500m	**None:** No Groundwater Supplies within 500m. Unconfirmed information from FCC suggests the possibility of additional groundwater abstraction points and wells nearby (Appendix A). Low importance. Will have permanent impact on a significant proportion of attribute.
5.1.6	**Identification of hydrogeological features from the GSI Karst database**	***None:*** No Karst Feature within 2km	***None:*** 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.	***None:*** No Karst Feature within 2km	***Slight:*** 1x spring; St. Doolaghs Well 2km 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 1.8km north east to south east of the site, Low importance. Will have permanent impact on a significant proportion of attribute.	***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:*** No Karst Feature within 2km	***Slight:*** 1x spring; Bog Well 700m west of the site, Low importance. Will have permanent impact on a significant proportion of attribute.
5.2	**Hydrogeology - Pipelines**									
5.2.2	**Vulnerability Classification - potential for groundwater contamination**	A - predominantly high D - predominantly high F - predominantly low G - predominantly 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 low G - predominantly low	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 - Marine Outfall**									
5.3.2	**Vulnerability Classification - potential for groundwater contamination**	predominantly low	predominantly low	predominantly high	predominantly low	predominantly high	predominantly low	predominantly low	predominantly low	predominantly low
5.3.3	**Groundwater Supplies - identification of water supply springs and bored wells based on GSI, EPA & FCC records**	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	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 500m	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 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
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 features within 500m of the outfall 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	Soils and Geology	Annsbrook	Baldurgan	Clonshagh	Cookstown	Cloghran	Newtowncorduff	Rathartan	Saucerstown	Tyrrelstown Little
6.1	**Soils and Geology - Sites**									
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 that bedrock is at least 10 mbgl across the site. Confirm using ground investigation (rotary coring)	**Imperceptible -** confirm using ground investigation (rotary coring)	**Imperceptible -** confirm using ground investigation (rotary coring)	**Imperceptible -** confirm using ground investigation (rotary coring)	**Slight negative -** confirm using ground investigation (rotary coring)	**Imperceptible:** Confirm using ground investigation (rotary coring)	**Imperceptible -** confirm using ground investigation (rotary coring)	**Slight negative: 3**0% Shallow Bedrock . Confirm using ground investigation (rotary coring)	**Imperceptible -** confirm using ground investigation (rotary coring)
6.1.6	**Potential to encounter soft ground**	**Imperceptible:** No alluvial deposits mapped within site boundaries however proximity to river indicates soft silts may be present in the northern and southeastern part of the site. Ground investigation to confirm	**Imperceptible:** No alluvial deposits mapped within site boundaries however proximity to river indicates soft silts may be present in the north, south and west of the site. Ground investigation to confirm	**Imperceptible:** No alluvial deposits mapped within site boundaries however proximity to river indicates soft silts may be present in the north of the site. Ground investigation to confirm	**Imperceptible:** No alluvial deposits mapped within the site boundary. Presence of a river along the northern boundary indicates alluvium (including soft silts) may be present. Ground investigation to confirm	**Imperceptible:** No alluvial deposits mapped within site boundaries however proximity to river indicates soft silts may be present in the north of the site. Ground investigation to confirm	**Imperceptible:** No alluvial deposits mapped within the site boundary. Presence of a river near the south east and south west corners indicate alluvium (including soft silts) may be present. Ground investigation to confirm	**Imperceptible:** No alluvial deposits mapped within site boundaries however proximity to river indicates soft silts may be present in the south west of the site. Ground investigation to confirm	**Slight negative: 25**% Alluvium Deposits. Potential for soft ground in northeastern corner. Ground investigation to confirm	**Imperceptible:** No alluvial deposits mapped. Soft ground unlikely to be encountered.
6.2	**Soils and Geology - Pipelines**									
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 No.	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.
6.2.4	**Potential to encounter shallow bedrock during construction (interactions with other disciplines during construction - noise, dust etc)**	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 surface)	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 surface)	A - 95% shallow bedrock (15% bedrock at surface) B - 5% Shallow bedrock (0% bedrock at surface) G - 5% shallow bedrock (0% at surface)	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 surface)	A - 95% shallow bedrock (15% bedrock at surface) B - 5% Shallow bedrock (0% bedrock at surface) C - 65% shallow bedrock (5% at surface) G - 5% shallow bedrock (0% at surface)	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 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)	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)	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 surface)
6.2.5	**Potential impact on karst features**	2 No.	2 No.	No karst features within corridor	2 No.	No karst features within corridor	2 No.	2 No.	2 No.	2 No.
6.2.6	**Potential to encounter soft ground**	A - 1% Alluvium deposits D - Small area of lithosols/Peats (basic); 10% of alluvium deposits F - 5% Alluvium deposits G - 10% Alluvium Deposits	A - 1% Alluvium deposits D - Small area of lithosols/Peats (basic); 10% of alluvium deposits F - 5% Alluvium deposits G - 10% Alluvium Deposits	A - 1% Alluvium deposits B - 1% Alluvium deposits G - 10% Alluvium Deposits	A - 1% Alluvium deposits D - Small area of lithosols/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 D - Small area of lithosols/Peats (basic); 10% of alluvium deposits F - 5% Alluvium deposits G - 10% Alluvium Deposits	A - 1% Alluvium deposits D - Small area of lithosols/Peats (basic); 10% of alluvium deposits E - 10% of alluvium deposits F - 5% Alluvium deposits G - 10% Alluvium Deposits	A - 1% Alluvium deposits D - Small area of lithosols/Peats (basic); 10% of alluvium deposits E - 10% of alluvium deposits F - 5% Alluvium deposits G - 10% Alluvium Deposits	A - 1% Alluvium deposits D - Small area of lithosols/Peats (basic); 10% of alluvium deposits F - 5% Alluvium deposits G - 10% Alluvium Deposits
6.3	**Soils and Geology - Marine Outfall**									
6.3.1	**Potential to impact on Geological Heritage Sites/County Geological Sites**	2 No	2 No	No Geological Heritage Sites within corridor	2 No	No Geological Heritage Sites within corridor	2 No	2 No	2 No	2 No
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 shallow bedrock during construction (interactions with other disciplines during construction - noise, dust etc)**	5% shallow bedrock (2% bedrock at surface)	5% shallow bedrock (2% bedrock at surface)	15% shallow bedrock	5% shallow bedrock (2% bedrock at surface)	15% shallow bedrock	5% shallow bedrock (2% bedrock at surface)	5% shallow bedrock (2% bedrock at surface)	5% shallow bedrock (2% bedrock at surface)	5% shallow bedrock (2% bedrock at surface)
6.3.5	**Potential impact on karst features**	3 No.	3 No.	No karst features 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% Alluvium deposits	1% Alluvium deposits	15% Alluvium deposits	1% Alluvium deposits	15% Alluvium deposits	1% Alluvium deposits	1% Alluvium deposits	1% Alluvium deposits	1% Alluvium deposits

7.0	Agronomy & Agriculture - Sites	Annsbrook	Baldurgan	Clonshagh	Cookstown	Cloghran	Newtowncorduff	Rathartan	Saucerstown	Tyrrelstown Little
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%15%51%	31%
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	Beef	Mixed livestock & tillage	Horticulture & Tillage, (intensive market gardening area)	Tillage, Potatoes& Horticulture	Beef (site is located in an intensive market gardening area)
7.3	Number of landowners impacted within site boundary	1 to 3	1 to 3	4 to 6	1 to 3	4 to 6	1 to 3	7 to 9	1 to 3	1 to 3
7.5	Severance based on site location within overall land holdings	Minor	Minor	Minor	Moderate	Minor	Minor	Moderate	Minor	Imperceptible
7.7	Crop rotation practiced	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	No
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	Moderate negative impact
8.0	Noise	Annsbrook	Baldurgan	Clonshagh	Cookstown	Cloghran	Newtowncorduff	Rathartan	Saucerstown	Tyrrelstown Little
8.4	Construction Phase Impact rating	slight	imperceptible	slight	imperceptible	slight	slight	slight	slight	imperceptible
8.5	Operational Phase Impact rating	slight	imperceptible	slight	imperceptible	slight	slight	slight	slight	imperceptible
9.0	Air and Odour	Annsbrook	Baldurgan	Clonshagh	Cookstown	Cloghran	Newtowncorduff	Rathartan	Saucerstown	Tyrrelstown Little
9.9	Construction Phase Impact rating	imperceptible	imperceptible	imperceptible	imperceptible	slight	imperceptible	imperceptible	slight	imperceptible
9.10	Operational Phase Impact rating	imperceptible	imperceptible	imperceptible	imperceptible	slight	imperceptible	imperceptible	slight	imperceptible
10.0	People and Communities	Annsbrook	Baldurgan	Clonshagh	Cookstown	Cloghran	Newtowncorduff	Rathartan	Saucerstown	Tyrrelstown Little
10.1	Number of residential & commercial buildings 300-500m from site boundary	44	21	83	53	116	33	131	66	50
10.3	Potential to impact on known community amenities and facilities within 1km from site boundary.	Ballyboghill Hedgerow Round (Sli na Sceacha) - c. 480m to the SW.	Ballyboghill Hedgerow Round (Sli na Sceacha) - c. 280m to the east.	Football grounds c. 700m to the NW, Darndale and Belcamp Parks c. 800m to the SW and SE respectively and Innisfail GAA club c. 500m to the south.	Swords Roganstown golf club c. 990m to the south and Ballyboghill Hedgerow Round c. 980m to the NE.	Playground c. 800m to the north (Nevinstown East) and National Show Centre c. 580m to the west.	None	A 7-a-side football pitch c. 920m to the east.	A school complex c. 400m to south, Swords and Roganstown golf course c. 290m to the NW, Broadmeadow linear park c. 320m to east and demesne parkland c. 620m to the SW.	None
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.	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.	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	Annsbrook	Baldurgan	Clonshagh	Cookstown	Cloghran	Newtowncorduff	Rathartan	Saucerstown	Tyrrelstown 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 road	None	2 river/stream crossings	None	1 ditch/stream crossings	None	1 stream/river crossings	2 stream/river crossings	1 stream/river	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 2 fields	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	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 minimal landtake. Can use existing field access.
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	Access onto R125 which is ok. 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
11.6	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	4 accidents (all minor) located near entrance	None
11.7	Frequency of accidents on surrounding network (indication of general road safety issues)	few accidents on surrounding roads	few 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	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 (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)	3.25km (R125)	6.8km (R127 & R128)

12.0	Planning Policy	Annsbrook	Baldurgan	Clonshagh	Cookstown	Cloghran	Newtowncorduff	Rathartan	Saucerstown	Tyrrelstown Little
12.2	**Site Zoning**	RU (Rural)	RU (Rural)	GB (Greenbelt) HT (High Tech)	RU (Rural)	GB (Greenbelt)	RU (Rural)	RU (Rural)	OS (Open Space) GB (Greenbelt)	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	N/A	N/A	N/A	N/A
12.4	**Local Objectives on Site**	None	None	432 (Prepare Masterplan)	None	None	None	None	GIM8 (new regional park)	None
12.5	**Other Local Objectives on Site**	None	None	Road objectives	None	None	None	None	Road objective	None
12.6	**Land Uses present within 300m of site boundary**	Agricultural	Agricultural	Agricultural Open Space Urban Commercial	Agricultural	Agricultural	Agricultural Motorway	Agricultural Rural Residential Railway Line	Agricultural, Rural Residential Open Space	Agricultural, Rural Residential
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)	OS (Open Space) GB (Greenbelt) RU (Rural) RA (New Residential)	RU (Rural)
12.8	**Airport Public Safety and Noise Zones within 300m of site boundary**	N/A	N/A	Inner PSZ Outer PSZ Inner Noise Zone Outer Noise Zone	N/A	Inner PSZ Outer PSZ Inner Noise Zone Outer Noise Zone	N/A	N/A	N/A	N/A
12.9	**Local Objectives within 300m of site boundary**	180 (2 dwellings)	None	432 (prepare roads masterplan)	None	374 (nursing facility)	None	141 (agri-tourism)	GIM8 (active recreational hub)	GIM7 (historic landscape study)
12.10	**Other Local Objectives present within 300m of site boundary**	None	None	Road objectives	None	Indicative Cycle / Pedestrian Route	None	None	Road objective	None
12.11	**Land Uses present within 1km of Land Parcel Boundary**	Agricultural Rural Residential Rural Commercial Motorway	Agricultural Rural Residential (including Village) Rural Commercial	Agricultural Open Space Urban Residential Urban Commercial Hotel Burial Ground	Agricultural Rural Residential (including Village) Rural Commercial	Agricultural Open Space Quarrying Urban Residential Traveller Acc. Airport / Commercial Motorway	Agricultural Rural Residential Rural Commercial Urban Residential Motorway	Agricultural Rural Residential Rural Commercial Urban Residential Open Space Railway Line	Agricultural, Rural Residential Open Space Urban Residential	Agricultural, Rural Residential Rural Commercial Railway
12.12	**Zoning present within 1km of Land Parcel Boundary**	RU (Rural) RC (Rural Cluster) RB (Rural Business)	RU (Rural) RV (Rural Village) GB (Green Belt)	GB (Greenbelt) HT (High Tech) OS (Open Space) RA (New Residential) RS (Residential)	RU (Rural) GB (Greenbelt) RV (Rural Village)	GB (Greenbelt) GE (Enterprise) DA (Dublin Airport) OS (Open Space) RS (Residential)	RU (Rural) RB (Rural Business) RC (Rural Cluster) GE (Enterprise) RA (New Residential) RS (Residential)	RU (Rural) RB (Rural Business) RC (Rural Cluster) RS (Residential) TC (Town Centre) OS (Open Space) HA (High Amenity)	OS (Open Space) GB (Greenbelt) RU (Rural) RA (New Residential) RS (Residential) CI (Community)	RU (Rural) HA (High Amenity) RC (Rural Cluster)
12.13	**Airport Public Safety and Noise Zones within 1km of land parcel boundary**	N/A	N/A	Outer PSZ Inner Noise Zone Outer Noise Zone	N/A	Inner PSZ Outer PSZ Inner Noise Zone Outer Noise Zone	N/A	N/A	N/A	N/A
12.14	**Local Objectives within 1km of Land Parcel Boundary**	144 (ELV facility) 180 (2 dwellings) 203 (sports facility) 214 (1 dwelling) 219 (employment opportunity)	203 (sports facility) 219 (employment opportunity) 228 (1 dwelling)	383 (local shop) 411 (foot path) 413 (nursing home) 423 (prepare office masterplan) 432 (prepare roads masterplan) 436 (cemetery) 439 (high tech uses) 442 (FRA required) 443 (local shops) 446 (riverside walk)	228 (1 dwelling) 258 (tourism complex)	346 and 347 (access to residential estate) 374 (nursing facility) 375 and 376 (protect trees, develop tourism complex at Abbeyville) 383 (local shop) GIM1 (active recreation hub)	145, 148, 149, 152,, 156, 158, 156, 158, 159, 160, 161, 163, 164 (all relating to development of western edge of Lusk)	141 (agri-tourism) 176 (study on use of lands) 197, 200, 202, 204, 206, 207, 208, 209, 210, 211 (all relating to development of western areas of Rush)	GIM1 (active recreational hub) GIM 8 (new regional park)	111 (house extension) 131 (single dwelling) 141 (agri-tourism) GIM1 (recreation hub)

12.15	**Other Local Objectives present within 1km of Land Parcel Boundary**	None	Preserved Views to north and southeast	None	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 - Pipelines**	**Annsbrook**	**Baldurgan**	**Clonshagh**	**Cookstown**	**Cloghran**	**Newtowncorduff**	**Rathartan**	**Saucerstown**	**Tyrrelstown Little**
13.1	**Pipeline Length**									
13.1.6	**Total Pipeline Lengths**									
	Total Length as Open Cut	30,950 m	28,950 m	19,600 m	28,950 m	18,800 m	29,450 m	27,550 m	26,820 m	32,650 m
	Total Length as Tunnel	14,400 m	16,400 m	5,000 m	16,450 m	9,500 m	15,900 m	16,850 m	18,530 m	12,750 m
	Total Length in Marine	2,500 m	2,500 m	6,000 m	2,500 m	6,000 m	2,500 m	2,500 m	2,500 m	2,500 m
	Total Pipeline Length	**47,850 m**	**47,850 m**	**30,600 m**	**47,900 m**	**34,300 m**	**47,850 m**	**46,900 m**	**47,850 m**	**47,900 m**
13.2	**Power Requirements**									
	Power Requirement from 9C to WWTP Site	7,000 kW	6,700 kW	5,450 kW	6,600 kW	6,250 kW	6,750 kW	7,200 kW	5,050 kW	7,950 kW
	Power Requirement from North Dublin to WWTP Site	3,000 kW	3,000 kW	2,400 kW	3,000 kW	2,300 kW	2,550 kW	2,600 kW	2,050 kW	2,550 kW
	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**									
	Total embodied Carbon	**56,029**	**57,247**	**35,947**	**57,325**	**42,225**	**56,942**	**56,613**	**58,544**	**55,072**
	Total Lifetime Operational Carbon	**447,979**	**431,180**	**349,984**	**425,580**	**392,915**	**425,580**	**451,713**	**321,052**	**492,777**
	Total Carbon (tonnes CO2)	**504,008**	**488,427**	**385,931**	**482,905**	**435,140**	**482,523**	**508,325**	**379,596**	**547,849**
13.5	**Access / Right of Way / Wayleaves along Pipeline Corridors**									
	Potential restrictions Along Pipeline Corridors to WwTP Sites	11	11	8	11	8	11	12	12	11
13.6	**Crossings - Waterways, Rail, etc. along Pipeline Corridors**									
	Main River Crossings	7	7	2	7	2	7	7	7	7
	Stream Crossings	4	4	0	4	0	4	4	4	4
	Golf Courses	0	0	2	0	2	0	0	0	0
	Canal Crossings	0	0	0	0	0	0	0	0	0
	Motorway Crossings	2	2	1	2	1	2	2	2	2
	National Road Crossings	1	1	1	1	1	1	1	1	1
	Regional Road Crossings	15	15	10	15	10	15	15	15	15
	Railway Crossings	2	2	1	2	1	2	2	2	2
	Total Crossings	**31**	**31**	**17**	**31**	**17**	**31**	**31**	**31**	**31**
13.7	**Potential to Impact on Physical Infrastructure along Pipeline Corridors**									
		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 Roads
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	No known public utilities	1 number: ESB (MV) Overhead (38kv)	No known public utilities	1 Number: ESB (MV) Overhead (38kv). 2 Number: ESB (MV) Overhead (10-20kv)	1 Number: High Pressure Gas Line
13.10	**Land Ownership and Titles along Pipeline Corridors**									
		Most Ownerships	Most Ownerships	Least Ownerships	Most Ownerships	Least Ownerships	Most Ownerships	Most Ownerships	Most Ownerships	Most Ownerships
13.11	**Route Traffic Management**									
		Moderate Impact during Construction stage	Moderate Impact during Construction stage	Imperceptible Impact during Construction stage	Moderate Impact during Construction stage	Imperceptible Impact during Construction stage	Moderate Impact during Construction stage	Moderate Impact during Construction stage	Moderate Impact during Construction stage	Moderate Impact during Construction stage
		No Impact After Construction Stage	No Impact After Construction Stage	No Impact After Construction Stage	No Impact After Construction Stage	No Impact After Construction Stage	No Impact After Construction Stage	No Impact After Construction Stage	No Impact After Construction Stage	No Impact After Construction Stage
13.12	**Construction Risk along Pipeline Corridors**									
		(1) Deep Tunnel to Site, (2) Deep Tunnel to Coast.	(1) Deep Tunnel to Site, (2) Deep Tunnel to Coast.	(1) Deep Tunnel to Site, (2) Difficult Sea Outfall.	(1) Deep Tunnel to Site, (2) Deep Tunnel to Coast.	(1) Deep Tunnel to Site, (2) Difficult Sea Outfall.	(1) Deep Tunnel to Site, (2) Deep Tunnel to Coast.	(1) Deep Tunnel to Site	(1) Deep Tunnel to Site, (2) Deep Tunnel to Coast.	(1) Deep Tunnel to Site
		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 Bedrock	Most Variability in Depth to Bedrock	Most Variability in Depth to Bedrock	Most Variability in Depth to Bedrock	Most Variability in Depth to Bedrock
									Significantly larger diameter outfall pipe required	

13.13	**Operation and Maintenance - WwTP, Pumping Stations & Pipeline ancillaries**									
		Most Issues	Most Issues	Least Issues	Most Issues	Least Issues	Most Issues	Most Issues	Most Issues	Most Issues

Phase 2 Alternative Sites Assessment and Route Selection - Environmental & Technical Criteria Evaluation Matrix

Stage 2 of Criteria Evaluation (Sites, Pipeline Routes & Marine Outfall) - Identification of 'most favourable' cells - assignment of 'green colour'

Ref	Environmental Criteria	Annsbrook	Baldurgan	Clonshagh	Cookstown	Cloghran	Newtowncorduff	Rathartan	Saucerstown	Tyrrelstown Little
1.0	Cultural Heritage	Annsbrook	Baldurgan	Clonshagh	Cookstown	Cloghran	Newtowncorduff	Rathartan	Saucerstown	Tyrrelstown Little
1.1	Cultural Heritage -Sites									
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:** None	**Direct:** None **Indirect:** One moderate negative (DU005-038)
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	**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 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)	**Direct:** None **Indirect:** None	**Direct:** None **Indirect:** One moderate negative (RPS 245)
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)	**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)	**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)	None	One (potentially significant)	None	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	**Direct:** 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 townland boundaries (cultural heritage significance)	Two moderate negative	None	One moderate negative	Two moderate negative	One moderate negative	One moderate negative	Two moderate negative	Two moderate negative	Two moderate negative
1.2	Cultural Heritage -Pipelines									
1.2.1	Potential to impact on RMPs	32 RMP sites located within corridor	32 RMP sites located within corridor	20 RMP sites located within corridor	32 RMP sites located within corridor	20 RMP sites located within corridor	32 RMP sites located within corridor	32 RMP siotes located within corridor	32RMP sites 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 corridor	No national monuments located within corridor	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/NIAH	27 RPS and 12 NIAH sites located within corridor	27 RPS and 12 NIAH sites located within corridor	15 RPS and 6 NIAH sites located within corridor	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 impact on CH sites	27 CH sites located within corridor	27 CH sites located within corridor	9 CH sites 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 corridor	22 demesne landscapes located within corridor	14 demesne landscapes located within corridor	22 demesne landscapes located within corridor	15 demesne landscapes located within corridor	22 demesne landscapes located within corridor	23 demesne landscapes located within corridor	23 demesne landscapes located within corridor	22 demesne landscapes located within corridor
1.3	Cultural Heritage - Marine Outfalls									
1.3.1	Potential to impact on RMPs	11 RMP sites located within outfall area	11 RMP sites located within outfall area	No RMP sites located within outfall area	11 RMP sites located within outfall area	No RMP sites located within outfall area	11 RMP sites located within outfall area	11 RMP sites located within outfall area	11 RMP sites located within outfall area	11 RMP sites located within outfall area
1.3.3	Potential to impact on RPS/NIAH	29 RPS/NIAH sites located within corridor	29 RPS/NIAH sites located within corridor	No RPS/NIAH sites located within corridor	29 RPS/NIAH sites located within corridor	No 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	29 RPS/NIAH sites located within corridor
1.3.4	Potential to impact on CH sites	12 CH sites located within outfall area	12 CH sites located within outfall area	1 CH site located within outfall area	12 CH sites located within outfall area	1 CH site located within outfall area	12 CH sites located within outfall area	12 CH sites located within outfall area	12 CH sites located within outfall area	12 CH sites located within outfall area
1.3.5	Recorded shipwreck sites	40 shipwrecks in and within vicinity of the outfall area	40 shipwrecks 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 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	40 shipwrecks in and within vicinity of the outfall area	40 shipwrecks in and within vicinity of the outfall area

2.0	Landscape & Visual	Annsbrook	Baldurgan	Clonshagh	Cookstown	Cloghran	Newtowncorduff	Rathartan	Saucerstown	Tyrrelstown Little
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	Significant - one 0.5km E with relatively clear views towards the site afforded 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 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 ocassional open and elevated views over site and another 0.8km W with no clear views	Significant - One 1.6km 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 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
2.1.3	**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	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	Moderate - Baldungan Church on hill 2.5km N with extensive scenic views in the direction of the site	Significant - Swords Golf Course adjacent to NW and Broadmeadow River and Linear Park runs just to E of site - two accomodation providers 0.6km N with potential views across Broadmeadow River	Significant - Baldungan Castle on hill 1.7km N with extensive scenic views in the direction of the site
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 resonable integrity but the surrounds are a peri-urban landscape of mixed land uses relating 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 rural HSL to the E however major transport infrastructure occurs immediately W and a quarry and golf 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 located near an urban fringe (Rush) - rail line to W does not strongly influence landscape character	Moderate - rural landcape and river in immediate context of site but two regional roads a golf course a school / community centre and a significant settlement make up the varied land use within 1km	Significant - open rural landscape character of high integrity for the site and its surrounds - rail line passes close to eastern boundary but does not strongly influence character
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 but it will be difficult to screen views from elevated M1 overpasses N and S	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	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 views from castle and scenic route to N and scenic route to S	Slight - This site can generally be well screened and integrated but particular attention needs to be paid to elevated views from scenic route to S and views across river to the N	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 views from castle and scenic route to N
2.1.6	**Potential to impact on views from settlements**	Imperceptible - Crossroads settlement (Ballyboghill) 2.5km W has no view of site	Moderate - Crossroads settlement (Ballyboghill) 1.5km NW and associated dwellings stretch southwards along R108 closer to the site (1km)	Slight - Densely populated Nth Dublin suburb of Darndale <1km S, other estates 1km N and E - No clear views afforded toward the site from any of these	Moderate - Crossroads settlement (Ballyboghill) 1.7km NW and associated dwellings stretch southwards along R108 closer to the site (1km)	Moderate - small estate settlement of Ballymacartle 1km SE also clear views available from an estate adjacent to the east of the M1/Swords junction	Slight - settlement of Lusk 1.5km E but no views available - small settlement of Dunganstown 1km SE may be afforded restricted views	Significant - sizeable coastal settlement of Rush 0.8km E	Significant - settlement of Swords 1km 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 lining regional 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 afforded from local road ovepass 1km NE	Imperceptible - M1 passes 2.5km E and views of the scheme would not be afforded	Slight - M1 passes 1km W - clear views only afforded 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 filtered views of site through roadside screening will be afforded	Imperceptible - M1 5km W	Imperceptible - M1 2.5km E	Imperceptible - M1 4.5km W
2.1.9	**Potential to impact on views from Dublin - Belfast rail line**	Imperceptible - rail line 5km E	Imperceptible - rail line 6km E	Imperceptible - rail line 3.5km E	Imperceptible - rail line 6km E	Imperceptible - rail line 3km E	Imperceptible - rail line 3km E	Significant - rail line lies directly adjacent to W	Imperceptible - rail line 6km 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 glimpses may be afforded 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 at < 0.5km - clear views afforded from some sections and site access from R129	Slight / Significant - heavily used N32 national secondary road 0.3km to S and R107 regional road 1km E - neither has clear views towards site due to roadside screening - Note future malahide Rd realignment adjacent to site	Significant - R108 regional road 0.3km W and clear views afforded from some sections	Imperceptible - R107 regional road 2km E but no views available	Significant - slightly elevated R132 regional road (old N1) 0.5km E affords 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 0.5km S fleeting 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 aerial approach and vehicular egress**	Imperceptible - airport 10km S	Imperceptible - airport 8.5km S	Significant - airport 2km NW - clear views not afforded towards the site at ground level but it would be a prominent feature of the low level landing approach from the E	Imperceptible - airport 7.5km S	Significant - airport 1.5km SW - clear views afforded towards the site from elevated M1/airport access road interchange andit would be a prominent feature of the low level landing approach from the E	Imperceptible - airport 10km S	Imperceptible - airport >10km SW	Slight - airport 5km S but views likely to be available on Slight low landing approach from the E	Imperceptible - airport >10km SW
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	Moderate - intensive and strongly defined hedgerow/field pattern contained within site boundary but surrounding lands more dispersed in structure	Significant - intensive and strongly defined hedgerow/field pattern contained within site boundary but surrounding lands more dispersed in structure	Moderate - predominantly large fields defined by low hedgerows within site boundary	Moderate - several low meandering hedgerows contained within the site	Moderate - combination of large cropping fields in N half of site and smaller geometric pastoral fields in S half - low hedgerows
2.1.13	**Potential to impact on historic designed landscapes**	Moderate - Woodpark demesne 0.15km NE	Imperceptible - No demesne landscapes within or near 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 surrounded to the north and east by the site at the minimum setback (0.3km)	Slight - Abbeyville Estate 1km E	Imperceptible - No demesne landscapes within or near this site	Slight - Haystown Demesne 0.3km NE	Moderate - Saucerstown Demesne 0.2km W	Imperceptible - No demesne landscapes within or near this site

2.2	**Landscape & Visual - Pipelines**									
2.2.10	**Potential to disrupt landscape structure (treelines / hedgerows / field pattern etc.)**	A - Moderate - landscape is relatively unstructured and irregular along this pipeline 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 field patterns F - Significant - this corridor section passes almost entirely through fields and hedgerows G - Slight - Moderate - landscape is relatively unstructured and open along this pipeline corridor section but with some hedgerow field patterns	A - Moderate - landscape is relatively unstructured and irregular along this pipeline 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 field patterns F - Significant - this corridor section passes almost entirely through fields and hedgerows G - Slight - Moderate - landscape is relatively unstructured and open along this pipeline corridor section but with some hedgerow field patterns	A - Moderate - landscape is relatively unstructured and irregular along this pipeline corridor section but with some hedgerow field patterns B- Moderate - landscape is relatively unstructured and irregular along this pipeline corridor section but with some hedgerow field patterns G - Slight - Moderate - landscape is relatively unstructured and open along this pipeline corridor section but with some hedgerow field patterns	A - Moderate - landscape is relatively unstructured and irregular along this pipeline 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 field patterns F - Significant - this corridor section passes almost entirely through fields and hedgerows G - Slight - Moderate - landscape is relatively unstructured and open along this pipeline corridor section but with some hedgerow field patterns	A - Moderate - landscape is relatively unstructured and irregular along this pipeline corridor section but with some hedgerow field patterns B- Moderate - landscape is relatively unstructured and irregular along this pipeline corridor section but with some hedgerow field patterns G - Slight - Moderate - landscape is relatively unstructured and open along this pipeline corridor section but with some hedgerow field patterns	A - Moderate - landscape is relatively unstructured and irregular along this pipeline 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 field patterns F - Significant - this corridor section passes almost entirely through fields and hedgerows G - Slight - Moderate - landscape is relatively unstructured and open along this pipeline corridor section but with some hedgerow field patterns	A - Moderate - landscape is relatively unstructured and irregular along this pipeline 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 field patterns E- Significant - this corridor section passes almost entirely through fields and hedgerows F - Significant - this corridor section passes almost entirely through fields and hedgerows G - Slight - Moderate - landscape is relatively unstructured and open along this pipeline corridor section but with some hedgerow field patterns	A - Moderate - landscape is relatively unstructured and irregular along this pipeline 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 field patterns E- Significant - this corridor section passes almost entirely through fields and hedgerows F - Significant - this corridor section passes almost entirely through fields and hedgerows G - Slight - Moderate - landscape is relatively unstructured and open along this pipeline corridor section but with some hedgerow field patterns	A - Moderate - landscape is relatively unstructured and irregular along this pipeline 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 field patterns F - Significant - this corridor section passes almost entirely through fields and hedgerows G - Slight - Moderate - landscape is relatively unstructured and open along this pipeline corridor section but with some hedgerow field patterns
2.2.13	**Potential to impact on historic designed landscapes**	A - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section D -Significant - passes across corner of Abbeyville estate at eastern end of corridor F - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section G - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section	A - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section D -Significant - passes across corner of Abbeyville estate at eastern end of corridor F - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section G - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section	A - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section B - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section G - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section	A - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section D -Significant - passes across corner of Abbeyville estate at eastern end of corridor F - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section G - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section	A - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section B - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section G - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section	A - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section D -Significant - passes across corner of Abbeyville estate at eastern end of corridor F - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section G - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section	A - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section D -Significant - passes across corner of Abbeyville estate at eastern end of corridor E- Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section F - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section G - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section	A - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section D -Significant - passes across corner of Abbeyville estate at eastern end of corridor E- Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section F - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section G - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section	A - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section D -Significant - passes across corner of Abbeyville estate at eastern end of corridor F - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section G - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section
2.3	**Landscape & Visual - Marine Outfalls**									

3.0	Ecology	Annsbrook	Baldurgan	Clonshagh	Cookstown	Cloghran	Newtowncorduff	Rathartan	Saucerstown	Tyrrelstown Little
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)	**Slight:** 5.3km upstream of Natura 2000 wetland sites Rogerstown Estuary SPA/SAC and 7.0km upstream of Natura 2000 wetland sites Malahide Estuary SPA/SAC	**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 wetland sites (Baldoyle 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)	**Moderate**: 3.0km upstream of Natura 2000 wetland sites (Malahide Estuary SPA/SAC)	**Moderate**: 2.2km 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 corridor.	**Significant**: Site abuts Sluice River ecological corridor	**Significant**: Site abuts Rath Little ecological corridor; Access road crosses Ballough Stream ecological corridor.	**Imperceptible**: Site located more than 3km from Ballough Stream ecological corridor	**Moderate:** Site located 250m from the Broadmeadow River ecological corridor	**Imperceptible**: Site 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**: 0.1km 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	**Moderate**: 1.4km of hedges within the site	**Significant**: 3.8km 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.	**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.	**Slight:** Site comprised of agriculturally improved, cultivated or arable land.	**Slight:** Site comprised of agriculturally improved, cultivated or arable land.	**Slight:** 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 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	**Significant -** The Broadmeadow River (main channel and tributaries) constitutes a salmonid system and the access road crosses a tributary and site abuts a tributary.	**Imperceptible** - 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 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	**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 Greylag Goose flock. Location is in an area considered likely to be used by the north Co Dublin winter Greylag Goose flock on occasion	**Imperceptible** - Outside the normal geographical range of the north Co Dublin winter Greylag Goose flock	**Significant** - Within 'Skerries Grasslands' IWEBS area, likely to be a feeding site for the north Co Dublin winter Greylag Goose flock
3.1.8	Potential to result in loss of breeding habitat for Annex I species Kingfisher	**Slight** - watercourse present but no suitable breeding habitat for Kingfisher or high quality feeding habitat	**Slight -** watercourse present but no suitable breeding habitat for Kingfisher or high quality feeding habitat	**Slight -** watercourse present but no suitable breeding habitat for Kingfisher or high quality feeding habitat	**Slight** - watercourse present but no breeding habitat for Kingfisher nor high quality feeding habitat for Kingfisher	**Slight -** watercourse present but no suitable breeding habitat for Kingfisher or high quality feeding habitat	**Slight -** watercourse present but no suitable breeding habitat for Kingfisher or high quality feeding habitat	**Slight -** watercourse present but no suitable breeding habitat for Kingfisher or high quality feeding habitat	**Significant** - suitable breeding habitat anf high quality feeding habitat for Kingfisher is present on the Broad Meadow River	**Slight -** watercourse present but no suitable breeding habitat for Kingfisher or high quality feeding habitat
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 (I.e. 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	**Slight -** smallish fields, unlikely to be used regularly by Lapwing and Golden Plover	**Moderate -** smallish fields, but proximity to Rogerstown Estuary increases liklihood of site being used by Lapwing and Golden Plover	**Significant** - site includes large wet fields close to the Broad Meadow River highly suitable for Lapwing, Golden Plover or other winter waders	**Significant** - site includes large arable fields and pastures suitable for Lapwing, Golden Plover or other winter waders

3.2	Ecology - Pipelines									
3.2.1	**potential to impact on Natura 2000 Sites and Natural Heritage Areas**	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 D - 0.5km Malahide estuary SPA/SAC; 2.0km Baldoyle Bay SPA/SAC/pNHA F - Malahide Estuary SPA/SAC/pNHA; Rogerstown Estuary SPA/SAC/pNHA; Balcunnin Stream flows out to WFD coastal waters G - 0.5km Baldoyle Bay SAC/SPA/pNHA F - Also crosses Balcunnin Stream which flows out to WFD coastal waters	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 D - 0.5km Malahide estuary SPA/SAC; 2.0km Baldoyle Bay SPA/SAC/pNHA F - Malahide Estuary SPA/SAC/pNHA; Rogerstown Estuary SPA/SAC/pNHA; Balcunnin Stream flows out to WFD coastal waters G - 0.5km Baldoyle Bay SAC/SPA/pNHA F - Also crosses Balcunnin Stream which flows out to WFD coastal waters	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 B - 8.0km North Dublin BAY SAC and North Bull Island SPA; 4.5km Baldoyle Bay SAC/SPA/pNHA G - 0.5km Baldoyle Bay SAC/SPA/pNHA G - Also interfaces with Baldoyle Bay SAC/SPA/pNHA and Ramsar site	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 D - 0.5km Malahide estuary SPA/SAC; 2.0km Baldoyle Bay SPA/SAC/pNHA F - Malahide Estuary SPA/SAC/pNHA; Rogerstown Estuary SPA/SAC/pNHA; Balcunnin Stream flows out to WFD coastal waters G - 0.5km Baldoyle Bay SAC/SPA/pNHA F - Also crosses Balcunnin Stream which flows out to WFD coastal waters	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 B - 8.0km North Dublin BAY SAC and North Bull Island SPA; 4.5km Baldoyle Bay SAC/SPA/pNHA G - 0.5km Baldoyle Bay SAC/SPA/pNHA G - Also interfaces with Baldoyle Bay SAC/SPA/pNHA and Ramsar site	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 D - 0.5km Malahide estuary SPA/SAC; 2.0km Baldoyle Bay SPA/SAC/pNHA F - Malahide Estuary SPA/SAC/pNHA; Rogerstown Estuary SPA/SAC/pNHA; Balcunnin Stream flows out to WFD coastal waters G - 0.5km Baldoyle Bay SAC/SPA/pNHA F - Also crosses Balcunnin Stream which flows out to WFD coastal waters	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 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 F - Malahide Estuary SPA/SAC/pNHA; Rogerstown Estuary SPA/SAC/pNHA; Balcunnin Stream flows out to WFD coastal waters G - 0.5km Baldoyle Bay SAC/SPA/pNHA	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 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 F - Malahide Estuary SPA/SAC/pNHA; Rogerstown Estuary SPA/SAC/pNHA; Balcunnin Stream flows out to WFD coastal waters G - 0.5km Baldoyle Bay SAC/SPA/pNHA	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 D - 0.5km Malahide estuary SPA/SAC; 2.0km Baldoyle Bay SPA/SAC/pNHA F - Malahide Estuary SPA/SAC/pNHA; Rogerstown Estuary SPA/SAC/pNHA; Balcunnin Stream flows out to WFD coastal waters G - 0.5km Baldoyle Bay SAC/SPA/pNHA F - Also crosses Balcunnin Stream which flows out to WFD coastal waters
3.2.2	**Potential to impact upon ecological buffer zones or Nature Development Areas idenitifed in the Fingal Development Plan 2011 - 2017**	Impinges upon 6 ecological buffer zones (3 No. D; 3 No. G) Impinges upon four nature developement areas potentially impinges on 6 No. Nature Development Areas	Impinges upon 6 ecological buffer zones (3 No. D; 3 No. G) Impinges upon four nature developement areas potentially impinges on 6 No. Nature Development Areas	Impinges upon 3 ecological buffer zones (Route G) Impinges upon four nature developement areas Crosses 1 No. nature development area potentially impinges on 1 No. Nature Development Areas	Impinges upon 6 ecological buffer zones (3 No. D; 3 No. G) Impinges upon four nature developement areas potentially impinges on 6 No. Nature Development Areas	Impinges upon 3 ecological buffer zones (Route G) Impinges upon five nature developement areas Crosses 1 No. nature development area potentially impinges on 1 No. Nature Development Areas	Impinges upon 6 ecological buffer zones (3 No. D; 3 No. G) Impinges upon four nature developement areas potentially impinges on 6 No. Nature Development Areas	Impinges upon 6 ecological buffer zones (3 No. D; 3 No. G) Impinges upon four nature developement areas potentially impinges on 6 No. Nature Development Areas	Impinges upon 6 ecological buffer zones (3 No. D; 3 No. G) Impinges upon four nature developement areas potentially impinges on 6 No. Nature Development Areas	Impinges upon 6 ecological buffer zones (3 No. D; 3 No. G) Impinges upon four nature developement areas potentially impinges on 6 No. Nature Development Areas
3.2.3	**Potential to impact upon ecological corridor, nature development area or high value habitats**	Crosses 10 No. ecological corridors Potentially crosses 1 No. ecological corridor Impinges upon TPO sites Potentially impinges upon TPO areas Potentially crosses 36 rivers or streams Loss of hedgerow habitat along 41km	Crosses 10 No. ecological corridors Potentially crosses 1 No. ecological corridor Impinges upon TPO sites Potentially impinges upon TPO areas Potentially crosses 36 rivers or streams Loss of hedgerow habitat along 41km	Crosses 2 No. ecological corridors Potentially crosses 1 No. ecological corridor Impinges upon TPO sites Crosses 1 No. TPO site Potentially crosses 4 rivers or streams Potentially crosses one area of deciduous woodland Loss of hedgerow habitat along 17km	Crosses 10 No. ecological corridors Potentially crosses 1 No. ecological corridor Impinges upon TPO sites Potentially impinges upon TPO areas Potentially crosses 36 rivers or streams Loss of hedgerow habitat along 41km	Crosses 2 No. ecological corridors Potentially crosses 1 No. ecological corridor Impinges upon TPO sites Crosses 1 No. TPO site Potentially crosses 6 No rivers or streams Potentially crosses 1 No. area of deciduous woodland Loss of hedgerow habitat along 20km	Crosses 10 No. ecological corridors Potentially crosses 1 No. ecological corridor Impinges upon TPO sites Potentially impinges upon TPO areas Potentially crosses 36 rivers or streams Loss of hedgerow habitat along 41km	Crosses 12 No. ecological corridors Potentially crosses 1 No. ecological corridor Impinges upon TPO sites Potentially impinges upon TPO areas Potentially crosses 45 rivers or streams Loss of hedgerow habitat along 54km	Crosses 12 No. ecological corridors Potentially crosses 1 No. ecological corridor Impinges upon TPO sites Potentially impinges upon TPO areas Potentially crosses 45 rivers or streams Loss of hedgerow habitat along 54km	Crosses 10 No. ecological corridors Potentially crosses 1 No. ecological corridor Impinges upon TPO sites Potentially impinges upon TPO areas Potentially crosses 36 rivers or streams Loss of hedgerow habitat along 41km
3.2.4	**Potenitial to impact on a salmonid system**	Crosses 8 No. salmonid systems.	Crosses 8 No. salmonid systems.	Crosses 2 No. salmonid systems.	Crosses 8 No. salmonid systems.	Crosses 3 No. salmonid systems.	Crosses 8 No. salmonid systems.	Crosses 9 No. salmonid systems.	Crosses 9 No. salmonid systems.	Crosses 8 No. salmonid systems.
3.2.6	**Potential to impact on the breeding habitat for Annex 1 species Kingfisher**	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 River where possible suitable habitat for breeding kingfisher occurs	No suitable riparian habitat for breeding kingfisher	Portion of route D located along the Broadmeadow River where possible suitable habitat for breeding kingfisher occurs	No suitable riparian habitat for breeding kingfisher	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 River where possible suitable habitat for breeding kingfisher occurs Crosses Ballough River which is unlikely to have suitable riparian habitat for breeding kingfisher	Portion of route D located along the Broadmeadow River where possible suitable habitat for breeding kingfisher occurs Crosses Ballough River which is unlikely to have suitable riparian habitat for breeding kingfisher	Portion of route D located along the Broadmeadow River where possible suitable habitat for breeding kingfisher occurs
3.2.8	**Potential to impact on IWeBS identified areas of importance to birds adjacent to Malahide Estuary**	Portion of route located within Malahide Estuary IWEBS area Portion of route located within 'Skerries Grasslands' IWEBS area	Portion of route located within Malahide Estuary IWEBS area Portion of route located within 'Skerries Grasslands' IWEBS area	No IWEB areas located on pipeline route	Portion of route located within Malahide Estuary IWEBS area Portion of route located within 'Skerries Grasslands' IWEBS area	No IWEB areas located on pipeline route	Portion of route located within Malahide Estuary IWEBS area Portion of route located within 'Skerries Grasslands' IWEBS area	Portion of route located within Malahide Estuary IWEBS area Portion of 2 No. routes located within 'Skerries Grasslands' IWEBS area	Portion of route located within Malahide Estuary IWEBS area Portion of 2 No. routes located within 'Skerries Grasslands' IWEBS area	Portion of route located within Malahide Estuary IWEBS area Portion of route located within 'Skerries Grasslands' IWEBS area

3.3	**Ecology - Marine Outfall**									
3.3.1	**potential 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)	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 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 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)	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)
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)	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)	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)	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)	Slight (isolated sensitve sites in some areas of coast)	Slight (isolated sensitve sites in some areas of coast)
3.3.6	**Potential to impact on water quality and bathing waters designated under the Bathing Water Directive**	Slight (to be determined following hydrodynamic modelling)	Slight (to be determined following hydrodynamic modelling)	Moderate (to be determined following hydrodynamic modelling)	Slight (to be determined following hydrodynamic modelling)	Moderate (to be determined following hydrodynamic modelling)	Slight (to be determined following hydrodynamic modelling)	Slight (to be determined following hydrodynamic modelling)	Slight (to be determined following hydrodynamic modelling)	Slight (to be determined following hydrodynamic modelling)
4.0	**Hydrology -**	**Annsbrook**	**Baldurgan**	**Clonshagh**	**Cookstown**	**Cloghran**	**Newtowncorduff**	**Rathartan**	**Saucerstown**	**Tyrrelstown Little**
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 site 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.	***Slight:*** 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.	***Moderate:*** Belinstown River (10m north) and Broadmeadow tributary (1km south) (water quality Q3) of the site, High Importance. Will have permanent impact on small proportion of attribute.	***Moderate:*** Sluice River (10m north) and Sluice 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 Q3), 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.	***Significant:*** Broadmeadow tributaries (water quality Q3) are within 10m of the site; the site is surrounded by tributaries almost throughout its perimeter, High importance. Will have permanent impact on small proportion of attribute. Will have permanent impact on a significant proportion of attribute.	***Imperceptible:*** Collinstown Stream (120 southwest), Rush Town Stream (360m southeast) and Balcunnin Stream (930m north) of the site, Low 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.	***Slight:*** Crossing BroadmeadowTributary, Medium importance. Will have permanent impact on small proportion of attribute.	***None:*** No new culvert required.
4.1.3	**Area prone to flooding (based on historical data and predicted flood extents adjacent to the site as well as up and downstream locations)**	***Imperceptible:*** No flooding to the site from the Ballough and Ballyboghill rivers. The Ballyboghill has extensive overland flooding approx. 3km downstream, Low importance. Will have permanent impact on small proportion of attribute.	***Slight:*** Ballyboghill have overland flooding approx. 200m to the north of the site. The Belinstown has extensive overland flooding approx. 2km downstream, medium importance. Will have permanent impact on small proportion of attribute.	***Imperceptible:*** No flooding from the Mayne / Cuckoo Rivers to the site. The Mayne has history of flooding; and predicted overland flooding approx. 2km downstream, Low importance. Will have permanent impact on small proportion of attribute.	***Imperceptible:*** The Belinstown has extensive predicted overland flooding (both tidal & fluvial) and recurrence historic flooding approx. 3.5km downstream, Low importance. Will have permanent impact on small proportion of attribute.	***Slight:*** No flooding from the Sluice River at the site. The Sluice has history of flooding and predicted overland flooding approx. 0.5km upstream and 2km downstream, Medium importance. Will have permanent impact on small proportion of attribute.	***Imperceptible:*** No flooding from Ballough River. The eastern tributary was not modelled in FEM FRAMS, but has a history of flooding upstream, Low importance. Will have permanent impact on small proportion of attribute.	***Imperceptible:*** No flooding from the Collinstown Stream and Palmerstown Stream close to the site. History of flooding at downstream locations, Low importance. Will have permanent impact on small proportion of attribute.	***Moderate:*** The Broadmeadow River flooding extent is adjacent to the site boundary, High importance. Will have permanent impact on small proportion of attribute.	***Imperceptible:*** No flooding from the Collinstown and Rush Town Stream to the site. History of flooding at downstream locations, Low 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. 4.6km 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 5km downstream respectively, Low importance. Will have permanent impact on small proportion of attribute.	***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.	***Slight:*** 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, pNHA, Ramsar and SNR) approx. 1km downstream, High importance. Will have permanent impact on small proportion of attribute.	***Imperceptible:*** The Broadmeadow River discharges into the Broadmeadow Estuary (SAC, SPA, pNHA) approx. 3km downstream, Low importance. Will have permanent impact on small proportion of attribute.	***Slight:*** The Collinstown Stream discharges into Rogerstown Estuary and Rush Town Stream discharges into the Irish sea (unpolluted water quality) approx. 2.2km downstream, Medium importance. Will have permanent impact on small proportion of attribute.
4.2	**Hydrology - Pipelines**									
4.2.1	**Proximity to water bodies in terms of flooding and as an indicator of sensitive surface water receptors**	18 river catchments and some coastal areas	18 river catchments and some coastal areas	7 river catchments and some coastal areas	18 river catchments and some coastal areas	9 river catchments and some coastal areas	18 river catchments and some coastal areas	28 river catchments and some coastal areas	28 river catchments and some coastal areas	18 river catchments and some coastal areas
4.3	**Hydrology - Marine Outfall**									

5.0	Hydrogeology -	Annsbrook	Baldurgan	Clonshagh	Cookstown	Cloghran	Newtowncorduff	Rathartan	Saucerstown	Tyrrelstown Little
5.1	**Hydrogeology - Sites**									
5.1.1	**Aquifer Classification - importance of the groundwater resource to a given area**	**Moderate:** Locally Important Bedrock Aquifer underlies site, Medium importance. Will have permanent impact on a significant proportion of attribute.	**Moderate:** Locally Important Bedrock Aquifer underlies site, Medium importance. Will have permanent impact on a significant proportion of attribute.	**Moderate:** Poor Bedrock Aquifer and Locally Important Bedrock Aquifer underlies site, Medium importance. Will have permanent impact on a significant proportion of attribute.	**Moderate:** Locally Important Bedrock Aquifer underlies site, Medium importance. Will have permanent impact on a significant proportion of attribute.	**Slight:** Poor Bedrock Aquifer underlies site, Low importance. Will have permanent impact on a significant proportion of attribute.	**Moderate:** Locally Important Bedrock Aquifer underlies site, Medium importance. Will have permanent impact on a significant proportion of attribute.	**Moderate:** Locally Important Bedrock Aquifer underlies site, Medium importance. Will have permanent impact on a significant proportion of attribute.	**Moderate:** Poor Bedrock Aquifer and Locally Important Bedrock Aquifer underlies site, Medium importance. Will have permanent impact on a significant proportion of attribute.	**Moderate:** Locally Important Bedrock Aquifer underlies site, Medium importance. Will have permanent impact on a significant proportion of attribute.
5.1.2	**Vulnerability Classification - potential for groundwater contamination**	**Slight:** Low Vulnerability, Low importance. Will have permanent impact on a significant proportion of attribute.	**Slight:** Low Vulnerability, Low importance. Will have permanent impact on a significant proportion of attribute.	**Slight:** Low Vulnerability, Low importance. Will have permanent impact on a significant proportion of attribute.	**Slight:** Low Vulnerability, Low importance. Will have permanent impact on a significant proportion of attribute.	**Moderate:** Low to High Vulnerability, Predominantly Low, Medium importance. Will have permanent impact on a significant proportion of attribute.	**Slight:** Low Vulnerability, Low importance. Will have permanent impact on a significant proportion of attribute.	**Slight:** Low Vulnerability, Low importance. Will have permanent impact on a significant proportion of attribute.	**Moderate:** Low to High Vulnerability, Predominantly Moderate, Medium importance. Will have permanent impact on a significant proportion of attribute.	**Slight:** Low Vulnerability, Low importance. Will have permanent impact on a significant proportion of attribute.
5.1.3	**GSI Groundwater Protection Response matrix**	**R1**	**R1**	**R1**	**R1**	**R2**	**R1**	**R1**	**R2**	**R1**
5.1.4	**Groundwater Supplies - identification of water supply springs and bored wells based on GSI, EPA & FCC records**	**None:** No Groundwater Supplies within 500m however unconfirmed information from FCC suggests the possibility of additional groundwater abstraction points and wells nearby (Appendix A). If present, well would be of Low importance and would have a permanent impact on a significant proportion of attribute.	**Slight:** 1x Spring; St. Bridget's Well 400m South. Unconfirmed information from FCC suggests the possibility of additional groundwater abstraction points and wells nearby (Appendix A). Low importance. Will have permanent impact on a significant proportion of attribute.	**None:** No Groundwater Supplies within 500m	**Slight:** 1x Spring; St. Bridget's Well 210m South East. Unconfirmed information from FCC suggests the possibility of additional groundwater abstraction points and wells nearby (Appendix A). Low importance. Will have permanent impact on a significant proportion of attribute.	**None:** No Groundwater Supplies within 500m	**Slight:** 1x bored well; for agriculture and domestic use with good yields 510m North. Unconfirmed information from FCC suggests the possibility of additional groundwater abstraction points and wells nearby (Appendix A). Low importance. Will have permanent impact on a significant proportion of attribute.	**None:** No Groundwater Supplies within 500m. Unconfirmed information from FCC suggests the possibility of additional groundwater abstraction points and wells nearby (Appendix A). If present, well(s) would be of Low importance and would have a permanent impact on a significant proportion of attribute.	**None:** No Groundwater Supplies within 500m	**None:** No Groundwater Supplies within 500m. Unconfirmed information from FCC suggests the possibility of additional groundwater abstraction points and wells nearby (Appendix A). Low importance. Will have permanent impact on a significant proportion of attribute.
5.1.6	**Identification of hydrogeological features from the GSI Karst database**	***None:*** No Karst Feature within 2km	***None:*** 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.	***None:*** No Karst Feature within 2km	***Slight:*** 1x spring; St. Doolaghs Well 2km 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 1.8km north east to south east of the site, Low importance. Will have permanent impact on a significant proportion of attribute.	***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:*** No Karst Feature within 2km	***Slight:*** 1x spring; Bog Well 700m west of the site, Low importance. Will have permanent impact on a significant proportion of attribute.
5.2	**Hydrogeology - Pipelines**									
5.2.2	**Vulnerability Classification - potential for groundwater contamination**	A - predominantly high D - predominantly high F - predominantly low G - predominantly 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 low G - predominantly low	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 - Marine Outfall**									
5.3.2	**Vulnerability Classification - potential for groundwater contamination**	predominantly low	predominantly low	predominantly high	predominantly low	predominantly high	predominantly low	predominantly low	predominantly low	predominantly low
5.3.3	**Groundwater Supplies - identification of water supply springs and bored wells based on GSI, EPA & FCC records**	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	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 500m	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 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
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 features within 500m of the outfall 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	Soils and Geology	Annsbrook	Baldurgan	Clonshagh	Cookstown	Cloghran	Newtowncorduff	Rathartan	Saucerstown	Tyrrelstown Little
6.1	**Soils and Geology - Sites**									
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 that bedrock is at least 10 mbgl across the site. Confirm using ground investigation (rotary coring)	**Imperceptible -** confirm using ground investigation (rotary coring)	**Imperceptible -** confirm using ground investigation (rotary coring)	**Imperceptible -** confirm using ground investigation (rotary coring)	**Slight negative -** confirm using ground investigation (rotary coring)	**Imperceptible:** Confirm using ground investigation (rotary coring)	**Imperceptible -** confirm using ground investigation (rotary coring)	**Slight negative:** 30% Shallow Bedrock . Confirm using ground investigation (rotary coring)	**Imperceptible -** confirm using ground investigation (rotary coring)
6.1.6	**Potential to encounter soft ground**	**Imperceptible:** No alluvial deposits mapped within site boundaries however proximity to river indicates soft silts may be present in the northern and southeastern part of the site. Ground investigation to confirm	**Imperceptible:** No alluvial deposits mapped within site boundaries however proximity to river indicates soft silts may be present in the north, south and west of the site. Ground investigation to confirm	**Imperceptible:** No alluvial deposits mapped within site boundaries however proximity to river indicates soft silts may be present in the north of the site. Ground investigation to confirm	**Imperceptible:** No alluvial deposits mapped within the site boundary. Presence of a river along the northern boundary indicates alluvium (including soft silts) may be present. Ground investigation to confirm	**Imperceptible:** No alluvial deposits mapped within site boundaries however proximity to river indicates soft silts may be present in the north of the site. Ground investigation to confirm	**Imperceptible:** No alluvial deposits mapped within the site boundary. Presence of a river near the south east and south west corners indicate alluvium (including soft silts) may be present. Ground investigation to confirm	**Imperceptible:** No alluvial deposits mapped within site boundaries however proximity to river indicates soft silts may be present in the south west of the site. Ground investigation to confirm	**Slight negative: 25**% Alluvium Deposits. Potential for soft ground in northeastern corner. Ground investigation to confirm	**Imperceptible:** No alluvial deposits mapped. Soft ground unlikely to be encountered.
6.2	**Soils and Geology - Pipelines**									
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 No.	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.
6.2.4	**Potential to encounter shallow bedrock during construction (interactions with other disciplines during construction - noise, dust etc)**	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 surface)	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 surface)	A - 95% shallow bedrock (15% bedrock at surface) B - 5% Shallow bedrock (0% bedrock at surface) G - 5% shallow bedrock (0% at surface)	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 surface)	A - 95% shallow bedrock (15% bedrock at surface) B - 5% Shallow bedrock (0% bedrock at surface) C - 65% shallow bedrock (5% at surface) G - 5% shallow bedrock (0% at surface)	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 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)	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)	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 surface)
6.2.5	**Potential impact on karst features**	2 No.	2 No.	No karst features within corridor	2 No.	No karst features within corridor	2 No.	2 No.	2 No.	2 No.
6.2.6	**Potential to encounter soft ground**	A - 1% Alluvium deposits D - Small area of lithosols/Peats (basic); 10% of alluvium deposits F - 5% Alluvium deposits G - 10% Alluvium Deposits	A - 1% Alluvium deposits D - Small area of lithosols/Peats (basic); 10% of alluvium deposits F - 5% Alluvium deposits G - 10% Alluvium Deposits	A - 1% Alluvium deposits B - 1% Alluvium deposits G - 10% Alluvium Deposits	A - 1% Alluvium deposits D - Small area of lithosols/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 D - Small area of lithosols/Peats (basic); 10% of alluvium deposits F - 5% Alluvium deposits G - 10% Alluvium Deposits	A - 1% Alluvium deposits D - Small area of lithosols/Peats (basic); 10% of alluvium deposits E - 10% of alluvium deposits F - 5% Alluvium deposits G - 10% Alluvium Deposits	A - 1% Alluvium deposits D - Small area of lithosols/Peats (basic); 10% of alluvium deposits E - 10% of alluvium deposits F - 5% Alluvium deposits G - 10% Alluvium Deposits	A - 1% Alluvium deposits D - Small area of lithosols/Peats (basic); 10% of alluvium deposits F - 5% Alluvium deposits G - 10% Alluvium Deposits
6.3	**Soils and Geology - Marine Outfall**									
6.3.1	**Potential to impact on Geological Heritage Sites/County Geological Sites**	2 No	2 No	No Geological Heritage Sites within corridor	2 No	No Geological Heritage Sites within corridor	2 No	2 No	2 No	2 No
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 shallow bedrock during construction (interactions with other disciplines during construction - noise, dust etc)**	5% shallow bedrock (2% bedrock at surface)	5% shallow bedrock (2% bedrock at surface)	15% shallow bedrock	5% shallow bedrock (2% bedrock at surface)	15% shallow bedrock	5% shallow bedrock (2% bedrock at surface)	5% shallow bedrock (2% bedrock at surface)	5% shallow bedrock (2% bedrock at surface)	5% shallow bedrock (2% bedrock at surface)
6.3.5	**Potential impact on karst features**	3 No.	3 No.	No karst features 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% Alluvium deposits	1% Alluvium deposits	15% Alluvium deposits	1% Alluvium deposits	15% Alluvium deposits	1% Alluvium deposits	1% Alluvium deposits	1% Alluvium deposits	1% Alluvium deposits

7.0	Agronomy & Agriculture - Sites	Annsbrook	Baldurgan	Clonshagh	Cookstown	Cloghran	Newtowncorduff	Rathartan	Saucerstown	Tyrrelstown Little
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%15%51%	31%
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	Beef	Mixed livestock & tillage	Horticulture & Tillage, (intensive market gardening area)	Tillage, Potatoes& Horticulture	Beef (site is located in an intensive market gardening area)
7.3	Number of landowners impacted within site boundary	1 to 3	1 to 3	3 to 6	1 to 3	3 to 6	1 to 3	7 to 9	1 to 3	1 to 3
7.5	Severance based on site location within overall land holdings	Minor	Minor	Minor	Moderate	Minor	Minor	Moderate	Minor	Imperceptible
7.7	Crop rotation practiced	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	No
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	Moderate negative impact
8.0	Noise	Annsbrook	Baldurgan	Clonshagh	Cookstown	Cloghran	Newtowncorduff	Rathartan	Saucerstown	Tyrrelstown Little
8.4	Construction Phase Impact rating	slight	imperceptible	slight	imperceptible	slight	slight	slight	slight	imperceptible
8.5	Operational Phase Impact rating	slight	imperceptible	slight	imperceptible	slight	slight	slight	slight	imperceptible
9.0	Air and Odour	Annsbrook	Baldurgan	Clonshagh	Cookstown	Cloghran	Newtowncorduff	Rathartan	Saucerstown	Tyrrelstown Little
9.9	Construction Phase Impact rating	imperceptible	imperceptible	imperceptible	imperceptible	slight	imperceptible	imperceptible	slight	imperceptible
9.10	Operational Phase Impact rating	imperceptible	imperceptible	imperceptible	imperceptible	slight	imperceptible	imperceptible	slight	imperceptible
10.0	People and Communities	Annsbrook	Baldurgan	Clonshagh	Cookstown	Cloghran	Newtowncorduff	Rathartan	Saucerstown	Tyrrelstown Little
10.1	Number of residential & commercial buildings 300-500m from site boundary	44	21	83	53	116	33	131	66	50
10.3	Potential to impact on known community amenities and facilities within 1km from site boundary.	Ballyboghill Hedgerow Round (Sli na Sceacha) - c. 480m to the SW.	Ballyboghill Hedgerow Round (Sli na Sceacha) - c. 280m to the east.	Football grounds c. 700m to the NW, Darndale and Belcamp Parks c. 800m to the SW and SE respectively and Innisfail GAA club c. 500m to the south.	Swords Roganstown golf club c. 990m to the south and Ballyboghill Hedgerow Round c. 980m to the NE.	Playground c. 800m to the north (Nevinstown East) and National Show Centre c. 580m to the west.	None	A 7-a-side football pitch c. 920m to the east.	A school complex c. 400m to south, Swords and Roganstown golf course c. 290m to the NW, Broadmeadow linear park c. 320m to east and demesne parkland c. 620m to the SW.	None
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.	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.	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	Annsbrook	Baldurgan	Clonshagh	Cookstown	Cloghran	Newtowncorduff	Rathartan	Saucerstown	Tyrrelstown 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 road	None	2 river/stream crossings	None	1 ditch/stream crossings	None	1 stream/river crossings	2 stream/river crossings	1 stream/river	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 2 fields	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	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 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	Access onto R125 which is ok. 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
11.6	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	4 accidents (all minor) located near entrance	None
11.7	Frequency of accidents on surrounding network (indication of general road safety issues)	few accidents on surrounding roads	few 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	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 (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)	3.25km (R125)	6.8km (R127 & R128)

12.0	Planning Policy	Annsbrook	Baldurgan	Clonshagh	Cookstown	Cloghran	Newtowncorduff	Rathartan	Saucerstown	Tyrrelstown Little
12.2	**Site Zoning**	RU (Rural)	RU (Rural)	GB (Greenbelt) HT (High Tech)	RU (Rural)	GB (Greenbelt)	RU (Rural)	RU (Rural)	OS (Open Space) GB (Greenbelt)	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	N/A	N/A	N/A	N/A
12.4	**Local Objectives on Site**	None	None	432 (Prepare Masterplan)	None	None	None	None	GIM8 (new regional park)	None
12.5	**Other Local Objectives on Site**	None	None	Road objectives	None	None	None	None	Road objective	None
12.6	**Land Uses present within 300m of site boundary**	Agricultural	Agricultural	Agricultural Open Space Urban Commercial	Agricultural	Agricultural	Agricultural Motorway	Agricultural Rural Residential Railway Line	Agricultural, Rural Residential Open Space	Agricultural, Rural Residential
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)	OS (Open Space) GB (Greenbelt) RU (Rural) RA (New Residential)	RU (Rural)
12.8	**Airport Public Safety and Noise Zones within 300m of site boundary**	N/A	N/A	Inner PSZ Outer PSZ Inner Noise Zone Outer Noise Zone	N/A	Inner PSZ Outer PSZ Inner Noise Zone Outer Noise Zone	N/A	N/A	N/A	N/A
12.9	**Local Objectives within 300m of site boundary**	180 (2 dwellings)	None	432 (prepare roads masterplan)	None	374 (nursing facility)	None	141 (agri-tourism)	GIM8 (active recreational hub)	GIM7 (historic landscape study)
12.10	**Other Local Objectives present within 300m of site boundary**	None	None	Road objectives	None	Indicative Cycle / Pedestrian Route	None	None	Road objective	None
12.11	**Land Uses present within 1km of Land Parcel Boundary**	Agricultural Rural Residential Rural Commercial Motorway	Agricultural Rural Residential (including Village) Rural Commercial	Agricultural Open Space Urban Residential Urban Commercial Hotel Burial Ground	Agricultural Rural Residential (including Village) Rural Commercial	Agricultural Open Space Quarrying Urban Residential Traveller Acc. Airport / Commercial Motorway	Agricultural Rural Residential Rural Commercial Urban Residential Motorway	Agricultural Rural Residential Rural Commercial Urban Residential Open Space Railway Line	Agricultural, Rural Residential Open Space Urban Residential	Agricultural, Rural Residential Rural Commercial Railway
12.12	**Zoning present within 1km of Land Parcel Boundary**	RU (Rural) RC (Rural Cluster) RB (Rural Business)	RU (Rural) RV (Rural Village) GB (Green Belt)	GB (Greenbelt) HT (High Tech) OS (Open Space) RA (New Residential) RS (Residential)	RU (Rural) GB (Greenbelt) RV (Rural Village)	GB (Greenbelt) GE (Enterprise) DA (Dublin Airport) OS (Open Space) RS (Residential)	RU (Rural) RB (Rural Business) RC (Rural Cluster) GE (Enterprise) RA (New Residential) RS (Residential)	RU (Rural) RB (Rural Business) RC (Rural Cluster) RS (Residential) TC (Town Centre) OS (Open Space) HA (High Amenity)	OS (Open Space) GB (Greenbelt) RU (Rural) RA (New Residential) RS (Residential) CI (Community)	RU (Rural) HA (High Amenity) RC (Rural Cluster)
12.13	**Airport Public Safety and Noise Zones within 1km of land parcel boundary**	N/A	N/A	Outer PSZ Inner Noise Zone Outer Noise Zone	N/A	Inner PSZ Outer PSZ Inner Noise Zone Outer Noise Zone	N/A	N/A	N/A	N/A
12.14	**Local Objectives within 1km of Land Parcel Boundary**	144 (ELV facility) 180 (2 dwellings) 203 (sports facility) 214 (1 dwelling) 219 (employment opportunity)	203 (sports facility) 219 (employment opportunity) 228 (1 dwelling)	383 (local shop) 411 (foot path) 413 (nursing home) 423 (prepare office masterplan) 432 (prepare roads masterplan) 436 (cemetery) 439 (high tech uses) 442 (FRA required) 443 (local shops) 446 (riverside walk)	228 (1 dwelling) 258 (tourism complex)	346 and 347 (access to residential estate) 374 (nursing facility) 375 and 376 (protect trees, develop tourism complex at Abbeyville) 383 (local shop) GIM1 (active recreation hub)	145, 148, 149, 152,, 156, 158, 156, 158, 159, 160, 161, 163, 164 (all relating to development of western edge of Lusk)	141 (agri-tourism) 176 (study on use of lands) 197, 200, 202, 204, 206, 207, 208, 209, 210, 211 (all relating to development of western areas of	GIM1 (active recreational hub) GIM 8 (new regional park)	111 (house extension) 131 (single dwelling) 141 (agri-tourism) GIM1 (recreation hub)

12.15	**Other Local Objectives present within 1km of Land Parcel Boundary**	None	Preserved Views to north and southeast	None	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 - Pipelines**	**Annsbrook**	**Baldurgan**	**Clonshagh**	**Cookstown**	**Cloghran**	**Newtowncorduff**	**Rathartan**	**Saucerstown**	**Tyrrelstown Little**
13.1	**Pipeline Length**									
13.1.6	**Total Pipeline Lengths**									
	Total Length as Open Cut	30,950 m	28,950 m	19,600 m	28,950 m	18,800 m	29,450 m	27,550 m	26,820 m	32,650 m
	Total Length as Tunnel	14,400 m	16,400 m	5,000 m	16,450 m	9,500 m	15,900 m	16,850 m	18,530 m	12,750 m
	Total Length in Marine	2,500 m	2,500 m	6,000 m	2,500 m	6,000 m	2,500 m	2,500 m	2,500 m	2,500 m
	Total Pipeline Length	**47,850 m**	**47,850 m**	**30,600 m**	**47,900 m**	**34,300 m**	**47,850 m**	**46,900 m**	**47,850 m**	**47,900 m**
13.2	**Power Requirements**									
	Power Requirement from 9C to WWTP Site	7,000 kW	6,700 kW	5,450 kW	6,600 kW	6,250 kW	6,750 kW	7,200 kW	5,050 kW	7,950 kW
	Power Requirement from North Dublin to WWTP Site	3,000 kW	3,000 kW	2,400 kW	3,000 kW	2,300 kW	2,550 kW	2,600 kW	2,050 kW	2,550 kW
	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**									
	Total embodied Carbon	**56,029**	**57,247**	**35,947**	**57,325**	**42,225**	**56,942**	**56,613**	**58,544**	**55,072**
	Total Lifetime Operational Carbon	**447,979**	**431,180**	**349,984**	**425,580**	**392,915**	**425,580**	**451,713**	**321,052**	**492,777**
	Total Carbon (tonnes CO2)	**504,008**	**488,427**	**385,931**	**482,905**	**435,140**	**482,523**	**508,325**	**379,596**	**547,849**
13.5	**Access / Right of Way / Wayleaves along Pipeline Corridors**									
	Potential restrictions Along Pipeline Corridors to WwTP Sites	11	11	8	11	8	11	12	12	11
13.6	**Crossings - Waterways, Rail, etc. along Pipeline Corridors**									
	Main River Crossings	7	7	2	7	2	7	7	7	7
	Stream Crossings	4	4	0	4	0	4	4	4	4
	Golf Courses	0	0	2	0	2	0	0	0	0
	Canal Crossings	0	0	0	0	0	0	0	0	0
	Motorway Crossings	2	2	1	2	1	2	2	2	2
	National Road Crossings	1	1	1	1	1	1	1	1	1
	Regional Road Crossings	15	15	10	15	10	15	15	15	15
	Railway Crossings	2	2	1	2	1	2	2	2	2
	Total Crossings	**31**	**31**	**17**	**31**	**17**	**31**	**31**	**31**	**31**
13.7	**Potential to Impact on Physical Infrastructure along Pipeline Corridors**									
		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 Roads
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	No known public utilities	1 number: ESB (MV) Overhead (38kv)	No known public utilities	1 Number: ESB (MV) Overhead (38kv). 2 Number: ESB (MV) Overhead (10-20kv)	1 Number: High Pressure Gas Line
13.10	**Land Ownership and Titles along Pipeline Corridors**									
		Most Ownerships	Most Ownerships	Least Ownerships	Most Ownerships	Least Ownerships	Most Ownerships	Most Ownerships	Most Ownerships	Most Ownerships
13.11	**Route Traffic Management**									
		Moderate Impact during Construction stage	Moderate Impact during Construction stage	Imperceptible Impact during Construction stage	Moderate Impact during Construction stage	Imperceptible Impact during Construction stage	Moderate Impact during Construction stage	Moderate Impact during Construction stage	Moderate Impact during Construction stage	Moderate Impact during Construction stage
		No Impact After Construction Stage	No Impact After Construction Stage	No Impact After Construction Stage	No Impact After Construction Stage	No Impact After Construction Stage	No Impact After Construction Stage	No Impact After Construction Stage	No Impact After Construction Stage	No Impact After Construction Stage
13.12	**Construction Risk along Pipeline Corridors**									
		(1) Deep Tunnel to Site, (2) Deep Tunnel to Coast.	(1) Deep Tunnel to Site, (2) Deep Tunnel to Coast.	(1) Deep Tunnel to Site, (2) Difficult Sea Outfall.	(1) Deep Tunnel to Site, (2) Deep Tunnel to Coast.	(1) Deep Tunnel to Site, (2) Difficult Sea Outfall.	(1) Deep Tunnel to Site, (2) Deep Tunnel to Coast.	(1) Deep Tunnel to Site	(1) Deep Tunnel to Site, (2) Deep Tunnel to Coast,	(1) Deep Tunnel to Site
		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 Bedrock	Most Variability in Depth to Bedrock	Most Variability in Depth to Bedrock	Most Variability in Depth to Bedrock	Most Variability in Depth to Bedrock
									Significantly larger diameter outfall pipe required	

13.13	**Operation and Maintenance - WwTP, Pumping Stations & Pipeline ancillaries**									
		Most Issues	Most Issues	Least Issues	Most Issues	Least Issues	Most Issues	Most Issues	Most Issues	Most Issues

Phase 2 Alternative Sites Assessment and Route Selection - Environmental & Technical Criteria Evaluation Matrix

Stage 2 of Criteria Evaluation (Sites, Pipeline Routes & Marine Outfall) - Identification of 'least favourable' cells - assignment of 'amber colour' 1

Ref	Environmental Criteria	Annsbrook	Baldurgan	Clonshagh	Cookstown	Cloghran	Newtowncorduff	Rathartan	Saucerstown	Tyrrelstown Little
1.0	**Cultural Heritage**	**Annsbrook**	**Baldurgan**	**Clonshagh**	**Cookstown**	**Cloghran**	**Newtowncorduff**	**Rathartan**	**Saucerstown**	**Tyrrelstown Little**
1.1	**Cultural Heritage -Sites**									
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:** None	**Direct:** None **Indirect:** One moderate negative (DU005-038)
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	**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 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)	**Direct:** None **Indirect:** None	**Direct:** None **Indirect:** One moderate negative (RPS 245)
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)	**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)	**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)**	None	One (potentially significant)	None	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	**Direct:** 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 townland boundaries (cultural heritage significance)**	Two moderate negative	None	One moderate negative	Two moderate negative	One moderate negative	One moderate negative	Two moderate negative	Two moderate negative	Two moderate negative
1.2	**Cultural Heritage -Pipelines**									
1.2.1	**Potential to impact on RMPs**	32 RMP sites located within corridor	32 RMP sites located within corridor	20 RMP sites located within corridor	32 RMP sites located within corridor	20 RMP sites located within corridor	32 RMP sites located within corridor	32 RMP sites located within corridor	32RMP sites 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 corridor	No national monuments located within corridor	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/NIAH**	27 RPS and 12 NIAH sites located within corridor	27 RPS and 12 NIAH sites located within corridor	15 RPS and 6 NIAH sites located within corridor	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 impact on CH sites**	27 CH sites located within corridor	27 CH sites located within corridor	9 CH sites 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 corridor	22 demesne landscapes located within corridor	14 demesne landscapes located within corridor	22 demesne landscapes located within corridor	15 demesne landscapes located within corridor	22 demesne landscapes located within corridor	23 demesne landscapes located within corridor	23 demesne landscapes located within corridor	22 demesne landscapes located within corridor
1.3	**Cultural Heritage - Marine Outfalls**									
1.3.1	**Potential to impact on RMPs**	11 RMP sites located within outfall area	11 RMP sites located within outfall area	No RMP sites located within outfall area	11 RMP sites located within outfall area	No RMP sites located within outfall area	11 RMP sites located within outfall area	11 RMP sites located within outfall area	11 RMP sites located within outfall area	11 RMP sites located within outfall area
1.3.3	**Potential to impact on RPS/NIAH**	29 RPS/NIAH sites located within corridor	29 RPS/NIAH sites located within corridor	No RPS/NIAH sites located within corridor	29 RPS/NIAH sites located within corridor	No 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	29 RPS/NIAH sites located within corridor
1.3.4	**Potential to impact on CH sites**	12 CH sites located within outfall area	12 CH sites located within outfall area	1 CH site located within outfall area	12 CH sites located within outfall area	1 CH site located within outfall area	12 CH sites located within outfall area	12 CH sites located within outfall area	12 CH sites located within outfall area	12 CH sites located within outfall area
1.3.5	**Recorded shipwreck sites**	40 shipwrecks in and within vicinity of the outfall area	40 shipwrecks 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 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	40 shipwrecks in and within vicinity of the outfall area	40 shipwrecks in and within vicinity of the outfall area

2.0	Landscape & Visual	Annsbrook	Baldurgan	Clonshagh	Cookstown	Cloghran	Newtowncorduff	Rathartan	Saucerstown	Tyrrelstown Little
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	Significant - one 0.5km E with relatively clear views towards the site afforded 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 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 another 0.8km W with no clear views	Significant - One 1.6km 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 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
2.1.3	**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	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	Moderate - Baldungan Church on hill 2.5km N with extensive scenic views in the direction of the site	Significant - Swords Golf Course adjacent to NW and Broadmeadow River and Linear Park runs just to E of site - two accommodation providers 0.6km N with potential views across Broadmeadow River	Significant - Baldungan Castle on hill 1.7km N with extensive scenic views in the direction of the site
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	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 rural HSL to the E however major transport infrastructure occurs immediately W and a quarry and golf 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 located near an urban fringe (Rush) - rail line to W does not strongly influence landscape character	Moderate - rural landscape and river in immediate context of site but two regional roads a golf course a school community centre and a significant settlement make up the varied land use within 1km	Significant - open rural landscape character of high integrity for the site and its surrounds - rail line passes close to eastern boundary but does not strongly influence character
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 but it will be difficult to screen views from elevated M1 overpasses N and S	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	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 views from castle and scenic route to N and scenic route to S	Slight - This site can generally be well screened and integrated but particular attention needs to be paid to elevated views from scenic route to S and views across river to the N	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 views from castle and scenic route to N
2.1.6	**Potential to impact on views from settlements**	Imperceptible - Crossroads settlement (Ballyboghill) 2.5km W has no view of site	Moderate - Crossroads settlement (Ballyboghill) 1.5km NW and associated dwellings stretch southwards along R108 closer to the site (1km)	Slight - Densely populated Nth Dublin suburb of Darndale <1km S, other estates 1km N and E - No clear views afforded toward the site from any of these	Moderate - Crossroads settlement (Ballyboghill) 1.7km NW and associated dwellings stretch southwards along R108 closer to the site (1km)	Moderate - small estate settlement of Ballymacartle 1km SE also clear views available from an estate adjacent to the east of the M1/Swords junction	Slight - settlement of Lusk 1.5km E but no views available - small settlement of Dunganstown 1km SE may be afforded restricted views	Significant - sizeable coastal settlement of Rush 0.8km E	Significant - settlement of Swords 1km 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 lining regional 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 afforded from local road overpass 1km NE	Imperceptible - M1 passes 2.5km E and views of the scheme would not be afforded	Slight - M1 passes 1km W - clear views only afforded 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 filtered views of site through roadside screening will be afforded	Imperceptible - M1 5km W	Imperceptible - M1 2.5km E	Imperceptible - M1 4.5km W
2.1.9	**Potential to impact on views from Dublin - Belfast rail line**	Imperceptible - rail line 5km E	Imperceptible - rail line 6km E	Imperceptible - rail line 3.5km E	Imperceptible - rail line 6km E	Imperceptible - rail line 3km E	Imperceptible - rail line 3km E	Significant - rail line lies directly adjacent to W	Imperceptible - rail line 6km 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 glimpses may be afforded 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 at < 0.5km - clear views afforded from some sections and site access from R129	Slight / Significant - heavily used N32 national secondary road 0.3km to S and R107 regional road 1km E - neither has clear views towards site due to roadside screening - Note future malahide Rd realignment adjacent to site	Significant - R108 regional road 0.3km W and clear views afforded from some sections	Imperceptible - R107 regional road 2km E but no views available	Significant - slightly elevated R132 regional road (old N1) 0.5km E affords 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 0.5km S fleeting 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 aerial approach and vehicular egress**	Imperceptible - airport 10km S	Imperceptible - airport 8.5km S	Significant - airport 2km NW - clear views not afforded towards the site at ground level but it would be a prominent feature of the low level landing approach from the E	Imperceptible - airport 7.5km S	Significant - airport 1.5km SW - clear views afforded towards the site from elevated M1/airport access road interchange andit would be a prominent feature of the low level landing approach from the E	Imperceptible - airport 10km S	Imperceptible - airport >10km SW	Slight - airport 5km S but views likely to be available on Slight low landing approach from the E	Imperceptible - airport >10km SW
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	Moderate - intensive and strongly defined hedgerow/field pattern contained within site boundary but surrounding lands more dispersed in structure	Significant - intensive and strongly defined hedgerow/field pattern contained within site boundary but surrounding lands more dispersed in structure	Moderate - predominantly large fields defined by low hedgerows within site boundary	Moderate - several low meandering hedgerows contained within the site	Moderate - combination of large cropping fields in N half of site and smaller geometric pastoral fields in S half - low hedgerows
2.1.13	**Potential to impact on historic designed landscapes**	Moderate - Woodpark demesne 0.15km NE	Imperceptible - No demesne landscapes within or near 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 surrounded to the north and east by the site at the minimum setback (0.3km)	Slight - Abbeyville Estate 1km E	Imperceptible - No demesne landscapes within or near this site	Slight - Haystown Demesne 0.3km NE	Moderate - Saucerstown Demesne 0.2km W	Imperceptible - No demesne landscapes within or near this site

2.2	**Landscape & Visual - Pipelines**									
2.2.10	**Potential to disrupt landscape structure (treelines / hedgerows / field pattern etc.)**	A - Moderate - landscape is relatively unstructured and irregular along this pipeline 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 field patterns F - Significant - this corridor section passes almost entirely through fields and hedgerows G - Slight - Moderate - landscape is relatively unstructured and open along this pipeline corridor section but with some hedgerow field patterns	A - Moderate - landscape is relatively unstructured and irregular along this pipeline 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 field patterns F - Significant - this corridor section passes almost entirely through fields and hedgerows G - Slight - Moderate - landscape is relatively unstructured and open along this pipeline corridor section but with some hedgerow field patterns	A - Moderate - landscape is relatively unstructured and irregular along this pipeline corridor section but with some hedgerow field patterns B- Moderate - landscape is relatively unstructured and irregular along this pipeline corridor section but with some hedgerow field patterns G - Slight - Moderate - landscape is relatively unstructured and open along this pipeline corridor section but with some hedgerow field patterns	A - Moderate - landscape is relatively unstructured and irregular along this pipeline 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 field patterns F - Significant - this corridor section passes almost entirely through fields and hedgerows G - Slight - Moderate - landscape is relatively unstructured and open along this pipeline corridor section but with some hedgerow field patterns	A - Moderate - landscape is relatively unstructured and irregular along this pipeline corridor section but with some hedgerow field patterns B- Moderate - landscape is relatively unstructured and irregular along this pipeline corridor section but with some hedgerow field patterns G - Slight - Moderate - landscape is relatively unstructured and open along this pipeline corridor section but with some hedgerow field patterns	A - Moderate - landscape is relatively unstructured and irregular along this pipeline 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 field patterns F - Significant - this corridor section passes almost entirely through fields and hedgerows G - Slight - Moderate - landscape is relatively unstructured and open along this pipeline corridor section but with some hedgerow field patterns	A - Moderate - landscape is relatively unstructured and irregular along this pipeline 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 field patterns E- Significant - this corridor section passes almost entirely through fields and hedgerows F - Significant - this corridor section passes almost entirely through fields and hedgerows G - Slight - Moderate - landscape is relatively unstructured and open along this pipeline corridor section but with some hedgerow field patterns	A - Moderate - landscape is relatively unstructured and irregular along this pipeline 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 field patterns E- Significant - this corridor section passes almost entirely through fields and hedgerows F - Significant - this corridor section passes almost entirely through fields and hedgerows G - Slight - Moderate - landscape is relatively unstructured and open along this pipeline corridor section but with some hedgerow field patterns	A - Moderate - landscape is relatively unstructured and irregular along this pipeline 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 field patterns F - Significant - this corridor section passes almost entirely through fields and hedgerows G - Slight - Moderate - landscape is relatively unstructured and open along this pipeline corridor section but with some hedgerow field patterns
2.2.13	**Potential to impact on historic designed landscapes**	A - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section D -Significant - passes across corner of Abbeyville estate at eastern end of corridor F - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section G - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section	A - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section D -Significant - passes across corner of Abbeyville estate at eastern end of corridor F - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section G - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section	A - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section B - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section G - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section	A - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section D -Significant - passes across corner of Abbeyville estate at eastern end of corridor F - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section G - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section	A - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section B - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section G - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section	A - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section D -Significant - passes across corner of Abbeyville estate at eastern end of corridor F - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section G - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section	A - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section D -Significant - passes across corner of Abbeyville estate at eastern end of corridor E- Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section F - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section G - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section	A - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section D -Significant - passes across corner of Abbeyville estate at eastern end of corridor E- Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section F - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section G - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section	A - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section D -Significant - passes across corner of Abbeyville estate at eastern end of corridor F - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section G - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section
2.3	**Landscape & Visual - Marine Outfalls**									

3.0	Ecology	Annsbrook	Baldurgan	Clonshagh	Cookstown	Cloghran	Newtowncorduff	Rathartan	Saucerstown	Tyrrelstown Little
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)	**Slight:** 5.3km upstream of Natura 2000 wetland sites Rogerstown Estuary SPA/SAC and 7.0km upstream of Natura 2000 wetland sites Malahide Estuary SPA/SAC	**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 wetland sites (Baldoyle 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)	**Moderate**: 3.0km upstream of Natura 2000 wetland sites (Malahide Estuary SPA/SAC)	**Moderate**: 2.2km 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 corridor.	**Significant**: Site abuts Sluice River ecological corridor	**Significant**: Site abuts Rath Little ecological corridor; Access road crosses Ballough Stream ecological corridor.	**Imperceptible**: Site located more than 3km from Ballough Stream ecological corridor	**Moderate:** Site located 250m from the Broadmeadow River ecological corridor	**Imperceptible**: Site 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**: 0.1km 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	**Moderate**: 1.4km of hedges within the site	**Significant**: 3.8km 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.	**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.	**Slight:** Site comprised of agriculturally improved, cultivated or arable land.	**Slight:** Site comprised of agriculturally improved, cultivated or arable land.	**Slight:** 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 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	**Significant -** The Broadmeadow River (main channel and tributaries) constitutes a salmonid system and the access road crosses a tributary and site abuts a tributary.	**Imperceptible** - 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 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	**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 Greylag Goose flock. Location is in an area considered likely to be used by the north Co Dublin winter Greylag Goose flock on occasion	**Imperceptible** - Outside the normal geographical range of the north Co Dublin winter Greylag Goose flock	**Significant** - Within 'Skerries Grasslands' IWEBS area, likely to be a feeding site for the north Co Dublin winter Greylag Goose flock
3.1.8	**Potential to result in loss of breeding habitat for Annex I species Kingfisher**	**Slight** - watercourse present but no suitable breeding habitat for Kingfisher or high quality feeding habitat	**Slight -** watercourse present but no suitable breeding habitat for Kingfisher or high quality feeding habitat	**Slight -** watercourse present but no suitable breeding habitat for Kingfisher or high quality feeding habitat	**Slight** - watercourse present but no breeding habitat for Kingfisher nor high quality feeding habitat for Kingfisher	**Slight -** watercourse present but no suitable breeding habitat for Kingfisher or high quality feeding habitat	**Slight -** watercourse present but no suitable breeding habitat for Kingfisher or high quality feeding habitat	**Slight -** watercourse present but no suitable breeding habitat for Kingfisher or high quality feeding habitat	**Significant** - suitable breeding habitat anf high quality feeding habitat for Kingfisher is present on the Broad Meadow River	**Slight -** watercourse present but no suitable breeding habitat for Kingfisher or high quality feeding habitat
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 (I.e. 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	**Slight -** smallish fields, unlikely to be used regularly by Lapwing and Golden Plover	**Moderate -** smallish fields, but proximity to Rogerstown Estuary increases liklihood of site being used by Lapwing and Golden Plover	**Significant** - site includes large wet fields close to the Broad Meadow River highly suitable for Lapwing, Golden Plover or other winter waders	**Significant** - site includes large arable fields and pastures suitable for Lapwing, Golden Plover or other winter waders

3.2	Ecology - Pipelines									
3.2.1	**potential to impact on Natura 2000 Sites and Natural Heritage Areas**	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 D - 0.5km Malahide estuary SPA/SAC; 2.0km Baldoyle Bay SPA/SAC/pNHA F - Malahide Estuary SPA/SAC/pNHA; Rogerstown Estuary SPA/SAC/pNHA; Balcunnin Stream flows out to WFD coastal waters G - 0.5km Baldoyle Bay SAC/SPA/pNHA F - Also crosses Balcunnin Stream which flows out to WFD coastal waters	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 D - 0.5km Malahide estuary SPA/SAC; 2.0km Baldoyle Bay SPA/SAC/pNHA F - Malahide Estuary SPA/SAC/pNHA; Rogerstown Estuary SPA/SAC/pNHA; Balcunnin Stream flows out to WFD coastal waters G - 0.5km Baldoyle Bay SAC/SPA/pNHA F - Also crosses Balcunnin Stream which flows out to WFD coastal waters	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 B - 8.0km North Dublin BAY SAC and North Bull Island SPA; 4.5km Baldoyle Bay SAC/SPA/pNHA G - 0.5km Baldoyle Bay SAC/SPA/pNHA G - Also interfaces with Baldoyle Bay SAC/SPA/pNHA and Ramsar site	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 D - 0.5km Malahide estuary SPA/SAC; 2.0km Baldoyle Bay SPA/SAC/pNHA F - Malahide Estuary SPA/SAC/pNHA; Rogerstown Estuary SPA/SAC/pNHA; Balcunnin Stream flows out to WFD coastal waters G - 0.5km Baldoyle Bay SAC/SPA/pNHA F - Also crosses Balcunnin Stream which flows out to WFD coastal waters	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 B - 8.0km North Dublin BAY SAC and North Bull Island SPA; 4.5km Baldoyle Bay SAC/SPA/pNHA G - 0.5km Baldoyle Bay SAC/SPA/pNHA G - Also interfaces with Baldoyle Bay SAC/SPA/pNHA and Ramsar site	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 D - 0.5km Malahide estuary SPA/SAC; 2.0km Baldoyle Bay SPA/SAC/pNHA F - Malahide Estuary SPA/SAC/pNHA; Rogerstown Estuary SPA/SAC/pNHA; Balcunnin Stream flows out to WFD coastal waters G - 0.5km Baldoyle Bay SAC/SPA/pNHA F - Also crosses Balcunnin Stream which flows out to WFD coastal waters	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 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 F - Malahide Estuary SPA/SAC/pNHA; Rogerstown Estuary SPA/SAC/pNHA; Balcunnin Stream flows out to WFD coastal waters G - 0.5km Baldoyle Bay SAC/SPA/pNHA	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 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 F - Malahide Estuary SPA/SAC/pNHA; Rogerstown Estuary SPA/SAC/pNHA; Balcunnin Stream flows out to WFD coastal waters G - 0.5km Baldoyle Bay SAC/SPA/pNHA	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 D - 0.5km Malahide estuary SPA/SAC; 2.0km Baldoyle Bay SPA/SAC/pNHA F - Malahide Estuary SPA/SAC/pNHA; Rogerstown Estuary SPA/SAC/pNHA; Balcunnin Stream flows out to WFD coastal waters G - 0.5km Baldoyle Bay SAC/SPA/pNHA F - Also crosses Balcunnin Stream which flows out to WFD coastal waters
3.2.2	**Potential to impact upon ecological buffer zones or Nature Development Areas idenitifed in the Fingal Development Plan 2011 - 2017**	Impinges upon 6 ecological buffer zones (3 No. D; 3 No. G) Impinges upon four nature developement areas potentially impinges on 6 No. Nature Development Areas	Impinges upon 6 ecological buffer zones (3 No. D; 3 No. G) Impinges upon four nature developement areas potentially impinges on 6 No. Nature Development Areas	Impinges upon 3 ecological buffer zones (Route G) Impinges upon four nature developement areas Crosses 1 No. nature development area potentially impinges on 1 No. Nature Development Areas	Impinges upon 6 ecological buffer zones (3 No. D; 3 No. G) Impinges upon four nature developement areas potentially impinges on 6 No. Nature Development Areas	Impinges upon 3 ecological buffer zones (Route G) Impinges upon five nature developement areas Crosses 1 No. nature development area potentially impinges on 1 No. Nature Development Areas	Impinges upon 6 ecological buffer zones (3 No. D; 3 No. G) Impinges upon four nature developement areas potentially impinges on 6 No. Nature Development Areas	Impinges upon 6 ecological buffer zones (3 No. D; 3 No. G) Impinges upon four nature developement areas potentially impinges on 6 No. Nature Development Areas	Impinges upon 6 ecological buffer zones (3 No. D; 3 No. G) Impinges upon four nature developement areas potentially impinges on 6 No. Nature Development Areas	Impinges upon 6 ecological buffer zones (3 No. D; 3 No. G) Impinges upon four nature developement areas potentially impinges on 6 No. Nature Development Areas
3.2.3	**Potential to impact upon ecological corridor, nature development area or high value habitats**	Crosses 10 No. ecological corridors Potentially crosses 1 No. ecological corridor Impinges upon TPO sites Potentially impinges upon TPO areas Potentially crosses 36 rivers or streams Loss of hedgerow habitat along 41km	Crosses 10 No. ecological corridors Potentially crosses 1 No. ecological corridor Impinges upon TPO sites Potentially impinges upon TPO areas Potentially crosses 36 rivers or streams Loss of hedgerow habitat along 41km	Crosses 2 No. ecological corridors Potentially crosses 1 No. ecological corridor Impinges upon TPO sites Crosses 1 No. TPO site Potentially crosses 4 rivers or streams Potentially crosses one area of deciduous woodland Loss of hedgerow habitat along 17km	Crosses 10 No. ecological corridors Potentially crosses 1 No. ecological corridor Impinges upon TPO sites Potentially impinges upon TPO areas Potentially crosses 36 rivers or streams Loss of hedgerow habitat along 41km	Crosses 2 No. ecological corridors Potentially crosses 1 No. ecological corridor Impinges upon TPO sites Crosses 1 No. TPO site Potentially crosses 6 No rivers or streams Potentially crosses 1 No. area of deciduous woodland Loss of hedgerow habitat along 20km	Crosses 10 No. ecological corridors Potentially crosses 1 No. ecological corridor Impinges upon TPO sites Potentially impinges upon TPO areas Potentially crosses 36 rivers or streams Loss of hedgerow habitat along 41km	Crosses 12 No. ecological corridors Potentially crosses 1 No. ecological corridor Impinges upon TPO sites Potentially impinges upon TPO areas Potentially crosses 45 rivers or streams Loss of hedgerow habitat along 54km	Crosses 12 No. ecological corridors Potentially crosses 1 No. ecological corridor Impinges upon TPO sites Potentially impinges upon TPO areas Potentially crosses 45 rivers or streams Loss of hedgerow habitat along 54km	Crosses 10 No. ecological corridors Potentially crosses 1 No. ecological corridor Impinges upon TPO sites Potentially impinges upon TPO areas Potentially crosses 36 rivers or streams Loss of hedgerow habitat along 41km
3.2.4	**Potenitial to impact on a salmonid system**	Crosses 8 No. salmonid systems.	Crosses 8 No. salmonid systems.	Crosses 2 No. salmonid systems.	Crosses 8 No. salmonid systems.	Crosses 3 No. salmonid systems.	Crosses 8 No. salmonid systems.	Crosses 9 No. salmonid systems.	Crosses 9 No. salmonid systems.	Crosses 8 No. salmonid systems.
3.2.6	**Potential to impact on the breeding habitat for Annex 1 species Kingfisher**	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 River where possible suitable habitat for breeding kingfisher occurs	No suitable riparian habitat for breeding kingfisher	Portion of route D located along the Broadmeadow River where possible suitable habitat for breeding kingfisher occurs	No suitable riparian habitat for breeding kingfisher	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 River where possible suitable habitat for breeding kingfisher occurs Crosses Ballough River which is unlikely to have suitable riparian habitiat for breeding kingfisher	Portion of route D located along the Broadmeadow River where possible suitable habitat for breeding kingfisher occurs Crosses Ballough River which is unlikely to have suitable riparian habitiat for breeding kingfisher	Portion of route D located along the Broadmeadow River where possible suitable habitat for breeding kingfisher occurs
3.2.8	**Potential to impact on IWeBS identified areas of importance to birds adjacent to Malahide Estuary**	Portion of route located within Malahide Estuary IWEBS area Portion of route located within 'Skerries Grasslands' IWEBS area	Portion of route located within Malahide Estuary IWEBS area Portion of route located within 'Skerries Grasslands' IWEBS area	No IWEB areas located on pipeline route	Portion of route located within Malahide Estuary IWEBS area Portion of route located within 'Skerries Grasslands' IWEBS area	No IWEB areas located on pipeline route	Portion of route located within Malahide Estuary IWEBS area Portion of route located within 'Skerries Grasslands' IWEBS area	Portion of route located within Malahide Estuary IWEBS area Portion of 2 No. routes located within 'Skerries Grasslands' IWEBS area	Portion of route located within Malahide Estuary IWEBS area Portion of 2 No. routes located within 'Skerries Grasslands' IWEBS area	Portion of route located within Malahide Estuary IWEBS area Portion of route located within 'Skerries Grasslands' IWEBS area

3.3	**Ecology - Marine Outfall**									
3.3.1	**potential 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)	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 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 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)	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)
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)	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)	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)	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)	Slight (isolated sensitve sites in some areas of coast)	Slight (isolated sensitve sites in some areas of coast)
3.3.6	**Potential to impact on water quality and bathing waters designated under the Bathing Water Directive**	Slight (to be determined following hydrodynamic modelling)	Slight (to be determined following hydrodynamic modelling)	Moderate (to be determined following hydrodynamic modelling)	Slight (to be determined following hydrodynamic modelling)	Moderate (to be determined following hydrodynamic modelling)	Slight (to be determined following hydrodynamic modelling)	Slight (to be determined following hydrodynamic modelling)	Slight (to be determined following hydrodynamic modelling)	Slight (to be determined following hydrodynamic modelling)
4.0	**Hydrology -**	**Annsbrook**	**Baldurgan**	**Clonshagh**	**Cookstown**	**Cloghran**	**Newtowncorduff**	**Rathartan**	**Saucerstown**	**Tyrrelstown Little**
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 site 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.	***Slight:*** 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.	***Moderate:*** Belinstown River (10m north) and Broadmeadow tributary (1km south) (water quality Q3) of the site, High Importance. Will have permanent impact on small proportion of attribute.	***Moderate:*** Sluice River (10m north) and Sluice 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 Q3), 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.	***Significant:*** Broadmeadow tributaries (water quality Q3) are within 10m of the site; the site is surrounded by tributaries almost throughout its perimeter, High importance. Will have permanent impact on small proportion of attribute. Will have permanent impact on a significant proportion of attribute.	***Imperceptible:*** Collinstown Stream (120 southwest), Rush Town Stream (360m southeast) and Balcunnin Stream (930m north) of the site, Low 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.	***Slight:*** Crossing BroadmeadowTributary, Medium importance. Will have permanent impact on small proportion of attribute.	***None:*** No new culvert required.
4.1.3	**Area prone to flooding (based on historical data and predicted flood extents adjacent to the site as well as up and downstream locations)**	***Imperceptible:*** No flooding to the site from the Ballough and Ballyboghill rivers. The Ballyboghill has extensive overland flooding approx. 3km downstream, Low importance. Will have permanent impact on small proportion of attribute.	***Slight:*** Ballyboghill have overland flooding approx. 200m to the north of the site. The Belinstown has extensive overland flooding approx. 2km downstream, medium importance. Will have permanent impact on small proportion of attribute.	***Imperceptible:*** No flooding from the Mayne / Cuckoo Rivers to the site. The Mayne has history of flooding; and predicted overland flooding approx. 2km downstream, Low importance. Will have permanent impact on small proportion of attribute.	***Imperceptible:*** The Belinstown has extensive predicted overland flooding (both tidal & fluvial) and recurrence historic flooding approx. 3.5km downstream, Low importance. Will have permanent impact on small proportion of attribute.	***Slight:*** No flooding from the Sluice River at the site. The Sluice has history of flooding and predicted overland flooding approx. 0.5km upstream and 2km downstream, Medium importance. Will have permanent impact on small proportion of attribute.	***Imperceptible:*** No flooding from Ballough River. The eastern tributary was not modelled in FEM FRAMS, but has a history of flooding upstream, Low importance. Will have permanent impact on small proportion of attribute.	***Imperceptible:*** No flooding from the Collinstown Stream and Palmerstown Stream close to the site. History of flooding at downstream locations, Low importance. Will have permanent impact on small proportion of attribute.	***Moderate:*** The Broadmeadow River flooding extent is adjacent to the site boundary, High importance. Will have permanent impact on small proportion of attribute.	***Imperceptible:*** No flooding from the Collinstown and Rush Town Stream to the site. History of flooding at downstream locations, Low 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. 4.6km 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 5km downstream respectively, Low importance. Will have permanent impact on small proportion of attribute.	***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.	***Slight:*** 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, pNHA, Ramsar and SNR) approx. 1km downstream, High importance. Will have permanent impact on small proportion of attribute.	***Imperceptible:*** The Broadmeadow River discharges into the Broadmeadow Estuary (SAC, SPA, pNHA) approx. 3km downstream, Low importance. Will have permanent impact on small proportion of attribute.	***Slight:*** The Collinstown Stream discharges into Rogerstown Estuary and Rush Town Stream discharges into the Irish sea (unpolluted water quality) approx. 2.2km downstream, Medium importance. Will have permanent impact on small proportion of attribute.
4.2	**Hydrology - Pipelines**									
4.2.1	**Proximity to water bodies in terms of flooding and as an indicator of sensitive surface water receptors**	18 river catchments and some coastal areas	18 river catchments and some coastal areas	7 river catchments and some coastal areas	18 river catchments and some coastal areas	9 river catchments and some coastal areas	18 river catchments and some coastal areas	28 river catchments and some coastal areas	28 river catchments and some coastal areas	18 river catchments and some coastal areas
4.3	**Hydrology - Marine Outfall**									

5.0	Hydrogeology -	Annsbrook	Baldurgan	Clonshagh	Cookstown	Cloghran	Newtowncorduff	Rathartan	Saucerstown	Tyrrelstown Little
5.1	**Hydrogeology - Sites**									
5.1.1	**Aquifer Classification - importance of the groundwater resource to a given area**	**Moderate:** Locally Important Bedrock Aquifer underlies site, Medium importance. Will have permanent impact on a significant proportion of attribute.	**Moderate:** Locally Important Bedrock Aquifer underlies site, Medium importance. Will have permanent impact on a significant proportion of attribute.	**Moderate:** Poor Bedrock Aquifer and Locally Important Bedrock Aquifer underlies site, Medium importance. Will have permanent impact on a significant proportion of attribute.	**Moderate:** Locally Important Bedrock Aquifer underlies site, Medium importance. Will have permanent impact on a significant proportion of attribute.	**Slight:** Poor Bedrock Aquifer underlies site, Low importance. Will have permanent impact on a significant proportion of attribute.	**Moderate:** Locally Important Bedrock Aquifer underlies site, Medium importance. Will have permanent impact on a significant proportion of attribute.	**Moderate:** Locally Important Bedrock Aquifer underlies site, Medium importance. Will have permanent impact on a significant proportion of attribute.	**Moderate:** Poor Bedrock Aquifer and Locally Important Bedrock Aquifer underlies site, Medium importance. Will have permanent impact on a significant proportion of attribute.	**Moderate:** Locally Important Bedrock Aquifer underlies site, Medium importance. Will have permanent impact on a significant proportion of attribute.
5.1.2	**Vulnerability Classification - potential for groundwater contamination**	**Slight:** Low Vulnerability, Low importance. Will have permanent impact on a significant proportion of attribute.	**Slight:** Low Vulnerability, Low importance. Will have permanent impact on a significant proportion of attribute.	**Slight:** Low Vulnerability, Low importance. Will have permanent impact on a significant proportion of attribute.	**Slight:** Low Vulnerability, Low importance. Will have permanent impact on a significant proportion of attribute.	**Moderate:** Low to High Vulnerability, Predominantly Low, Medium importance. Will have permanent impact on a significant proportion of attribute.	**Slight:** Low Vulnerability, Low importance. Will have permanent impact on a significant proportion of attribute.	**Slight:** Low Vulnerability, Low importance. Will have permanent impact on a significant proportion of attribute.	**Moderate:** Low to High Vulnerability, Predominantly Moderate, Medium importance. Will have permanent impact on a significant proportion of attribute.	**Slight:** Low Vulnerability, Low importance. Will have permanent impact on a significant proportion of attribute.
5.1.3	**GSI Groundwater Protection Response matrix**	**R1**	**R1**	**R1**	**R1**	**R2**	**R1**	**R1**	**R2**	**R1**
5.1.4	**Groundwater Supplies - identification of water supply springs and bored wells based on GSI, EPA & FCC records**	**None:** No Groundwater Supplies within 500m however unconfirmed information from FCC suggests the possibility of additional groundwater abstraction points and wells nearby (Appendix A). If present, well would be of Low importance and would have a permanent impact on a significant proportion of attribute.	**Slight:** 1x Spring; St. Bridget's Well 400m South. Unconfirmed information from FCC suggests the possibility of additional groundwater abstraction points and wells nearby (Appendix A). Low importance. Will have permanent impact on a significant proportion of attribute.	**None:** No Groundwater Supplies within 500m	**Slight:** 1x Spring; St. Bridget's Well 210m South East. Unconfirmed information from FCC suggests the possibility of additional groundwater abstraction points and wells nearby (Appendix A). Low importance. Will have permanent impact on a significant proportion of attribute.	**None:** No Groundwater Supplies within 500m	**Slight:** 1x bored well; for agriculture and domestic use with good yields 510m North. Unconfirmed information from FCC suggests the possibility of additional groundwater abstraction points and wells nearby (Appendix A). Low importance. Will have permanent impact on a significant proportion of attribute.	**None:** No Groundwater Supplies within 500m. Unconfirmed information from FCC suggests the possibility of additional groundwater abstraction points and wells nearby (Appendix A). If present, well(s) would be of Low importance and would have a permanent impact on a significant proportion of attribute.	**None:** No Groundwater Supplies within 500m	**None:** No Groundwater Supplies within 500m. Unconfirmed information from FCC suggests the possibility of additional groundwater abstraction points and wells nearby (Appendix A). Low importance. Will have permanent impact on a significant proportion of attribute.
5.1.6	**Identification of hydrogeological features from the GSI Karst database**	***None:*** No Karst Feature within 2km	***None:*** 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.	***None:*** No Karst Feature within 2km	***Slight:*** 1x spring; St. Doolaghs Well 2km 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 1.8km north east to south east of the site, Low importance. Will have permanent impact on a significant proportion of attribute.	***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:*** No Karst Feature within 2km	***Slight:*** 1x spring; Bog Well 700m west of the site, Low importance. Will have permanent impact on a significant proportion of attribute.
5.2	**Hydrogeology - Pipelines**									
5.2.2	**Vulnerability Classification - potential for groundwater contamination**	A - predominantly high D - predominantly high F - predominantly low G - predominantly 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 low G - predominantly low	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 - Marine Outfall**									
5.3.2	**Vulnerability Classification - potential for groundwater contamination**	predominantly low	predominantly low	predominantly high	predominantly low	predominantly high	predominantly low	predominantly low	predominantly low	predominantly low
5.3.3	**Groundwater Supplies - identification of water supply springs and bored wells based on GSI, EPA & FCC records**	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	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 500m	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 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
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 features within 500m of the outfall 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	Soils and Geology	Annsbrook	Baldurgan	Clonshagh	Cookstown	Cloghran	Newtowncorduff	Rathartan	Saucerstown	Tyrrelstown Little
6.1	**Soils and Geology - Sites**									
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 that bedrock is at least 10 mbgl across the site. Confirm using ground investigation (rotary coring)	**Imperceptible -** confirm using ground investigation (rotary coring)	**Imperceptible -** confirm using ground investigation (rotary coring)	**Imperceptible -** confirm using ground investigation (rotary coring)	**Slight negative -** confirm using ground investigation (rotary coring)	**Imperceptible:** Confirm using ground investigation (rotary coring)	**Imperceptible -** confirm using ground investigation (rotary coring)	**Slight negative:** 30% Shallow Bedrock . Confirm using ground investigation (rotary coring)	**Imperceptible -** confirm using ground investigation (rotary coring)
6.1.6	**Potential to encounter soft ground**	**Imperceptible:** No alluvial deposits mapped within site boundaries however proximity to river indicates soft silts may be present in the northern and southeastern part of the site. Ground investigation to confirm	**Imperceptible:** No alluvial deposits mapped within site boundaries however proximity to river indicates soft silts may be present in the north, south and west of the site. Ground investigation to confirm	**Imperceptible:** No alluvial deposits mapped within site boundaries however proximity to river indicates soft silts may be present in the north of the site. Ground investigation to confirm	**Imperceptible:** No alluvial deposits mapped within the site boundary. Presence of a river along the northern boundary indicates alluvium (including soft silts) may be present. Ground investigation to confirm	**Imperceptible:** No alluvial deposits mapped within site boundaries however proximity to river indicates soft silts may be present in the north of the site. Ground investigation to confirm	**Imperceptible:** No alluvial deposits mapped within the site boundary. Presence of a river near the south east and south west corners indicate alluvium (including soft silts) may be present. Ground investigation to confirm	**Imperceptible:** No alluvial deposits mapped within site boundaries however proximity to river indicates soft silts may be present in the south west of the site. Ground investigation to confirm	**Slight negative: 25**% Alluvium Deposits. Potential for soft ground in northeastern corner. Ground investigation to confirm	**Imperceptible:** No alluvial deposits mapped. Soft ground unlikely to be encountered.
6.2	**Soils and Geology - Pipelines**									
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 No.	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.
6.2.4	**Potential to encounter shallow bedrock during construction (interactions with other disciplines during construction - noise, dust etc)**	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 surface)	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 surface)	A - 95% shallow bedrock (15% bedrock at surface) B - 5% Shallow bedrock (0% bedrock at surface) G - 5% shallow bedrock (0% at surface)	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 surface)	A - 95% shallow bedrock (15% bedrock at surface) B - 5% Shallow bedrock (0% bedrock at surface) C - 65% shallow bedrock (5% at surface) G - 5% shallow bedrock (0% at surface)	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 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)	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)	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 surface)
6.2.5	**Potential impact on karst features**	2 No.	2 No.	No karst features within corridor	2 No.	No karst features within corridor	2 No.	2 No.	2 No.	2 No.
6.2.6	**Potential to encounter soft ground**	A - 1% Alluvium deposits D - Small area of lithosols/Peats (basic); 10% of alluvium deposits F - 5% Alluvium deposits G - 10% Alluvium Deposits	A - 1% Alluvium deposits D - Small area of lithosols/Peats (basic); 10% of alluvium deposits F - 5% Alluvium deposits G - 10% Alluvium Deposits	A - 1% Alluvium deposits B - 1% Alluvium deposits G - 10% Alluvium Deposits	A - 1% Alluvium deposits D - Small area of lithosols/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 D - Small area of lithosols/Peats (basic); 10% of alluvium deposits F - 5% Alluvium deposits G - 10% Alluvium Deposits	A - 1% Alluvium deposits D - Small area of lithosols/Peats (basic); 10% of alluvium deposits E - 10% of alluvium deposits F - 5% Alluvium deposits G - 10% Alluvium Deposits	A - 1% Alluvium deposits D - Small area of lithosols/Peats (basic); 10% of alluvium deposits E - 10% of alluvium deposits F - 5% Alluvium deposits G - 10% Alluvium Deposits	A - 1% Alluvium deposits D - Small area of lithosols/Peats (basic); 10% of alluvium deposits F - 5% Alluvium deposits G - 10% Alluvium Deposits
6.3	**Soils and Geology - Marine Outfall**									
6.3.1	**Potential to impact on Geological Heritage Sites/County Geological Sites**	2 No	2 No	No Geological Heritage Sites within corridor	2 No	No Geological Heritage Sites within corridor	2 No	2 No	2 No	2 No
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 shallow bedrock during construction (interactions with other disciplines during construction - noise, dust etc)**	5% shallow bedrock (2% bedrock at surface)	5% shallow bedrock (2% bedrock at surface)	15% shallow bedrock	5% shallow bedrock (2% bedrock at surface)	15% shallow bedrock	5% shallow bedrock (2% bedrock at surface)	5% shallow bedrock (2% bedrock at surface)	5% shallow bedrock (2% bedrock at surface)	5% shallow bedrock (2% bedrock at surface)
6.3.5	**Potential impact on karst features**	3 No.	3 No.	No karst features 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% Alluvium deposits	1% Alluvium deposits	15% Alluvium deposits	1% Alluvium deposits	15% Alluvium deposits	1% Alluvium deposits	1% Alluvium deposits	1% Alluvium deposits	1% Alluvium deposits

7.0	Agronomy & Agriculture - Sites	Annsbrook	Baldurgan	Clonshagh	Cookstown	Cloghran	Newtowncorduff	Rathartan	Saucerstown	Tyrrelstown Little
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%15%51%	31%
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	Beef	Mixed livestock & tillage	Horticulture & Tillage, (intensive market gardening area)	Tillage, Potatoes& Horticulture	Beef (site is located in an intensive market gardening area)
7.3	Number of landowners impacted within site boundary	1 to 3	1 to 3	4 to 6	1 to 3	4 to 6	1 to 3	7 to 9	1 to 3	1 to 3
7.5	Severance based on site location within overall land holdings	Minor	Minor	Minor	Moderate	Minor	Minor	Moderate	Minor	Imperceptible
7.7	Crop rotation practiced	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	No
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	Moderate negative impact
8.0	Noise	Annsbrook	Baldurgan	Clonshagh	Cookstown	Cloghran	Newtowncorduff	Rathartan	Saucerstown	Tyrrelstown Little
8.4	Construction Phase Impact rating	slight	imperceptible	slight	imperceptible	slight	slight	slight	slight	imperceptible
8.5	Operational Phase Impact rating	slight	imperceptible	slight	imperceptible	slight	slight	slight	slight	imperceptible
9.0	Air and Odour	Annsbrook	Baldurgan	Clonshagh	Cookstown	Cloghran	Newtowncorduff	Rathartan	Saucerstown	Tyrrelstown Little
9.9	Construction Phase Impact rating	imperceptible	imperceptible	imperceptible	imperceptible	slight	imperceptible	imperceptible	slight	imperceptible
9.10	Operational Phase Impact rating	imperceptible	imperceptible	imperceptible	imperceptible	slight	imperceptible	imperceptible	slight	imperceptible
10.0	People and Communities	Annsbrook	Baldurgan	Clonshagh	Cookstown	Cloghran	Newtowncorduff	Rathartan	Saucerstown	Tyrrelstown Little
10.1	Number of residential & commercial buildings 300-500m from site boundary	44	21	83	53	116	33	131	66	50
10.3	Potential to impact on known community amenities and facilities within 1km from site boundary.	Ballyboghill Hedgerow Round (Sli na Sceacha) - c. 480m to the SW.	Ballyboghill Hedgerow Round (Sli na Sceacha) - c. 280m to the east.	Football grounds c. 700m to the NW, Darndale and Belcamp Parks c. 800m to the SW and SE respectively and Innisfail GAA club c. 500m to the south.	Swords Roganstown golf club c. 990m to the south and Ballyboghill Hedgerow Round c. 980m to the NE.	Playground c. 800m to the north (Nevinstown East) and National Show Centre c. 580m to the west.	None	A 7-a-side football pitch c. 920m to the east.	A school complex c. 400m to south, Swords and Roganstown golf course c. 290m to the NW, Broadmeadow linear park c. 320m to east and demesne parkland c. 620m to the SW.	None
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.	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.	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	Annsbrook	Baldurgan	Clonshagh	Cookstown	Cloghran	Newtowncorduff	Rathartan	Saucerstown	Tyrrelstown 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 road	None	2 river/stream crossings	None	1 ditch/stream crossings	None	1 stream/river crossings	2 stream/river crossings	1 stream/river	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 2 fields	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	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 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	Access onto R125 which is ok. 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
11.6	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	4 accidents (all minor) located near entrance	None
11.7	Frequency of accidents on surrounding network (indication of general road safety issues)	few accidents on surrounding roads	few 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	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 (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)	3.25km (R125)	6.8km (R127 & R128)

12.0	Planning Policy	Annsbrook	Baldurgan	Clonshagh	Cookstown	Cloghran	Newtowncorduff	Rathartan	Saucerstown	Tyrrelstown Little
12.2	**Site Zoning**	RU (Rural)	RU (Rural)	GB (Greenbelt) HT (High Tech)	RU (Rural)	GB (Greenbelt)	RU (Rural)	RU (Rural)	OS (Open Space) GB (Greenbelt)	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	N/A	N/A	N/A	N/A
12.4	**Local Objectives on Site**	None	None	432 (Prepare Masterplan)	None	None	None	None	GIM8 (new regional park)	None
12.5	**Other Local Objectives on Site**	None	None	Road objectives	None	None	None	None	Road objective	None
12.6	**Land Uses present within 300m of site boundary**	Agricultural	Agricultural	Agricultural Open Space Urban Commercial	Agricultural	Agricultural	Agricultural Motorway	Agricultural Rural Residential Railway Line	Agricultural, Rural Residential Open Space	Agricultural, Rural Residential
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)	OS (Open Space) GB (Greenbelt) RU (Rural) RA (New Residential)	RU (Rural)
12.8	**Airport Public Safety and Noise Zones within 300m of site boundary**	N/A	N/A	Inner PSZ Outer PSZ Inner Noise Zone Outer Noise Zone	N/A	Inner PSZ Outer PSZ Inner Noise Zone Outer Noise Zone	N/A	N/A	N/A	N/A
12.9	**Local Objectives within 300m of site boundary**	180 (2 dwellings)	None	432 (prepare roads masterplan)	None	374 (nursing facility)	None	141 (agri-tourism)	GIM8 (active recreational hub)	GIM7 (historic landscape study)
12.10	**Other Local Objectives present within 300m of site boundary**	None	None	Road objectives	None	Indicative Cycle / Pedestrian Route	None	None	Road objective	None
12.11	**Land Uses present within 1km of Land Parcel Boundary**	Agricultural Rural Residential Rural Commercial Motorway	Agricultural Rural Residential (including Village) Rural Commercial	Agricultural Open Space Urban Residential Urban Commercial Hotel Burial Ground	Agricultural Rural Residential (including Village) Rural Commercial	Agricultural Open Space Quarrying Urban Residential Traveller Acc. Airport / Commercial Motorway	Agricultural Rural Residential Rural Commercial Urban Residential Motorway	Agricultural Rural Residential Rural Commercial Urban Residential Open Space Railway Line	Agricultural, Rural Residential Open Space Urban Residential	Agricultural, Rural Residential Rural Commercial Railway
12.12	**Zoning present within 1km of Land Parcel Boundary**	RU (Rural) RC (Rural Cluster) RB (Rural Business)	RU (Rural) RV (Rural Village) GB (Green Belt)	GB (Greenbelt) HT (High Tech) OS (Open Space) RA (New Residential) RS (Residential)	RU (Rural) GB (Greenbelt) RV (Rural Village)	GB (Greenbelt) GE (Enterprise) DA (Dublin Airport) OS (Open Space) RS (Residential)	RU (Rural) RB (Rural Business) RC (Rural Cluster) GE (Enterprise) RA (New Residential) RS (Residential)	RU (Rural) RB (Rural Business) RC (Rural Cluster) RS (Residential) TC (Town Centre) OS (Open Space) HA (High Amenity)	OS (Open Space) GB (Greenbelt) RU (Rural) RA (New Residential) RS (Residential) CI (Community)	RU (Rural) HA (High Amenity) RC (Rural Cluster)
12.13	**Airport Public Safety and Noise Zones within 1km of land parcel boundary**	N/A	N/A	Outer PSZ Inner Noise Zone Outer Noise Zone	N/A	Inner PSZ Outer PSZ Inner Noise Zone Outer Noise Zone	N/A	N/A	N/A	N/A
12.14	**Local Objectives within 1km of Land Parcel Boundary**	144 (ELV facility) 180 (2 dwellings) 203 (sports facility) 214 (1 dwelling) 219 (employment opportunity)	203 (sports facility) 219 (employment opportunity) 228 (1 dwelling)	383 (local shop) 411 (foot path) 413 (nursing home) 423 (prepare office masterplan) 432 (prepare roads masterplan) 436 (cemetery) 439 (high tech uses) 442 (FRA required) 443 (local shops) 446 (riverside walk)	228 (1 dwelling) 258 (tourism complex)	346 and 347 (access to residential estate) 374 (nursing facility) 375 and 376 (protect trees, develop tourism complex at Abbeyville) 383 (local shop) GIM1 (active recreation hub)	145, 148, 149, 152,, 156, 158, 156, 158, 159, 160, 161, 163, 164 (all relating to development of western edge of Lusk)	141 (agri-tourism) 176 (study on use of lands) 197, 200, 202, 204, 206, 207, 208, 209, 210, 211 (all relating to development of western areas of	GIM1 (active recreational hub) GIM 8 (new regional park)	111 (house extension) 131 (single dwelling) 141 (agri-tourism) GIM1 (recreation hub)

12.15	**Other Local Objectives present within 1km of Land Parcel Boundary**	None	Preserved Views to north and southeast	None	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 - Pipelines**	**Annsbrook**	**Baldurgan**	**Clonshagh**	**Cookstown**	**Cloghran**	**Newtowncorduff**	**Rathartan**	**Saucerstown**	**Tyrrelstown Little**
13.1	**Pipeline Length**									
13.1.6	**Total Pipeline Lengths**									
	Total Length as Open Cut	30,950 m	28,950 m	19,600 m	28,950 m	18,800 m	29,450 m	27,550 m	26,820 m	32,650 m
	Total Length as Tunnel	14,400 m	16,400 m	5,000 m	16,450 m	9,500 m	15,900 m	16,850 m	18,530 m	12,750 m
	Total Length in Marine	2,500 m	2,500 m	6,000 m	2,500 m	6,000 m	2,500 m	2,500 m	2,500 m	2,500 m
	Total Pipeline Length	**47,850 m**	**47,850 m**	**30,600 m**	**47,900 m**	**34,300 m**	**47,850 m**	**46,900 m**	**47,850 m**	**47,900 m**
13.2	**Power Requirements**									
	Power Requirement from 9C to WWTP Site	7,000 kW	6,700 kW	5,450 kW	6,600 kW	6,250 kW	6,750 kW	7,200 kW	5,050 kW	7,950 kW
	Power Requirement from North Dublin to WWTP Site	3,000 kW	3,000 kW	2,400 kW	3,000 kW	2,300 kW	2,550 kW	2,600 kW	2,050 kW	2,550 kW
	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**									
	Total embodied Carbon	**56,029**	**57,247**	**35,947**	**57,325**	**42,225**	**56,942**	**56,613**	**58,544**	**55,072**
	Total Lifetime Operational Carbon	**447,979**	**431,180**	**349,984**	**425,580**	**392,915**	**425,580**	**451,713**	**321,052**	**492,777**
	Total Carbon (tonnes CO2)	**504,008**	**488,427**	**385,931**	**482,905**	**435,140**	**482,523**	**508,325**	**379,596**	**547,849**
13.5	**Access / Right of Way / Wayleaves along Pipeline Corridors**									
	Potential restrictions Along Pipeline Corridors to WwTP Sites	11	11	8	11	8	11	12	12	11
13.6	**Crossings - Waterways, Rail, etc. along Pipeline Corridors**									
	Main River Crossings	7	7	2	7	2	7	7	7	7
	Stream Crossings	4	4	0	4	0	4	4	4	4
	Golf Courses	0	0	2	0	2	0	0	0	0
	Canal Crossings	0	0	0	0	0	0	0	0	0
	Motorway Crossings	2	2	1	2	1	2	2	2	2
	National Road Crossings	1	1	1	1	1	1	1	1	1
	Regional Road Crossings	15	15	10	15	10	15	15	15	15
	Railway Crossings	2	2	1	2	1	2	2	2	2
	Total Crossings	**31**	**31**	**17**	**31**	**17**	**31**	**31**	**31**	**31**
13.7	**Potential to Impact on Physical Infrastructure along Pipeline Corridors**									
		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 Roads
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	No known public utilities	1 number: ESB (MV) Overhead (38kv)	No known public utilities	1 Number: ESB (MV) Overhead (38kv). 2 Number: ESB (MV) Overhead (10-20kv)	1 Number: High Pressure Gas Line
13.10	**Land Ownership and Titles along Pipeline Corridors**									
		Most Ownerships	Most Ownerships	Least Ownerships	Most Ownerships	Least Ownerships	Most Ownerships	Most Ownerships	Most Ownerships	Most Ownerships
13.11	**Route Traffic Management**									
		Moderate Impact during Construction stage	Moderate Impact during Construction stage	Imperceptible Impact during Construction stage	Moderate Impact during Construction stage	Imperceptible Impact during Construction stage	Moderate Impact during Construction stage	Moderate Impact during Construction stage	Moderate Impact during Construction stage	Moderate Impact during Construction stage
		No Impact After Construction Stage	No Impact After Construction Stage	No Impact After Construction Stage	No Impact After Construction Stage	No Impact After Construction Stage	No Impact After Construction Stage	No Impact After Construction Stage	No Impact After Construction Stage	No Impact After Construction Stage
13.12	**Construction Risk along Pipeline Corridors**									
		(1) Deep Tunnel to Site, (2) Deep Tunnel to Coast.	(1) Deep Tunnel to Site, (2) Deep Tunnel to Coast.	(1) Deep Tunnel to Site, (2) Difficult Sea Outfall.	(1) Deep Tunnel to Site, (2) Deep Tunnel to Coast.	(1) Deep Tunnel to Site, (2) Difficult Sea Outfall.	(1) Deep Tunnel to Site, (2) Deep Tunnel to Coast.	(1) Deep Tunnel to Site	(1) Deep Tunnel to Site, (2) Deep Tunnel to Coast,	(1) Deep Tunnel to Site
		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 Bedrock	Most Variability in Depth to Bedrock	Most Variability in Depth to Bedrock	Most Variability in Depth to Bedrock	Most Variability in Depth to Bedrock
									Significantly larger diameter outfall pipe required	

13.13	**Operation and Maintenance - WwTP, Pumping Stations & Pipeline ancillaries**									
		Most Issues	Most Issues	Least Issues	Most Issues	Least Issues	Most Issues	Most Issues	Most Issues	Most Issues

Phase 2 Alternative Sites Assessment and Route Selection - Environmental & Technical Criteria Evaluation Matrix

Stage 2 of Criteria Evaluation (Sites, Pipeline Routes & Marine Outfall) - Identification of 'least favourable' cells - assignment of 'amber colour' 2

Ref	Environmental Criteria	Annsbrook	Baldurgan	Clonshagh	Cookstown	Cloghran	Newtowncorduff	Rathartan	Tyrrelstown Little
1.0	Cultural Heritage	Annsbrook	Baldurgan	Clonshagh	Cookstown	Cloghran	Newtowncorduff	Rathartan	Tyrrelstown Little
1.1	Cultural Heritage -Sites								
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 (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	**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 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)	**Direct:** None **Indirect:** One moderate negative (RPS 245)
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)	**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)	**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)	None	One (potentially significant)	None	Three (potentially significant)	One (potentially significant)	One (potentially significant)	One (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	**Direct:** None **Indirect:** None	**Direct:** None **Indirect:** None	Direct: None Indirect: One slight negative (Tyrrelstown House)
1.1.7	Potential to impact (direct) on townland boundaries (cultural heritage significance)	Two moderate negative	None	One moderate negative	Two moderate negative	One moderate negative	One moderate negative	Two moderate negative	Two moderate negative
1.2	Cultural Heritage -Pipelines								
1.2.1	Potential to impact on RMPs	32 RMP sites located within corridor	32 RMP sites located within corridor	20 RMP sites located within corridor	32 RMP sites located within corridor	20 RMP sites located within corridor	32 RMP sites located within corridor	32 RMP sites located within 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 corridor	No national monuments located within corridor	One national monument located within corridor	No national monuments located within corridor	One national monument located within corridor	No national monuments located within corridor	One national monument located within corridor
1.2.3	Potential to impact on RPS/NIAH	27 RPS and 12 NIAH sites located within corridor	27 RPS and 12 NIAH sites located within corridor	15 RPS and 6 NIAH sites located within corridor	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	27 RPS and 12 NIAH sites located within corridor
1.2.4	Potential to impact on CH sites	27 CH sites located within corridor	27 CH sites located within corridor	9 CH sites 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	27 CH sites located within corridor
1.2.5	potential to impact on historic designed landscapes	22 demesne landscapes located within corridor	22 demesne landscapes located within corridor	14 demesne landscapes located within corridor	22 demesne landscapes located within corridor	15 demesne landscapes located within corridor	22 demesne landscapes located within corridor	23 demesne landscapes located within corridor	22 demesne landscapes located within corridor
1.3	Cultural Heritage - Marine Outfalls								
1.3.1	Potential to impact on RMPs	11 RMP sites located within outfall area	11 RMP sites located within outfall area	No RMP sites located within outfall area	11 RMP sites located within outfall area	No RMP sites located within outfall area	11 RMP sites located within outfall area	11 RMP sites located within outfall area	11 RMP sites located within outfall area
1.3.3	Potential to impact on RPS/NIAH	29 RPS/NIAH sites located within corridor	29 RPS/NIAH sites located within corridor	No RPS/NIAH sites located within corridor	29 RPS/NIAH sites located within corridor	No 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 sites located within outfall area	12 CH sites located within outfall area	1 CH site located within outfall area	12 CH sites located within outfall area	1 CH site located within outfall area	12 CH sites located within outfall area	12 CH sites located within outfall area	12 CH sites located within outfall area
1.3.5	Recorded shipwreck sites	40 shipwrecks in and within vicinity of the outfall area	40 shipwrecks 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 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	40 shipwrecks in and within vicinity of the outfall area

2.0	Landscape & Visual	Annsbrook	Baldurgan	Clonshagh	Cookstown	Cloghran	Newtowncorduff	Rathartan	Tyrrelstown Little
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	Significant - one 0.5km E with relatively clear views towards the site afforded 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 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 1.6km 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 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	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 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	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	Moderate - Baldungan Church on hill 2.5km 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
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	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 rural HSL to the E however major transport infrastructure occurs immediately W and a quarry and golf 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 located near an urban fringe (Rush) - rail line to W does not strongly influence landscape character	Significant - open rural landscape character of high integrity for the site and its surrounds - rail line passes close to eastern boundary but does not strongly influence character
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 but it will be difficult to screen views from elevated M1 overpasses N and S	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	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 views from castle and scenic route to N and scenic route to S	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 views from castle and scenic route to N
2.1.6	Potential to impact on views from settlements	Imperceptible - Crossroads settlement (Ballyboghill) 2.5km W has no view of site	Moderate - Crossroads settlement (Ballyboghill) 1.5km NW and associated dwellings stretch southwards along R108 closer to the site (1km)	Slight - Densely populated Nth Dublin suburb of Darndale <1km S, other estates 1km N and E - No clear views afforded toward the site from any of these	Moderate - Crossroads settlement (Ballyboghill) 1.7km NW and associated dwellings stretch southwards along R108 closer to the site (1km)	Moderate - small estate settlement of Ballymacartle 1km SE also clear views available from an estate adjacent to the east of the M1/Swords junction	Slight - settlement of Lusk 1.5km E but no views available - small settlement of Dunganstown 1km SE may be afforded restricted views	Significant - sizeable coastal settlement of Rush 0.8km E	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	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 afforded from local road overpass 1km NE	Imperceptible - M1 passes 2.5km E and views of the scheme would not be afforded	Slight - M1 passes 1km W - clear views only afforded 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 filtered views of site through roadside screening will be afforded	Imperceptible - M1 5km W	Imperceptible - M1 4.5km W
2.1.9	Potential to impact on views from Dublin - Belfast rail line	Imperceptible - rail line 5km E	Imperceptible - rail line 6km E	Imperceptible - rail line 3.5km E	Imperceptible - rail line 6km E	Imperceptible - rail line 3km E	Imperceptible - rail line 3km E	Significant - rail line lies directly adjacent to W	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 glimpses may be afforded 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 at < 0.5km - clear views afforded from some sections and site access from R129	Slight / Significant - heavily used N32 national secondary road 0.3km to S and R107 regional road 1km E - neither has clear views towards site due to roadside screening - Note future malahide Rd realignment adjacent to site	Significant - R108 regional road 0.3km W and clear views afforded from some sections	Imperceptible - R107 regional road 2km E but no views available	Significant - slightly elevated R132 regional road (old N1) 0.5km E affords occasional clear views over site	Significant - R128 regional road 0.5km S with clear views from some sections	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 aerial approach and vehicular egress	Imperceptible - airport 10km S	Imperceptible - airport 8.5km S	Significant - airport 2km NW - clear views not afforded towards the site at ground level but it would be a prominent feature of the low level landing approach from the E	Imperceptible - airport 7.5km S	Significant - airport 1.5km SW - clear views afforded towards the site from elevated M1/airport access road interchange and it would be a prominent feature of the low level landing approach from the E	Imperceptible - airport 10km S	Imperceptible - airport >10km SW	Imperceptible - airport >10km SW
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	Moderate - intensive and strongly defined hedgerow/field pattern contained within site boundary but surrounding lands more dispersed in structure	Significant - intensive and strongly defined hedgerow/field pattern contained within site boundary but surrounding lands more dispersed in structure	Moderate - predominantly large fields defined by low hedgerows within site boundary	Moderate - combination of large cropping fields in N half of site and smaller geometric pastoral fields in S half - low hedgerows

2.1.13	**Potential to impact on historic designed landscapes**	Moderate - Woodpark demesne 0.15km NE	Imperceptible - No demesne landscapes within or near 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 surrounded to the north and east by the site at the minimum setback (0.3km)	Slight - Abbeyville Estate 1km E	Imperceptible - No demesne landscapes within or near this site	Slight - Haystown Demesne 0.3km NE	Imperceptible - No demesne landscapes within or near this site
2.2	**Landscape & Visual - Pipelines**								
2.2.10	**Potential to disrupt landscape structure (treelines / hedgerows / field pattern etc.)**	A - Moderate - landscape is relatively unstructured and irregular along this pipeline 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 field patterns F - Significant - this corridor section passes almost entirely through fields and hedgerows G - Slight - Moderate - landscape is relatively unstructured and open along this pipeline corridor section but with some hedgerow field patterns	A - Moderate - landscape is relatively unstructured and irregular along this pipeline 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 field patterns F - Significant - this corridor section passes almost entirely through fields and hedgerows G - Slight - Moderate - landscape is relatively unstructured and open along this pipeline corridor section but with some hedgerow field patterns	A - Moderate - landscape is relatively unstructured and irregular along this pipeline corridor section but with some hedgerow field patterns B- Moderate - landscape is relatively unstructured and irregular along this pipeline corridor section but with some hedgerow field patterns G - Slight - Moderate - landscape is relatively unstructured and open along this pipeline corridor section but with some hedgerow field patterns	A - Moderate - landscape is relatively unstructured and irregular along this pipeline 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 field patterns F - Significant - this corridor section passes almost entirely through fields and hedgerows G - Slight - Moderate - landscape is relatively unstructured and open along this pipeline corridor section but with some hedgerow field patterns	A - Moderate - landscape is relatively unstructured and irregular along this pipeline corridor section but with some hedgerow field patterns B- Moderate - landscape is relatively unstructured and irregular along this pipeline corridor section but with some hedgerow field patterns G - Slight - Moderate - landscape is relatively unstructured and open along this pipeline corridor section but with some hedgerow field patterns	A - Moderate - landscape is relatively unstructured and irregular along this pipeline 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 field patterns F - Significant - this corridor section passes almost entirely through fields and hedgerows G - Slight - Moderate - landscape is relatively unstructured and open along this pipeline corridor section but with some hedgerow field patterns	A - Moderate - landscape is relatively unstructured and irregular along this pipeline 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 field patterns E- Significant - this corridor section passes almost entirely through fields and hedgerows F - Significant - this corridor section passes almost entirely through fields and hedgerows G - Slight - Moderate - landscape is relatively unstructured and open along this pipeline corridor section but with some hedgerow field patterns	A - Moderate - landscape is relatively unstructured and irregular along this pipeline 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 field patterns F - Significant - this corridor section passes almost entirely through fields and hedgerows G - Slight - Moderate - landscape is relatively unstructured and open along this pipeline corridor section but with some hedgerow field patterns
2.2.13	**Potential to impact on historic designed landscapes**	A - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section D -Significant - passes across corner of Abbeyville estate at eastern end of corridor F - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section G - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section	A - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section D -Significant - passes across corner of Abbeyville estate at eastern end of corridor F - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section G - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section	A - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section B - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section G - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section	A - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section D -Significant - passes across corner of Abbeyville estate at eastern end of corridor F - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section G - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section	A - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section B - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section G - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section	A - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section D -Significant - passes across corner of Abbeyville estate at eastern end of corridor F - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section G - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section	A - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section D -Significant - passes across corner of Abbeyville estate at eastern end of corridor E- Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section F - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section G - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section	A - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section D -Significant - passes across corner of Abbeyville estate at eastern end of corridor F - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section G - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section
2.3	**Landscape & Visual - Marine Outfalls**								

3.0	Ecology	Annsbrook	Baldurgan	Clonshagh	Cookstown	Cloghran	Newtowncorduff	Rathartan	Tyrrelstown Little
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)	**Slight:** 5.3km upstream of Natura 2000 wetland sites Rogerstown Estuary SPA/SAC and 7.0km upstream of Natura 2000 wetland sites Malahide Estuary SPA/SAC	**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 wetland sites (Baldoyle 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)	**Moderate**: 2.2km 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 corridor.	**Significant**: Site abuts Sluice River ecological corridor	**Significant**: Site abuts Rath Little ecological corridor; Access road crosses Ballough Stream ecological corridor.	**Imperceptible**: Site located more than 3km from Ballough Stream ecological corridor	**Imperceptible**: Site 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**: 0.1km 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	**Significant**: 3.8km 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.	**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.	**Slight:** Site comprised of agriculturally improved, cultivated or arable land.	**Slight:** 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 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	**Imperceptible** - 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 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	**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 Greylag Goose flock. Location is in an area considered likely to be used by the north Co Dublin winter Greylag Goose flock on occasion	**Significant** - Within 'Skerries Grasslands' IWEBS area, likely to be a feeding site for the north Co Dublin winter Greylag Goose flock
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 (I.e. 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	**Slight -** smallish fields, unlikely to be used regularly by Lapwing and Golden Plover	**Moderate -** smallish fields, but proximity to Rogerstown Estuary increases liklihood of site being used by Lapwing and Golden Plover	**Significant** - site includes large arable fields and pastures suitable for Lapwing, Golden Plover or other winter waders

3.2	Ecology - Pipelines								
3.2.1	**potential to impact on Natura 2000 Sites and Natural Heritage Areas**	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 D - 0.5km Malahide estuary SPA/SAC; 2.0km Baldoyle Bay SPA/SAC/pNHA F - Malahide Estuary SPA/SAC/pNHA; Rogerstown Estuary SPA/SAC/pNHA; Balcunnin Stream flows out to WFD coastal waters G - 0.5km Baldoyle Bay SAC/SPA/pNHA F - Also crosses Balcunnin Stream which flows out to WFD coastal waters G - Also interfaces with Baldoyle Bay	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 D - 0.5km Malahide estuary SPA/SAC; 2.0km Baldoyle Bay SPA/SAC/pNHA F - Malahide Estuary SPA/SAC/pNHA; Rogerstown Estuary SPA/SAC/pNHA; Balcunnin Stream flows out to WFD coastal waters G - 0.5km Baldoyle Bay SAC/SPA/pNHA F - Also crosses Balcunnin Stream which flows out to WFD coastal waters G - Also interfaces with Baldoyle Bay	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 B - 8.0km North Dublin BAY SAC and North Bull Island SPA; 4.5km Baldoyle Bay SAC/SPA/pNHA G - 0.5km Baldoyle Bay SAC/SPA/pNHA G - Also interfaces with Baldoyle Bay SAC/SPA/pNHA and Ramsar site	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 D - 0.5km Malahide estuary SPA/SAC; 2.0km Baldoyle Bay SPA/SAC/pNHA F - Malahide Estuary SPA/SAC/pNHA; Rogerstown Estuary SPA/SAC/pNHA; Balcunnin Stream flows out to WFD coastal waters G - 0.5km Baldoyle Bay SAC/SPA/pNHA F - Also crosses Balcunnin Stream which flows out to WFD coastal waters G - Also interfaces with Baldoyle Bay	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 B - 8.0km North Dublin BAY SAC and North Bull Island SPA; 4.5km Baldoyle Bay SAC/SPA/pNHA G - 0.5km Baldoyle Bay SAC/SPA/pNHA G - Also interfaces with Baldoyle Bay SAC/SPA/pNHA and Ramsar site	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 D - 0.5km Malahide estuary SPA/SAC; 2.0km Baldoyle Bay SPA/SAC/pNHA F - Malahide Estuary SPA/SAC/pNHA; Rogerstown Estuary SPA/SAC/pNHA; Balcunnin Stream flows out to WFD coastal waters G - 0.5km Baldoyle Bay SAC/SPA/pNHA F - Also crosses Balcunnin Stream which flows out to WFD coastal waters G - Also interfaces with Baldoyle Bay	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 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 F - Malahide Estuary SPA/SAC/pNHA; Rogerstown Estuary SPA/SAC/pNHA; Balcunnin Stream flows out to WFD coastal waters G - 0.5km Baldoyle Bay SAC/SPA/pNHA E - Also crosses Rush Stream which	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 D - 0.5km Malahide estuary SPA/SAC; 2.0km Baldoyle Bay SPA/SAC/pNHA F - Malahide Estuary SPA/SAC/pNHA; Rogerstown Estuary SPA/SAC/pNHA; Balcunnin Stream flows out to WFD coastal waters G - 0.5km Baldoyle Bay SAC/SPA/pNHA F - Also crosses Balcunnin Stream which flows out to WFD coastal waters G - Also interfaces with Baldoyle Bay
3.2.2	**Potential to impact upon ecological buffer zones or Nature Development Areas idenitifed in the Fingal Development Plan 2011 - 2017**	Impinges upon 6 ecological buffer zones (3 No. D; 3 No. G) Impinges upon four nature developoment areas potentially impinges on 6 No. Nature Development Areas	Impinges upon 6 ecological buffer zones (3 No. D; 3 No. G) Impinges upon four nature developoment areas potentially impinges on 6 No. Nature Development Areas	Impinges upon 3 ecological buffer zones (Route G) Impinges upon four nature developoment areas Crosses 1 No. nature development area potentially impinges on 1 No. Nature Development Areas	Impinges upon 6 ecological buffer zones (3 No. D; 3 No. G) Impinges upon four nature developoment areas potentially impinges on 6 No. Nature Development Areas	Impinges upon 3 ecological buffer zones (Route G) Impinges upon five nature developoment areas Crosses 1 No. nature development area potentially impinges on 1 No. Nature Development Areas	Impinges upon 6 ecological buffer zones (3 No. D; 3 No. G) Impinges upon four nature developoment areas potentially impinges on 6 No. Nature Development Areas	Impinges upon 6 ecological buffer zones (3 No. D; 3 No. G) Impinges upon four nature developoment areas potentially impinges on 6 No. Nature Development Areas	Impinges upon 6 ecological buffer zones (3 No. D; 3 No. G) Impinges upon four nature developoment areas potentially impinges on 6 No. Nature Development Areas
3.2.3	**Potential to impact upon ecological corridor, nature development area or high value habitats**	Crosses 10 No. ecological corridors Potentially crosses 1 No. ecological corridor Impinges upon TPO sites Potentially impinges upon TPO areas Potentially crosses 36 rivers or streams Loss of hedgerow habitat along 41km	Crosses 10 No. ecological corridors Potentially crosses 1 No. ecological corridor Impinges upon TPO sites Potentially impinges upon TPO areas Potentially crosses 36 rivers or streams Loss of hedgerow habitat along 41km	Crosses 2 No. ecological corridors Potentially crosses 1 No. ecological corridor Impinges upon TPO sites Crosses 1 No. TPO site Potentially crosses 4 rivers or streams Potentially crosses one area of deciduous woodland Loss of hedgerow habitat along 17km	Crosses 10 No. ecological corridors Potentially crosses 1 No. ecological corridor Impinges upon TPO sites Potentially impinges upon TPO areas Potentially crosses 36 rivers or streams Loss of hedgerow habitat along 41km	Crosses 2 No. ecological corridors Potentially crosses 1 No. ecological corridor Impinges upon TPO sites Crosses 1 No. TPO site Potentially crosses 6 No rivers or streams Potentially crosses 1 No. area of deciduous woodland Loss of hedgerow habitat along 20km	Crosses 10 No. ecological corridors Potentially crosses 1 No. ecological corridor Impinges upon TPO sites Potentially impinges upon TPO areas Potentially crosses 36 rivers or streams Loss of hedgerow habitat along 41km	Crosses 12 No. ecological corridors Potentially crosses 1 No. ecological corridor Impinges upon TPO sites Potentially impinges upon TPO areas Potentially crosses 45 rivers or streams Loss of hedgerow habitat along 54km	Crosses 10 No. ecological corridors Potentially crosses 1 No. ecological corridor Impinges upon TPO sites Potentially impinges upon TPO areas Potentially crosses 36 rivers or streams Loss of hedgerow habitat along 41km
3.2.4	**Potential to impact on a salmonid system**	Crosses 8 No. salmonid systems.	Crosses 8 No. salmonid systems.	Crosses 2 No. salmonid systems.	Crosses 8 No. salmonid systems.	Crosses 3 No. salmonid systems.	Crosses 8 No. salmonid systems.	Crosses 9 No. salmonid systems.	Crosses 8 No. salmonid systems.
3.2.6	**Potential to impact on the breeding habitat for Annex 1 species Kingfisher**	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 River where possible suitable habitat for breeding kingfisher occurs	No suitable riparian habitat for breeding kingfisher	Portion of route D located along the Broadmeadow River where possible suitable habitat for breeding kingfisher occurs	No suitable riparian habitat for breeding kingfisher	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 River where possible suitable habitat for breeding kingfisher occurs Crosses Ballough River which is unlikely to have suitable riparian habitiat for breeding kingfisher	Portion of route D located along the Broadmeadow River where possible suitable habitat for breeding kingfisher occurs
3.2.8	**Potential to impact on IWeBS identified areas of importance to birds adjacent to Malahide Estuary**	Portion of route located within Malahide Estuary IWEBS area Portion of route located within 'Skerries Grasslands' IWEBS area	Portion of route located within Malahide Estuary IWEBS area Portion of route located within 'Skerries Grasslands' IWEBS area	No IWEB areas located on pipeline route	Portion of route located within Malahide Estuary IWEBS area Portion of route located within 'Skerries Grasslands' IWEBS area	No IWEB areas located on pipeline route	Portion of route located within Malahide Estuary IWEBS area Portion of route located within 'Skerries Grasslands' IWEBS area	Portion of route located within Malahide Estuary IWEBS area Portion of 2 No. routes located within 'Skerries Grasslands' IWEBS area	Portion of route located within Malahide Estuary IWEBS area Portion of route located within 'Skerries Grasslands' IWEBS area

3.3	**Ecology - Marine Outfall**								
3.3.1	**potential 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)	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 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 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)	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)	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)	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)	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)	Slight (isolated sensitve sites in some areas of coast)
3.3.6	**Potential to impact on water quality and bathing waters designated under the Bathing Water Directive**	Slight (to be determined following hydrodynamic modelling)	Slight (to be determined following hydrodynamic modelling)	Moderate (to be determined following hydrodynamic modelling)	Slight (to be determined following hydrodynamic modelling)	Moderate (to be determined following hydrodynamic modelling)	Slight (to be determined following hydrodynamic modelling)	Slight (to be determined following hydrodynamic modelling)	Slight (to be determined following hydrodynamic modelling)
4.0	**Hydrology -**	**Annsbrook**	**Baldurgan**	**Clonshagh**	**Cookstown**	**Cloghran**	**Newtowncorduff**	**Rathartan**	**Tyrrelstown Little**
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 site 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.	***Slight:*** 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.	***Moderate:*** Belinstown River (10m north) and Broadmeadow tributary (1km south) (water quality Q3) of the site, High Importance. Will have permanent impact on small proportion of attribute.	***Moderate:*** Sluice River (10m north) and Sluice 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 Q3), 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.	***Imperceptible:*** Collinstown Stream (120 southwest), Rush Town Stream (360m southeast) and Balcunnin Stream (930m north) of the site, Low 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.	***None:*** No new culvert required.
4.1.3	**Area prone to flooding (based on historical data and predicted flood extents adjacent to the site as well as up and downstream locations)**	***Imperceptible:*** No flooding to the site from the Ballough and Ballyboghil rivers. The Ballyboghil has extensive overland flooding approx. 3km downstream, Low importance. Will have permanent impact on small proportion of attribute.	***Slight:*** Ballyboghil have overland flooding approx. 200m to the north of the site. The Belinstown has extensive overland flooding approx. 2km downstream, medium importance. Will have permanent impact on small proportion of attribute.	***Imperceptible:*** No flooding from the Mayne / Cuckoo Rivers to the site. The Mayne has history of flooding; and predicted overland flooding approx. 2km downstream, Low importance. Will have permanent impact on small proportion of attribute.	***Imperceptible:*** The Belinstown has extensive predicted overland flooding (both tidal & fluvial) and recurrence historic flooding approx. 3.5km downstream, Low importance. Will have permanent impact on small proportion of attribute.	***Slight:*** No flooding from the Sluice River at the site. The Sluice has history of flooding and predicted overland flooding approx. 0.5km upstream and 2km downstream, Medium importance. Will have permanent impact on small proportion of attribute.	***Imperceptible:*** No flooding from Ballough River. The eastern tributary was not modelled in FEM FRAMS, but has a history of flooding upstream, Low importance. Will have permanent impact on small proportion of attribute.	***Imperceptible:*** No flooding from the Collinstown Stream and Palmerstown Stream close to the site. History of flooding at downstream locations, Low importance. Will have permanent impact on small proportion of attribute.	***Imperceptible:*** No flooding from the Collinstown and Rush Town Stream to the site. History of flooding at downstream locations, Low 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. 4.6km 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 5km downstream respectively, Low importance. Will have permanent impact on small proportion of attribute.	***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.	***Slight:*** 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, pNHA, Ramsar and SNR) approx. 1km downstream, High importance. Will have permanent impact on small proportion of attribute.	***Slight:*** The Collinstown Stream discharges into Rogerstown Estuary and Rush Town Stream discharges into the Irish sea (unpolluted water quality) approx. 2.2km downstream, Medium importance. Will have permanent impact on small proportion of attribute.
4.2	**Hydrology - Pipelines**								
4.2.1	**Proximity to water bodies in terms of flooding and as an indicator of sensitive surface water receptors**	18 river catchments and some coastal areas	18 river catchments and some coastal areas	7 river catchments and some coastal areas	18 river catchments and some coastal areas	9 river catchments and some coastal areas	18 river catchments and some coastal areas	28 river catchments and some coastal areas	18 river catchments and some coastal areas
4.3	**Hydrology - Marine Outfall**								

5.0	Hydrogeology -	Annsbrook	Baldurgan	Clonshagh	Cookstown	Cloghran	Newtowncorduff	Rathartan	Tyrrelstown Little
5.1	**Hydrogeology - Sites**								
5.1.1	**Aquifer Classification - importance of the groundwater resource to a given area**	**Moderate:** Locally Important Bedrock Aquifer underlies site, Medium importance. Will have permanent impact on a significant proportion of attribute.	**Moderate:** Locally Important Bedrock Aquifer underlies site, Medium importance. Will have permanent impact on a significant proportion of attribute.	**Moderate:** Poor Bedrock Aquifer and Locally Important Bedrock Aquifer underlies site, Medium importance. Will have permanent impact on a significant proportion of attribute.	**Moderate:** Locally Important Bedrock Aquifer underlies site, Medium importance. Will have permanent impact on a significant proportion of attribute.	**Slight:** Poor Bedrock Aquifer underlies site, Low importance. Will have permanent impact on a significant proportion of attribute.	**Moderate:** Locally Important Bedrock Aquifer underlies site, Medium importance. Will have permanent impact on a significant proportion of attribute.	**Moderate:** Locally Important Bedrock Aquifer underlies site, Medium importance. Will have permanent impact on a significant proportion of attribute.	**Moderate:** Locally Important Bedrock Aquifer underlies site, Medium importance. Will have permanent impact on a significant proportion of attribute.
5.1.2	**Vulnerability Classification - potential for groundwater contamination**	**Slight:** Low Vulnerability, Low importance. Will have permanent impact on a significant proportion of attribute.	**Slight:** Low Vulnerability, Low importance. Will have permanent impact on a significant proportion of attribute.	**Slight:** Low Vulnerability, Low importance. Will have permanent impact on a significant proportion of attribute.	**Slight:** Low Vulnerability, Low importance. Will have permanent impact on a significant proportion of attribute.	**Moderate:** Low to High Vulnerability, Predominantly Low, Medium importance. Will have permanent impact on a significant proportion of attribute.	**Slight:** Low Vulnerability, Low importance. Will have permanent impact on a significant proportion of attribute.	**Slight:** Low Vulnerability, Low importance. Will have permanent impact on a significant proportion of attribute.	**Slight:** Low Vulnerability, Low importance. Will have permanent impact on a significant proportion of attribute.
5.1.3	**GSI Groundwater Protection Response matrix**	**R1**	**R1**	**R1**	**R1**	**R2**	**R1**	**R1**	**R1**
5.1.4	**Groundwater Supplies - identification of water supply springs and bored wells based on GSI, EPA & FCC records**	**None:** No Groundwater Supplies within 500m however unconfirmed information from FCC suggests the possibility of additional groundwater abstraction points and wells nearby (Appendix A). If present, well would be of Low importance and would have a permanent impact on a significant proportion of attribute.	**Slight:** 1x Spring; St. Bridget's Well 400m South. Unconfirmed information from FCC suggests the possibility of additional groundwater abstraction points and wells nearby (Appendix A). Low importance. Will have permanent impact on a significant proportion of attribute.	**None:** No Groundwater Supplies within 500m	**Slight:** 1x Spring; St. Bridget's Well 210m South East. Unconfirmed information from FCC suggests the possibility of additional groundwater abstraction points and wells nearby (Appendix A). Low importance. Will have permanent impact on a significant proportion of attribute.	**None:** No Groundwater Supplies within 500m	**Slight:** 1x bored well; for agriculture and domestic use with good yields 510m North. Unconfirmed information from FCC suggests the possibility of additional groundwater abstraction points and wells nearby (Appendix A). Low importance. Will have permanent impact on a significant proportion of attribute.	**None:** No Groundwater Supplies within 500m. Unconfirmed information from FCC suggests the possibility of additional groundwater abstraction points and wells nearby (Appendix A). If present, well(s) would be of Low importance and would have a permanent impact on a significant proportion of attribute.	**None:** No Groundwater Supplies within 500m. Unconfirmed information from FCC suggests the possibility of additional groundwater abstraction points and wells nearby (Appendix A). Low importance. Will have permanent impact on a significant proportion of attribute.
5.1.6	**Identification of hydrogeological features from the GSI Karst database**	***None:*** No Karst Feature within 2km	***None:*** 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.	***None:*** No Karst Feature within 2km	***Slight:*** 1x spring; St. Doolaghs Well 2km 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 1.8km north east to south east of the site, Low importance. Will have permanent impact on a significant proportion of attribute.	***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.	***Slight:*** 1x spring; Bog Well 700m west of the site, Low importance. Will have permanent impact on a significant proportion of attribute.
5.2	**Hydrogeology - Pipelines**								
5.2.2	**Vulnerability Classification - potential for groundwater contamination**	A - predominantly high D - predominantly high F - predominantly low G - predominantly 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 low G - predominantly low	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 F - predominantly low G - predominantly low
5.3	**Hydrogeology - Marine Outfall**								
5.3.2	**Vulnerability Classification - potential for groundwater contamination**	predominantly low	predominantly low	predominantly high	predominantly low	predominantly high	predominantly low	predominantly low	predominantly low
5.3.3	**Groundwater Supplies - identification of water supply springs and bored wells based on GSI, EPA & FCC records**	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	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 500m	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 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 features within 500m of the outfall study area	2 No. springs within the corridor	4 No. springs within the corridor	2 No. springs within the corridor

6.0	Soils and Geology	Annsbrook	Baldurgan	Clonshagh	Cookstown	Cloghran	Newtowncorduff	Rathartan	Tyrrelstown Little
6.1	**Soils and Geology - Sites**								
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 that bedrock is at least 10 mbgl across the site. Confirm using ground investigation (rotary coring)	**Imperceptible -** confirm using ground investigation (rotary coring)	**Imperceptible -** confirm using ground investigation (rotary coring)	**Imperceptible -** confirm using ground investigation (rotary coring)	**Slight negative -** confirm using ground investigation (rotary coring)	**Imperceptible:** Confirm using ground investigation (rotary coring)	**Imperceptible -** confirm using ground investigation (rotary coring)	**Imperceptible -** confirm using ground investigation (rotary coring)
6.2	**Soils and Geology - Pipelines**								
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 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.	35 No.
6.2.4	**Potential to encounter shallow bedrock during construction (interactions with other disciplines during construction - noise, dust etc)**	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 surface)	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 surface)	A - 95% shallow bedrock (15% bedrock at surface) B - 5% Shallow bedrock (0% bedrock at surface) G - 5% shallow bedrock (0% at surface)	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 surface)	A - 95% shallow bedrock (15% bedrock at surface) B - 5% Shallow bedrock (0% bedrock at surface) C - 65% shallow bedrock (5% at surface) G - 5% shallow bedrock (0% at surface)	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 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)	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 surface)
6.2.5	**Potential impact on karst features**	2 No.	2 No.	No karst features within corridor	2 No.	No karst features within corridor	2 No.	2 No.	2 No.
6.2.6	**Potential to encounter soft ground**	A - 1% Alluvium deposits D - Small area of lithosols/Peats (basic); 10% of alluvium deposits F - 5% Alluvium deposits G - 10% Alluvium Deposits	A - 1% Alluvium deposits D - Small area of lithosols/Peats (basic); 10% of alluvium deposits F - 5% Alluvium deposits G - 10% Alluvium Deposits	A - 1% Alluvium deposits B - 1% Alluvium deposits G - 10% Alluvium Deposits	A - 1% Alluvium deposits D - Small area of lithosols/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 D - Small area of lithosols/Peats (basic); 10% of alluvium deposits F - 5% Alluvium deposits G - 10% Alluvium Deposits	A - 1% Alluvium deposits D - Small area of lithosols/Peats (basic); 10% of alluvium deposits E - 10% of alluvium deposits F - 5% Alluvium deposits G - 10% Alluvium Deposits	A - 1% Alluvium deposits D - Small area of lithosols/Peats (basic); 10% of alluvium deposits F - 5% Alluvium deposits G - 10% Alluvium Deposits
6.3	**Soils and Geology - Marine Outfall**								
6.3.1	**Potential to impact on Geological Heritage Sites/County Geological Sites**	2 No	2 No	No Geological Heritage Sites within corridor	2 No	No Geological Heritage Sites within corridor	2 No	2 No	2 No
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.
6.3.4	**Potential to encounter shallow bedrock during construction (interactions with other disciplines during construction - noise, dust etc)**	5% shallow bedrock (2% bedrock at surface)	5% shallow bedrock (2% bedrock at surface)	15% shallow bedrock	5% shallow bedrock (2% bedrock at surface)	15% shallow bedrock	5% shallow bedrock (2% bedrock at surface)	5% shallow bedrock (2% bedrock at surface)	5% shallow bedrock (2% bedrock at surface)
6.3.5	**Potential impact on karst features**	3 No.	3 No.	No karst features within corridor	3 No.	No karst features within corridor	3 No.	3 No.	3 No.
6.3.6	**Potential to encounter soft ground**	1% Alluvium deposits	1% Alluvium deposits	15% Alluvium deposits	1% Alluvium deposits	15% Alluvium deposits	1% Alluvium deposits	1% Alluvium deposits	1% Alluvium deposits

7.0	Agronomy & Agriculture - Sites	Annsbrook	Baldurgan	Clonshagh	Cookstown	Cloghran	Newtowncorduff	Rathartan	Tyrrelstown Little
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%	31%
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	Beef	Mixed livestock & tillage	Horticulture & Tillage, (intensive market gardening area)	Beef (site is located in an intensive market gardening area)
7.3	Number of landowners impacted within site boundary	1 to 3	1 to 3	4 to 6	1 to 3	4 to 6	1 to 3	7 to 9	1 to 3
7.5	Severance based on site location within overall land holdings	Minor	Minor	Minor	Moderate	Minor	Minor	Moderate	Imperceptible
7.7	Crop rotation practiced	Yes	Yes	Yes	Yes	No	Yes	Yes	No
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
8.0	Noise	Annsbrook	Baldurgan	Clonshagh	Cookstown	Cloghran	Newtowncorduff	Rathartan	Tyrrelstown Little
8.4	Construction Phase Impact rating	slight	imperceptible	slight	imperceptible	slight	slight	slight	imperceptible
8.5	Operational Phase Impact rating	slight	imperceptible	slight	imperceptible	slight	slight	slight	imperceptible
9.0	Air and Odour	Annsbrook	Baldurgan	Clonshagh	Cookstown	Cloghran	Newtowncorduff	Rathartan	Tyrrelstown Little
9.9	Construction Phase Impact rating	imperceptible	imperceptible	imperceptible	imperceptible	slight	imperceptible	imperceptible	imperceptible
9.10	Operational Phase Impact rating	imperceptible	imperceptible	imperceptible	imperceptible	slight	imperceptible	imperceptible	imperceptible
10.0	People and Communities	Annsbrook	Baldurgan	Clonshagh	Cookstown	Cloghran	Newtowncorduff	Rathartan	Tyrrelstown Little
10.1	Number of residential & commercial buildings 300-500m from site boundary	44	21	83	53	116	33	131	50
10.3	Potential to impact on known community amenities and facilities within 1km from site boundary.	Ballyboghill Hedgerow Round (Sli na Sceacha) - c. 480m to the SW.	Ballyboghill Hedgerow Round (Sli na Sceacha) - c. 280m to the east.	Football grounds c. 700m to the NW, Darndale and Belcamp Parks c. 800m to the SW and SE respectively and Innisfail GAA club c. 500m to the south.	Swords Roganstown golf club c. 990m to the south and Ballyboghill Hedgerow Round c. 980m to the NE.	Playground c. 800m to the north (Nevinstown East) and National Show Centre c. 580m to the west.	None	A 7-a-side football pitch c. 920m to the east.	None
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.	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.	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	Annsbrook	Baldurgan	Clonshagh	Cookstown	Cloghran	Newtowncorduff	Rathartan	Tyrrelstown 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	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 minimal landtake. Can use existing field access.
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	Crosses narrow local road to reach access on more suitable road
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	None
11.7	Frequency of accidents on surrounding network (indication of general road safety issues)	few accidents on surrounding roads	few 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	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)	6.8km (R127 & R128)

12.0	Planning Policy	Annsbrook	Baldurgan	Clonshagh	Cookstown	Cloghran	Newtowncorduff	Rathartan	Tyrrelstown Little
12.2	**Site Zoning**	RU (Rural)	RU (Rural)	GB (Greenbelt) HT (High Tech)	RU (Rural)	GB (Greenbelt)	RU (Rural)	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	N/A	N/A	N/A
12.4	**Local Objectives on Site**	None	None	432 (Prepare Masterplan)	None	None	None	None	None
12.5	**Other Local Objectives on Site**	None	None	Road objectives	None	None	None	None	None
12.6	**Land Uses present within 300m of site boundary**	Agricultural	Agricultural	Agricultural Open Space Urban Commercial	Agricultural	Agricultural	Agricultural Motorway	Agricultural Rural Residential Railway Line	Agricultural, Rural Residential
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)	RU (Rural)
12.8	**Airport Public Safety and Noise Zones within 300m of site boundary**	N/A	N/A	Inner PSZ Outer PSZ Inner Noise Zone Outer Noise Zone	N/A	Inner PSZ Outer PSZ Inner Noise Zone Outer Noise Zone	N/A	N/A	N/A
12.9	**Local Objectives within 300m of site boundary**	180 (2 dwellings)	None	432 (prepare roads masterplan)	None	374 (nursing facility)	None	141 (agri-tourism)	GIM7 (historic landscape study)
12.10	**Other Local Objectives present within 300m of site boundary**	None	None	Road objectives	None	Indicative Cycle / Pedestrian Route	None	None	None
12.11	**Land Uses present within 1km of Land Parcel Boundary**	Agricultural Rural Residential Rural Commercial Motorway	Agricultural Rural Residential (including Village) Rural Commercial	Agricultural Open Space Urban Residential Urban Commercial Hotel Burial Ground	Agricultural Rural Residential (including Village) Rural Commercial	Agricultural Open Space Quarrying Urban Residential Traveller Acc. Airport / Commercial Motorway	Agricultural Rural Residential Rural Commercial Urban Residential Motorway	Agricultural Rural Residential Rural Commercial Urban Residential Open Space Railway Line	Agricultural, Rural Residential Rural Commercial Railway
12.12	**Zoning present within 1km of Land Parcel Boundary**	RU (Rural) RC (Rural Cluster) RB (Rural Business)	RU (Rural) RV (Rural Village) GB (Green Belt)	GB (Greenbelt) HT (High Tech) OS (Open Space) RA (New Residential) RS (Residential)	RU (Rural) GB (Greenbelt) RV (Rural Village)	GB (Greenbelt) GE (Enterprise) DA (Dublin Airport) OS (Open Space) RS (Residential)	RU (Rural) RB (Rural Business) RC (Rural Cluster) GE (Enterprise) RA (New Residential) RS (Residential)	RU (Rural) RB (Rural Business) RC (Rural Cluster) RS (Residential) TC (Town Centre) OS (Open Space) HA (High Amenity)	RU (Rural) HA (High Amenity) RC (Rural Cluster)
12.13	**Airport Public Safety and Noise Zones within 1km of land parcel boundary**	N/A	N/A	Outer PSZ Inner Noise Zone Outer Noise Zone	N/A	Inner PSZ Outer PSZ Inner Noise Zone Outer Noise Zone	N/A	N/A	N/A

12.14	**Local Objectives within 1km of Land Parcel Boundary**	144 (ELV facility) 180 (2 dwellings) 203 (sports facility) 214 (1 dwelling) 219 (employment opportunity)	203 (sports facility) 219 (employment opportunity) 228 (1 dwelling)	383 (local shop) 411 (foot path) 413 (nursing home) 423 (prepare office masterplan) 432 (prepare roads masterplan) 436 (cemetery) 439 (high tech uses) 442 (FRA required) 443 (local shops) 446 (riverside walk)	228 (1 dwelling) 258 (tourism complex)	346 and 347 (access to residential estate) 374 (nursing facility) 375 and 376 (protect trees, develop tourism complex at Abbeyville) 383 (local shop) GIM1 (active recreation hub)	145, 148, 149, 152,, 156, 158, 156, 158, 159, 160, 161, 163, 164 (all relating to development of western edge of Lusk)	141 (agri-tourism) 176 (study on use of lands) 197, 200, 202, 204, 206, 207, 208, 209, 210, 211 (all relating to development of western areas of	111 (house extension) 131 (single dwelling) 141 (agri-tourism) GIM1 (recreation hub)
12.15	**Other Local Objectives present within 1km of Land Parcel Boundary**	None	Preserved Views to north and southeast	None	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	Preserved views to the north
13.0	**Engineering Design - Pipelines**	**Annsbrook**	**Baldurgan**	**Clonshagh**	**Cookstown**	**Cloghran**	**Newtowncorduff**	**Rathartan**	**Tyrrelstown Little**
13.1	**Pipeline Length**								
13.1.6	**Total Pipeline Lengths**								
	Total Length as Open Cut	30,950 m	28,950 m	19,600 m	28,950 m	18,800 m	29,450 m	27,550 m	32,650 m
	Total Length as Tunnel	14,400 m	16,400 m	5,000 m	16,450 m	9,500 m	15,900 m	16,850 m	12,750 m
	Total Length in Marine	2,500 m	2,500 m	6,000 m	2,500 m	6,000 m	2,500 m	2,500 m	2,500 m
	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**								
	Power Requirement from 9C to WWTP Site	7,000 kW	6,700 kW	5,450 kW	6,600 kW	6,250 kW	6,750 kW	7,200 kW	7,950 kW
	Power Requirement from North Dublin to WWTP Site	3,000 kW	3,000 kW	2,400 kW	3,000 kW	2,300 kW	2,550 kW	2,600 kW	2,550 kW
	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**								
	Total embodied Carbon	**56,029**	**57,247**	**35,947**	**57,325**	**42,225**	**56,942**	**56,613**	**55,072**
	Total Lifetime Operational Carbon	**447,979**	**431,180**	**349,984**	**425,580**	**392,915**	**425,580**	**451,713**	**492,777**
	Total Carbon (tonnes CO2)	**504,008**	**488,427**	**385,931**	**482,905**	**435,140**	**482,523**	**508,325**	**547,849**
13.5	**Access / Right of Way / Wayleaves along Pipeline Corridors**								
	Potential restrictions Along Pipeline Corridors to WwTP Sites	11	11	8	11	8	11	12	11

13.6	**Crossings - Waterways, Rail, etc. along Pipeline Corridors**								
	Main River Crossings	7	7	2	7	2	7	7	7
	Stream Crossings	4	4	0	4	0	4	4	4
	Golf Courses	0	0	2	0	2	0	0	0
	Canal Crossings	0	0	0	0	0	0	0	0
	Motorway Crossings	2	2	1	2	1	2	2	2
	National Road Crossings	1	1	1	1	1	1	1	1
	Regional Road Crossings	15	15	10	15	10	15	15	15
	Railway Crossings	2	2	1	2	1	2	2	2
	Total Crossings	**31**	**31**	**17**	**31**	**17**	**31**	**31**	**31**
13.7	**Potential to Impact on Physical Infrastructure along Pipeline Corridors**								
		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
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	No known public utilities	1 number: ESB (MV) Overhead (38kv)	No known public utilities	1 Number: High Pressure Gas Line
13.10	**Land Ownership and Titles along Pipeline Corridors**								
		Most Ownerships	Most Ownerships	Least Ownerships	Most Ownerships	Least Ownerships	Most Ownerships	Most Ownerships	Most Ownerships
13.11	**Route Traffic Management**								
		Moderate Impact during Construction stage	Moderate Impact during Construction stage	Imperceptible Impact during Construction stage	Moderate Impact during Construction stage	Imperceptible Impact during Construction stage	Moderate Impact during Construction stage	Moderate Impact during Construction stage	Moderate Impact during Construction stage
		No Impact After Construction Stage	No Impact After Construction Stage	No Impact After Construction Stage	No Impact After Construction Stage	No Impact After Construction Stage	No Impact After Construction Stage	No Impact After Construction Stage	No Impact After Construction Stage
13.12	**Construction Risk along Pipeline Corridors**								
		(1) Deep Tunnel to Site, (2) Deep Tunnel to Coast.	(1) Deep Tunnel to Site, (2) Deep Tunnel to Coast.	(1) Deep Tunnel to Site, (2) Difficult Sea Outfall.	(1) Deep Tunnel to Site, (2) Deep Tunnel to Coast.	(1) Deep Tunnel to Site, (2) Difficult Sea Outfall.	(1) Deep Tunnel to Site, (2) Deep Tunnel to Coast.	(1) Deep Tunnel to Site	(1) Deep Tunnel to Site
		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 Bedrock	Most Variability in Depth to Bedrock	Most Variability in Depth to Bedrock	Most Variability in Depth to Bedrock
13.13	**Operation and Maintenance - WwTP, Pumping Stations & Pipeline ancillaries**								
		Most Issues	Most Issues	Least Issues	Most Issues	Least Issues	Most Issues	Most Issues	Most Issues

Phase 2 Alternative Sites Assessment and Route Selection - Environmental & Technical Criteria Evaluation Matrix

Stage 2 of Criteria Evaluation (Sites, Pipeline Routes & Marine Outfall) - Identification of 'least favourable' cells - assignment of 'amber colour' 3

Ref	Environmental Criteria	Annsbrook	Baldurgan	Clonshagh	Cookstown	Cloghran	Newtowncorduff	Rathartan
1.0	Cultural Heritage	Annsbrook	Baldurgan	Clonshagh	Cookstown	Cloghran	Newtowncorduff	Rathartan
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 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)	**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)
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)	One (potentially significant)	One (potentially significant)
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	**Direct:** None **Indirect:** None	**Direct:** None **Indirect:** None
1.1.7	Potential to impact (direct) on townland boundaries (cultural heritage significance)	Two moderate negative	None	One moderate negative	Two moderate negative	One moderate negative	One moderate negative	Two moderate negative
1.2	Cultural Heritage -Pipelines							
1.2.1	Potential to impact on RMPs	32 RMP sites located within corridor	32 RMP sites located within corridor	20 RMP sites located within corridor	32 RMP sites located within corridor	20 RMP sites located within corridor	32 RMP sites located within 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 corridor	No national monuments located within corridor	One national monument located within corridor	No national monuments located within corridor	One national monument located within corridor	No national monuments located within corridor
1.2.3	Potential to impact on RPS/NIAH	27 RPS and 12 NIAH sites located within corridor	27 RPS and 12 NIAH sites located within corridor	15 RPS and 6 NIAH sites located within corridor	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
1.2.4	Potential to impact on CH sites	27 CH sites located within corridor	27 CH sites located within corridor	9 CH sites 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
1.2.5	Potential to impact on historic designed landscapes	22 demesne landscapes located within corridor	22 demesne landscapes located within corridor	14 demesne landscapes located within corridor	22 demesne landscapes located within corridor	15 demesne landscapes located within corridor	22 demesne landscapes located within corridor	23 demesne landscapes located within corridor
1.3	Cultural Heritage - Marine Outfalls							
1.3.1	Potential to impact on RMPs	11 RMP sites located within outfall area	11 RMP sites located within outfall area	No RMP sites located within outfall area	11 RMP sites located within outfall area	No RMP sites located within outfall area	11 RMP sites located within outfall area	11 RMP sites located within outfall area
1.3.3	Potential to impact on RPS/NIAH	29 RPS/NIAH sites located within corridor	29 RPS/NIAH sites located within corridor	No RPS/NIAH sites located within corridor	29 RPS/NIAH sites located within corridor	No 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 sites located within outfall area	12 CH sites located within outfall area	1 CH site located within outfall area	12 CH sites located within outfall area	1 CH site located within outfall area	12 CH sites located within outfall area	12 CH sites located within outfall area
1.3.5	Recorded shipwreck sites	40 shipwrecks in and within vicinity of the outfall area	40 shipwrecks 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 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

2.0	Landscape & Visual	Annsbrook	Baldurgan	Clonshagh	Cookstown	Cloghran	Newtowncorduff	Rathartan
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	Significant - one 0.5km E with relatively clear views towards the site afforded 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 although 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 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	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	Moderate - Baldungan Church on hill 2.5km N with extensive scenic views in the direction of the site
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	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 rural HSL to the E however major transport infrastructure occurs immediately W and a quarry and golf 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 located near an urban fringe (Rush) - rail line to W does not strongly influence landscape character
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 but it will be difficult to screen views from elevated M1 overpasses N and S	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	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 views from castle and scenic route to N and scenic route to S
2.1.6	**Potential to impact on views from settlements**	Imperceptible - Crossroads settlement (Ballyboghill) 2.5km W has no view of site	Moderate - Crossroads settlement (Ballyboghill) 1.5km NW and associated dwellings stretch southwards along R108 closer to the site (1km)	Slight - Densely populated Nth Dublin suburb of Darndale <1km S, other estates 1km N and E - No clear views afforded toward the site from any of these	Moderate - Crossroads settlement (Ballyboghill) 1.7km NW and associated dwellings stretch southwards along R108 closer to the site (1km)	Moderate - small estate settlement of Ballymacartle 1km SE also clear views available from an estate adjacent to the east of the M1/Swords junction	Slight - settlement of Lusk 1.5km E but no views available - small settlement of Dunganstown 1km SE may be afforded restricted views	Significant - sizeable coastal settlement of Rush 0.8km E
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
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 afforded from local road overpass 1km NE	Imperceptible - M1 passes 2.5km E and views of the scheme would not be afforded	Slight - M1 passes 1km W - clear views only afforded 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 filtered views of site through roadside screening will be afforded	Imperceptible - M1 5km W
2.1.9	**Potential to impact on views from Dublin - Belfast rail line**	Imperceptible - rail line 5km E	Imperceptible - rail line 6km E	Imperceptible - rail line 3.5km E	Imperceptible - rail line 6km E	Imperceptible - rail line 3km E	Imperceptible - rail line 3km E	Significant - rail line lies directly adjacent to W
2.1.10	**Potential to impact on views from other major roads (national or regional roads)**	Moderate - regional road (R129) 0.6km S glimpses may be afforded 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 at < 0.5km - clear views afforded from some sections and site access from R129	Slight / Significant - heavily used N32 national secondary road 0.3km to S and R107 regional road 1km E - neither has clear views towards site due to roadside screening - Note future malahide Rd realignment adjacent to site	Significant - R108 regional road 0.3km W and clear views afforded from some sections	Imperceptible - R107 regional road 2km E but no views available	Significant - slightly elevated R132 regional road (old N1) 0.5km E affords occasional clear views over site	Significant - R128 regional road 0.5km S with clear views from some sections

2.1.11	**Potential to impact on arrival views from Dublin Airport including aerial approach and vehicular egress**	Imperceptible - airport 10km S	Imperceptible - airport 8.5km S	Significant - airport 2km NW - clear views not afforded towards the site at ground level but it would be a prominent feature of the low level landing approach from the E	Imperceptible - airport 7.5km S	Significant - airport 1.5km SW - clear views afforded towards the site from elevated M1/airport access road interchange and it would be a prominent feature of the low level landing approach from the E	Imperceptible - airport 10km S	Imperceptible - airport >10km SW
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	Moderate - intensive and strongly defined hedgerow/field pattern contained within site boundary but surrounding lands more dispersed in structure	Significant - intensive and strongly defined hedgerow/field pattern contained within site boundary but surrounding lands more dispersed in structure	Moderate - predominantly large fields defined by low hedgerows within site boundary
2.1.13	**Potential to impact on historic designed landscapes**	Moderate - Woodpark demesne 0.15km NE	Imperceptible - No demesne landscapes within or near 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 surrounded to the north and east by the site at the minimum setback (0.3km)	Slight - Abbeyville Estate 1km E	Imperceptible - No demesne landscapes within or near this site	Slight - Haystown Demesne 0.3km NE
2.2	**Landscape & Visual - Pipelines**							
2.2.10	**Potential to disrupt landscape structure (treelines / hedgerows / field pattern etc.)**	A - Moderate - landscape is relatively unstructured and irregular along this pipeline 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 field patterns F - Significant - this corridor section passes almost entirely through fields and hedgerows G - Slight - Moderate - landscape is relatively unstructured and open along this pipeline corridor section but with some hedgerow field patterns	A - Moderate - landscape is relatively unstructured and irregular along this pipeline 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 field patterns F - Significant - this corridor section passes almost entirely through fields and hedgerows G - Slight - Moderate - landscape is relatively unstructured and open along this pipeline corridor section but with some hedgerow field patterns	A - Moderate - landscape is relatively unstructured and irregular along this pipeline corridor section but with some hedgerow field patterns B- Moderate - landscape is relatively unstructured and irregular along this pipeline corridor section but with some hedgerow field patterns G - Slight - Moderate - landscape is relatively unstructured and open along this pipeline corridor section but with some hedgerow field patterns	A - Moderate - landscape is relatively unstructured and irregular along this pipeline 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 field patterns F - Significant - this corridor section passes almost entirely through fields and hedgerows G - Slight - Moderate - landscape is relatively unstructured and open along this pipeline corridor section but with some hedgerow field patterns	A - Moderate - landscape is relatively unstructured and irregular along this pipeline corridor section but with some hedgerow field patterns B- Moderate - landscape is relatively unstructured and irregular along this pipeline corridor section but with some hedgerow field patterns G - Slight - Moderate - landscape is relatively unstructured and open along this pipeline corridor section but with some hedgerow field patterns	A - Moderate - landscape is relatively unstructured and irregular along this pipeline 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 field patterns F - Significant - this corridor section passes almost entirely through fields and hedgerows G - Slight - Moderate - landscape is relatively unstructured and open along this pipeline corridor section but with some hedgerow field patterns	A - Moderate - landscape is relatively unstructured and irregular along this pipeline 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 field patterns E- Significant - this corridor section passes almost entirely through fields and hedgerows F - Significant - this corridor section passes almost entirely through fields and hedgerows G - Slight - Moderate - landscape is relatively unstructured and open along this pipeline corridor section but with some hedgerow field patterns
2.2.13	**Potential to impact on historic designed landscapes**	A - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section D -Significant - passes across corner of Abbeyville estate at eastern end of corridor F - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section G - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section	A - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section D -Significant - passes across corner of Abbeyville estate at eastern end of corridor F - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section G - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section	A - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section B - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section G - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section	A - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section D -Significant - passes across corner of Abbeyville estate at eastern end of corridor F - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section G - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section	A - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section B - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section G - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section	A - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section D -Significant - passes across corner of Abbeyville estate at eastern end of corridor F - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section G - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section	A - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section D -Significant - passes across corner of Abbeyville estate at eastern end of corridor E- Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section F - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section G - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section

2.3	**Landscape & Visual - Marine Outfalls**							
3.0	**Ecology**	**Annsbrook**	**Baldurgan**	**Clonshagh**	**Cookstown**	**Cloghran**	**Newtowncorduff**	**Rathartan**
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)	**Slight:** 5.3km upstream of Natura 2000 wetland sites Rogerstown Estuary SPA/SAC and 7.0km upstream of Natura 2000 wetland sites Malahide Estuary SPA/SAC	**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 wetland sites (Baldoyle 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 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 corridor.	**Significant**: Site abuts Sluice River ecological corridor	**Significant**: Site abuts Rath Little ecological corridor; Access road crosses Ballough Stream ecological corridor.	**Imperceptible**: Site 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**: 0.1km 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
3.1.4	**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.	**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.	**Slight:** 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 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 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	**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 Greylag Goose flock. Location is in an area considered likely to be used by the north Co Dublin winter Greylag Goose flock on occasion
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 (I.e. 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	**Slight -** smallish fields, unlikely to be used regularly by Lapwing and Golden Plover	**Moderate -** smallish fields, but proximity to Rogerstown Estuary increases liklihood of site being used by Lapwing and Golden Plover

3.2	Ecology - Pipelines							
3.2.1	**Potenital to impact on Natura 2000 Sites and Natural Heritage Areas**	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 D - 0.5km Malahide estuary SPA/SAC; 2.0km Baldoyle Bay SPA/SAC/pNHA F - Malahide Estuary SPA/SAC/pNHA; Rogerstown Estuary SPA/SAC/pNHA; Balcunnin Stream flows out to WFD coastal waters G - 0.5km Baldoyle Bay SAC/SPA/pNHA F - Also crosses Balcunnin Stream which flows out to WFD coastal waters	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 D - 0.5km Malahide estuary SPA/SAC; 2.0km Baldoyle Bay SPA/SAC/pNHA F - Malahide Estuary SPA/SAC/pNHA; Rogerstown Estuary SPA/SAC/pNHA; Balcunnin Stream flows out to WFD coastal waters G - 0.5km Baldoyle Bay SAC/SPA/pNHA F - Also crosses Balcunnin Stream which flows out to WFD coastal waters	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 B - 8.0km North Dublin BAY SAC and North Bull Island SPA; 4.5km Baldoyle Bay SAC/SPA/pNHA G - 0.5km Baldoyle Bay SAC/SPA/pNHA G - Also interfaces with Baldoyle Bay SAC/SPA/pNHA and Ramsar site	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 D - 0.5km Malahide estuary SPA/SAC; 2.0km Baldoyle Bay SPA/SAC/pNHA F - Malahide Estuary SPA/SAC/pNHA; Rogerstown Estuary SPA/SAC/pNHA; Balcunnin Stream flows out to WFD coastal waters G - 0.5km Baldoyle Bay SAC/SPA/pNHA F - Also crosses Balcunnin Stream which flows out to WFD coastal waters	Crosses river upstream of following (c)SAC/SPA/(p)NHA B - 8.0km North Dublin BAY SAC and North Bull Island SPA; 4.5km Baldoyle Bay SAC/SPA/pNHA G - 0.5km Baldoyle Bay SAC/SPA/pNHA G - Also interfaces with Baldoyle Bay SAC/SPA/pNHA and Ramsar site	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 D - 0.5km Malahide estuary SPA/SAC; 2.0km Baldoyle Bay SPA/SAC/pNHA F - Malahide Estuary SPA/SAC/pNHA; Rogerstown Estuary SPA/SAC/pNHA; Balcunnin Stream flows out to WFD coastal waters G - 0.5km Baldoyle Bay SAC/SPA/pNHA F - Also crosses Balcunnin Stream which flows out to WFD coastal waters	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 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 F - Malahide Estuary SPA/SAC/pNHA; Rogerstown Estuary SPA/SAC/pNHA; Balcunnin Stream flows out to WFD coastal waters G - 0.5km Baldoyle Bay SAC/SPA/pNHA
3.2.2	**Potential to impact upon ecological buffer zones or Nature Development Areas idenitifed in the Fingal Development Plan 2011 - 2017**	Impinges upon 6 ecological buffer zones (3 No. D; 3 No. G) Impinges upon four nature developoment areas Potenitally impinges on 6 No. Nature Development Areas	Impinges upon 6 ecological buffer zones (3 No. D; 3 No. G) Impinges upon four nature developoment areas Potenitally impinges on 6 No. Nature Development Areas	Impinges upon 3 ecological buffer zones (Route G) Impinges upon four nature developoment areas Crosses 1 No. nature development area Potenitally impinges on 1 No. Nature Development Areas	Impinges upon 6 ecological buffer zones (3 No. D; 3 No. G) Impinges upon four nature developoment areas Potenitally impinges on 6 No. Nature Development Areas	Impinges upon 3 ecological buffer zones (Route G) Impinges upon five nature developoment areas Crosses 1 No. nature development area Potenitally impinges on 1 No. Nature Development Areas	Impinges upon 6 ecological buffer zones (3 No. D; 3 No. G) Impinges upon four nature developoment areas Potenitally impinges on 6 No. Nature Development Areas	Impinges upon 6 ecological buffer zones (3 No. D; 3 No. G) Impinges upon four nature developoment areas Potenitally impinges on 6 No. Nature Development Areas
3.2.3	**Potential to impact upon ecological corridor, nature development area or high value habitats**	Crosses 10 No. ecological corridors Potentially crosses 1 No. ecological corridor Impinges upon TPO sites Potentially impinges upon TPO areas Potentially crosses 36 rivers or streams Loss of hedgerow habitat along 41km	Crosses 10 No. ecological corridors Potentially crosses 1 No. ecological corridor Impinges upon TPO sites Potentially impinges upon TPO areas Potentially crosses 36 rivers or streams Loss of hedgerow habitat along 41km	Crosses 2 No. ecological corridors Potentially crosses 1 No. ecological corridor Impinges upon TPO sites Crosses 1 No. TPO site Potentially crosses 4 rivers or streams Potentially crosses one area of deciduous woodland Loss of hedgerow habitat along 17km	Crosses 10 No. ecological corridors Potentially crosses 1 No. ecological corridor Impinges upon TPO sites Potentially impinges upon TPO areas Potentially crosses 36 rivers or streams Loss of hedgerow habitat along 41km	Crosses 2 No. ecological corridors Potentially crosses 1 No. ecological corridor Impinges upon TPO sites Crosses 1 No. TPO site Potentially crosses 6 No rivers or streams Potentially crosses 1 No. area of deciduous woodland Loss of hedgerow habitat along 20km	Crosses 10 No. ecological corridors Potentially crosses 1 No. ecological corridor Impinges upon TPO sites Potentially impinges upon TPO areas Potentially crosses 36 rivers or streams Loss of hedgerow habitat along 41km	Crosses 12 No. ecological corridors Potentially crosses 1 No. ecological corridor Impinges upon TPO sites Potentially impinges upon TPO areas Potentially crosses 45 rivers or streams Loss of hedgerow habitat along 54km

3.2.4	**Potenitial to impact on a salmonid system**	Crosses 8 No. salmonid systems.	Crosses 8 No. salmonid systems.	Crosses 2 No. salmonid systems.	Crosses 8 No. salmonid systems.	Crosses 3 No. salmonid systems.	Crosses 8 No. salmonid systems.	Crosses 9 No. salmonid systems.
3.2.6	**Potential to impact on the breeding habitat for Annex 1 species Kingfisher**	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 River where possible suitable habitat for breeding kingfisher occurs	No suitable riparian habitat for breeding kingfisher	Portion of route D located along the Broadmeadow River where possible suitable habitat for breeding kingfisher occurs	No suitable riparian habitat for breeding kingfisher	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 River where possible suitable habitat for breeding kingfisher occurs Crosses Ballough River which is unlikely to have suitable riparian habitat for breeding kingfisher
3.2.8	**Potential to impact on IWeBS identified areas of importance to birds adjacent to Malahide Estuary**	Portion of route located within Malahide Estuary IWEBS area Portion of route located within 'Skerries Grasslands' IWEBS area	Portion of route located within Malahide Estuary IWEBS area Portion of route located within 'Skerries Grasslands' IWEBS area	No IWEB areas located on pipeline route	Portion of route located within Malahide Estuary IWEBS area Portion of route located within 'Skerries Grasslands' IWEBS area	No IWEB areas located on pipeline route	Portion of route located within Malahide Estuary IWEBS area Portion of route located within 'Skerries Grasslands' IWEBS area	Portion of route located within Malahide Estuary IWEBS area Portion of 2 No. routes located within 'Skerries Grasslands' IWEBS area
3.3	**Ecology - Marine Outfall**							
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 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 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)
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)	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)	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)
3.3.6	**Potential to impact on water quality and bathing waters designated under the Bathing Water Directive**	Slight (to be determined following hydrodynamic modelling)	Slight (to be determined following hydrodynamic modelling)	Moderate (to be determined following hydrodynamic modelling)	Slight (to be determined following hydrodynamic modelling)	Moderate (to be determined following hydrodynamic modelling)	Slight (to be determined following hydrodynamic modelling)	Slight (to be determined following hydrodynamic modelling)

4.0	Hydrology -	Annsbrook	Baldurgan	Clonshagh	Cookstown	Cloghran	Newtowncorduff	Rathartan
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 site 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.	***Slight:*** 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.	***Moderate:*** Belinstown River (10m north) and Broadmeadow tributary (1km south) (water quality Q3) of the site, High Importance. Will have permanent impact on small proportion of attribute.	***Moderate:*** Sluice River (10m north) and Sluice 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 Q3), 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.
4.1.3	**Area prone to flooding (based on historical data and predicted flood extents adjacent to the site as well as up and downstream locations)**	***Imperceptible:*** No flooding to the site from the Ballough and Ballyboghill rivers. The Ballyboghill has extensive overland flooding approx. 3km downstream, Low importance. Will have permanent impact on small proportion of attribute.	***Slight:*** Ballyboghill have overland flooding approx. 200m to the north of the site. The Belinstown has extensive overland flooding approx. 2km downstream, medium importance. Will have permanent impact on small proportion of attribute.	***Imperceptible:*** No flooding from the Mayne / Cuckoo Rivers to the site. The Mayne has history of flooding; and predicted overland flooding approx. 2km downstream, Low importance. Will have permanent impact on small proportion of attribute.	***Imperceptible:*** The Belinstown has extensive predicted overland flooding (both tidal & fluvial) and recurrence historic flooding approx. 3.5km downstream, Low importance. Will have permanent impact on small proportion of attribute.	***Slight:*** No flooding from the Sluice River at the site. The Sluice has history of flooding and predicted overland flooding approx. 0.5km upstream and 2km downstream, Medium importance. Will have permanent impact on small proportion of attribute.	***Imperceptible:*** No flooding from Ballough River. The eastern tributary was not modelled in FEM FRAMS, but has a history of flooding upstream, Low importance. Will have permanent impact on small proportion of attribute.	***Imperceptible:*** No flooding from the Collinstown Stream and Palmerstown Stream close to the site. History of flooding at downstream locations, Low 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. 4.6km 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 5km downstream respectively, Low importance. Will have permanent impact on small proportion of attribute.	***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.	***Slight:*** 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, pNHA, Ramsar and SNR) approx. 1km downstream, High importance. Will have permanent impact on small proportion of attribute.
4.2	**Hydrology - Pipelines**							
4.2.1	**Proximity to water bodies in terms of flooding and as an indicator of sensitive surface water receptors**	18 river catchments and some coastal areas	18 river catchments and some coastal areas	7 river catchments and some coastal areas	18 river catchments and some coastal areas	9 river catchments and some coastal areas	18 river catchments and some coastal areas	28 river catchments and some coastal areas
4.3	**Hydrology - Marine Outfall**							

5.0	Hydrogeology -	Annsbrook	Baldurgan	Clonshagh	Cookstown	Cloghran	Newtowncorduff	Rathartan
5.1	**Hydrogeology - Sites**							
5.1.1	**Aquifer Classification - importance of the groundwater resource to a given area**	**Moderate:** Locally Important Bedrock Aquifer underlies site, Medium importance. Will have permanent impact on a significant proportion of attribute.	**Moderate:** Locally Important Bedrock Aquifer underlies site, Medium importance. Will have permanent impact on a significant proportion of attribute.	**Moderate:** Poor Bedrock Aquifer and Locally Important Bedrock Aquifer underlies site, Medium importance. Will have permanent impact on a significant proportion of attribute.	**Moderate:** Locally Important Bedrock Aquifer underlies site, Medium importance. Will have permanent impact on a significant proportion of attribute.	**Slight:** Poor Bedrock Aquifer underlies site, Low importance. Will have permanent impact on a significant proportion of attribute.	**Moderate:** Locally Important Bedrock Aquifer underlies site, Medium importance. Will have permanent impact on a significant proportion of attribute.	**Moderate:** Locally Important Bedrock Aquifer underlies site, Medium importance. Will have permanent impact on a significant proportion of attribute.
5.1.2	**Vulnerability Classification - potential for groundwater contamination**	**Slight:** Low Vulnerability, Low importance. Will have permanent impact on a significant proportion of attribute.	**Slight:** Low Vulnerability, Low importance. Will have permanent impact on a significant proportion of attribute.	**Slight:** Low Vulnerability, Low importance. Will have permanent impact on a significant proportion of attribute.	**Slight:** Low Vulnerability, Low importance. Will have permanent impact on a significant proportion of attribute.	**Moderate:** Low to High Vulnerability, Predominantly Low, Medium importance. Will have permanent impact on a significant proportion of attribute.	**Slight:** Low Vulnerability, Low importance. Will have permanent impact on a significant proportion of attribute.	**Slight:** Low Vulnerability, Low importance. Will have permanent impact on a significant proportion of attribute.
5.1.3	**GSI Groundwater Protection Response matrix**	**R1**	**R1**	**R1**	**R1**	**R2**	**R1**	**R1**
5.1.4	**Groundwater Supplies - identification of water supply springs and bored wells based on GSI, EPA & FCC records**	**None:** No Groundwater Supplies within 500m however unconfirmed information from FCC suggests the possibility of additional groundwater abstraction points and wells nearby (Appendix A). If present, well would be of Low importance and would have a permanent impact on a significant proportion of attribute.	**Slight:** 1x Spring; St. Bridget's Well 400m South. Unconfirmed information from FCC suggests the possibility of additional groundwater abstraction points and wells nearby (Appendix A). Low importance. Will have permanent impact on a significant proportion of attribute.	**None:** No Groundwater Supplies within 500m	**Slight:** 1x Spring; St. Bridget's Well 210m South East. Unconfirmed information from FCC suggests the possibility of additional groundwater abstraction points and wells nearby (Appendix A). Low importance. Will have permanent impact on a significant proportion of attribute.	**None:** No Groundwater Supplies within 500m	**Slight:** 1x bored well; for agriculture and domestic use with good yields 510m North. Unconfirmed information from FCC suggests the possibility of additional groundwater abstraction points and wells nearby (Appendix A). Low importance. Will have permanent impact on a significant proportion of attribute.	**None:** No Groundwater Supplies within 500m. Unconfirmed information from FCC suggests the possibility of additional groundwater abstraction points and wells nearby (Appendix A). If present, well(s) would be of Low importance and would have a permanent impact on a significant proportion of attribute.
5.1.6	**Identification of hydrogeological features from the GSI Karst database**	***None:*** No Karst Feature within 2km	***None:*** 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.	***None:*** No Karst Feature within 2km	***Slight:*** 1x spring; St. Doolaghs Well 2km 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 1.8km north east to south east of the site, Low importance. Will have permanent impact on a significant proportion of attribute.	***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.
5.2	**Hydrogeology - Pipelines**							
5.2.2	**Vulnerability Classification - potential for groundwater contamination**	A - predominantly high D - predominantly high F - predominantly low G - predominantly 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 low G - predominantly low	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

5.3	**Hydrogeology - Marine Outfall**							
5.3.2	**Vulnerability Classification - potential for groundwater contamination**	predominantly low	predominantly low	predominantly high	predominantly low	predominantly high	predominantly low	predominantly low
5.3.3	**Groundwater Supplies - identification of water supply springs and bored wells based on GSI, EPA & FCC records**	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	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 500m	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
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 features within 500m of the outfall study area	2 No. springs within the corridor	4 No. springs within the corridor
6.0	**Soils and Geology**	**Annsbrook**	**Baldurgan**	**Clonshagh**	**Cookstown**	**Cloghran**	**Newtowncorduff**	**Rathartan**
6.1	**Soils and Geology - Sites**							
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 that bedrock is at least 10 mbgl across the site. Confirm using ground investigation (rotary coring)	**Imperceptible -** confirm using ground investigation (rotary coring)	**Imperceptible -** confirm using ground investigation (rotary coring)	**Imperceptible -** confirm using ground investigation (rotary coring)	**Slight negative -** confirm using ground investigation (rotary coring)	**Imperceptible:** Confirm using ground investigation (rotary coring)	**Imperceptible -** confirm using ground investigation (rotary coring)
6.2	**Soils and Geology - Pipelines**							
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 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.
6.2.4	**Potential to encounter shallow bedrock during construction (interactions with other disciplines during construction - noise, dust etc)**	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 surface)	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 surface)	A - 95% shallow bedrock (15% bedrock at surface) B - 5% Shallow bedrock (0% bedrock at surface) G - 5% shallow bedrock (0% at surface)	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 surface)	A - 95% shallow bedrock (15% bedrock at surface) B - 5% Shallow bedrock (0% bedrock at surface) C - 65% shallow bedrock (5% at surface) G - 5% shallow bedrock (0% at surface)	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 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)
6.2.5	**Potential impact on karst features**	2 No.	2 No.	No karst features within corridor	2 No.	No karst features within corridor	2 No.	2 No.
6.2.6	**Potential to encounter soft ground**	A - 1% Alluvium deposits D - Small area of lithosols/Peats (basic); 10% of alluvium deposits F - 5% Alluvium deposits G - 10% Alluvium Deposits	A - 1% Alluvium deposits D - Small area of lithosols/Peats (basic); 10% of alluvium deposits F - 5% Alluvium deposits G - 10% Alluvium Deposits	A - 1% Alluvium deposits B - 1% Alluvium deposits G - 10% Alluvium Deposits	A - 1% Alluvium deposits D - Small area of lithosols/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 D - Small area of lithosols/Peats (basic); 10% of alluvium deposits F - 5% Alluvium deposits G - 10% Alluvium Deposits	A - 1% Alluvium deposits D - Small area of lithosols/Peats (basic); 10% of alluvium deposits E - 10% of alluvium deposits F - 5% Alluvium deposits G - 10% Alluvium Deposits

6.3	**Soils and Geology - Marine Outfall**							
6.3.1	**Potential to impact on Geological Heritage Sites/County Geological Sites**	2 No	2 No	No Geological Heritage Sites within corridor	2 No	No Geological Heritage Sites within corridor	2 No	2 No
6.3.2	**Potential to interact with contaminated land**	9 No.	9 No.	1 No.	9 No.	1 No	9 No.	9 No.
6.3.4	**Potential to encounter shallow bedrock during construction (interactions with other disciplines during construction - noise, dust etc)**	5% shallow bedrock (2% bedrock at surface)	5% shallow bedrock (2% bedrock at surface)	15% shallow bedrock	5% shallow bedrock (2% bedrock at surface)	15% shallow bedrock	5% shallow bedrock (2% bedrock at surface)	5% shallow bedrock (2% bedrock at surface)
6.3.5	**Potential impact on karst features**	3 No.	3 No.	No karst features within corridor	3 No.	No karst features within corridor	3 No.	3 No.
6.3.6	**Potential to encounter soft ground**	1% Alluvium deposits	1% Alluvium deposits	15% Alluvium deposits	1% Alluvium deposits	15% Alluvium deposits	1% Alluvium deposits	1% Alluvium deposits
7.0	**Agronomy & Agriculture - Sites**	**Annsbrook**	**Baldurgan**	**Clonshagh**	**Cookstown**	**Cloghran**	**Newtowncorduff**	**Rathartan**
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	Beef	Mixed livestock & tillage	Horticulture & Tillage, (intensive market gardening area)
7.3	**Number of landowners impacted within site boundary**	1 to 3	1 to 3	4 to 6	1 to 3	4 to 6	1 to 3	7 to 9
7.5	**Severance based on site location within overall land holdings**	Minor	Minor	Minor	Moderate	Minor	Minor	Moderate
7.7	**Crop rotation practiced**	Yes	Yes	Yes	Yes	No	Yes	Yes
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**	**Annsbrook**	**Baldurgan**	**Clonshagh**	**Cookstown**	**Cloghran**	**Newtowncorduff**	**Rathartan**
8.4	**Construction Phase Impact rating**	slight	imperceptible	slight	imperceptible	slight	slight	slight
8.5	**Operational Phase Impact rating**	slight	imperceptible	slight	imperceptible	slight	slight	slight
9.0	**Air and Odour**	**Annsbrook**	**Baldurgan**	**Clonshagh**	**Cookstown**	**Cloghran**	**Newtowncorduff**	**Rathartan**
9.9	**Construction Phase Impact rating**	imperceptible	imperceptible	imperceptible	imperceptible	slight	imperceptible	imperceptible
9.10	**Operational Phase Impact rating**	imperceptible	imperceptible	imperceptible	imperceptible	slight	imperceptible	imperceptible
10.0	**People and Communities**	**Annsbrook**	**Baldurgan**	**Clonshagh**	**Cookstown**	**Cloghran**	**Newtowncorduff**	**Rathartan**
10.1	**Number of residential & commercial buildings 300-500m from site boundary**	44	21	83	53	116	33	131
10.3	**Potential to impact on known community amenities and facilities within 1km from site boundary.**	Ballyboghill Hedgerow Round (Sli na Sceacha) - c. 480m to the SW.	Ballyboghill Hedgerow Round (Sli na Sceacha) - c. 280m to the east.	Football grounds c. 700m to the NW, Darndale and Belcamp Parks c. 800m to the SW and SE respectively and Innisfail GAA club c. 500m to the south.	Swords Roganstown golf club c. 990m to the south and Ballyboghill Hedgerow Round c. 980m to the NE.	Playground c. 800m to the north (Nevinstown East) and National Show Centre c. 580m to the west.	None	A 7-a-side football pitch c. 920m to the east.
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.	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.	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.

11.0	Traffic	Annsbrook	Baldurgan	Clonshagh	Cookstown	Cloghran	Newtowncorduff	Rathartan
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 fields	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	None, Wide road, good visibility	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	few 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**	**Clonshagh**	**Cookstown**	**Cloghran**	**Newtowncorduff**	**Rathartan**
12.2	**Site Zoning**	RU (Rural)	RU (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	N/A	N/A
12.4	**Local Objectives on Site**	None	None	432 (Prepare Masterplan)	None	None	None	None
12.5	**Other Local Objectives on Site**	None	None	Road objectives	None	None	None	None
12.6	**Land Uses present within 300m of site boundary**	Agricultural	Agricultural	Agricultural Open Space Urban Commercial	Agricultural	Agricultural	Agricultural Motorway	Agricultural Rural Residential Railway Line
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**	N/A	N/A	Inner PSZ Outer PSZ Inner Noise Zone Outer Noise Zone	N/A	Inner PSZ Outer PSZ Inner Noise Zone Outer Noise Zone	N/A	N/A
12.9	**Local Objectives within 300m of site boundary**	180 (2 dwellings)	None	432 (prepare roads masterplan)	None	374 (nursing facility)	None	141 (agri-tourism)
12.10	**Other Local Objectives present within 300m of site boundary**	None	None	Road objectives	None	Indicative Cycle / Pedestrian Route	None	None

12.11	**Land Uses present within 1km of Land Parcel Boundary**	Agricultural Rural Residential Rural Commercial Motorway	Agricultural Rural Residential (including Village) Rural Commercial	Agricultural Open Space Urban Residential Urban Commercial Hotel Burial Ground	Agricultural Rural Residential (including Village) Rural Commercial	Agricultural Open Space Quarrying Urban Residential Traveller Acc. Airport / Commercial Motorway	Agricultural Rural Residential Rural Commercial Urban Residential Motorway	Agricultural Rural Residential Rural Commercial Urban Residential Open Space Railway Line
12.12	**Zoning present within 1km of Land Parcel Boundary**	RU (Rural) RC (Rural Cluster) RB (Rural Business)	RU (Rural) RV (Rural Village) GB (Green Belt)	GB (Greenbelt) HT (High Tech) OS (Open Space) RA (New Residential) RS (Residential)	RU (Rural) GB (Greenbelt) RV (Rural Village)	GB (Greenbelt) GE (Enterprise) DA (Dublin Airport) OS (Open Space) RS (Residential)	RU (Rural) RB (Rural Business) RC (Rural Cluster) GE (Enterprise) RA (New Residential) RS (Residential)	RU (Rural) RB (Rural Business) RC (Rural Cluster) RS (Residential) TC (Town Centre) OS (Open Space) HA (High Amenity)
12.13	**Airport Public Safety and Noise Zones within 1km of land parcel boundary**	N/A	N/A	Outer PSZ Inner Noise Zone Outer Noise Zone	N/A	Inner PSZ Outer PSZ Inner Noise Zone Outer Noise Zone	N/A	N/A
12.14	**Local Objectives within 1km of Land Parcel Boundary**	144 (ELV facility) 180 (2 dwellings) 203 (sports facility) 214 (1 dwelling) 219 (employment opportunity)	203 (sports facility) 219 (employment opportunity) 228 (1 dwelling)	383 (local shop) 411 (foot path) 413 (nursing home) 423 (prepare office masterplan) 432 (prepare roads masterplan) 436 (cemetery) 439 (high tech uses) 442 (FRA required) 443 (local shops) 446 (riverside walk)	228 (1 dwelling) 258 (tourism complex)	346 and 347 (access to residential estate) 374 (nursing facility) 375 and 376 (protect trees, develop tourism complex at Abbeyville) 383 (local shop) GIM1 (active recreation hub)	145, 148, 149, 152,, 156, 158, 156, 158, 159, 160, 161, 163, 164 (all relating to development of western edge of Lusk)	141 (agri-tourism) 176 (study on use of lands) 197, 200, 202, 204, 206, 207, 208, 209, 210, 211 (all relating to development of western areas of Rush)
12.15	**Other Local Objectives present within 1km of Land Parcel Boundary**	None	Preserved Views to north and southeast	None	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
13.0	**Engineering Design - Pipelines**	**Annsbrook**	**Baldurgan**	**Clonshagh**	**Cookstown**	**Cloghran**	**Newtowncorduff**	**Rathartan**
13.1	**Pipeline Length**							
13.1.6	**Total Pipeline Lengths**							
	Total Length as Open Cut	30,950 m	28,950 m	19,600 m	28,950 m	18,800 m	29,450 m	27,550 m
	Total Length as Tunnel	14,400 m	16,400 m	5,000 m	16,450 m	9,500 m	15,900 m	16,850 m
	Total Length in Marine	2,500 m	2,500 m	6,000 m	2,500 m	6,000 m	2,500 m	2,500 m
	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**							
	Power Requirement from 9C to WWTP Site	7,000 kW	6,700 kW	5,450 kW	6,600 kW	6,250 kW	6,750 kW	7,200 kW
	Power Requirement from North Dublin to WWTP Site	3,000 kW	3,000 kW	2,400 kW	3,000 kW	2,300 kW	2,550 kW	2,600 kW
	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**							
	Total embodied Carbon	**56,029**	**57,247**	**35,947**	**57,325**	**42,225**	**56,942**	**56,613**
	Total Lifetime Operational Carbon	**447,979**	**431,180**	**349,984**	**425,580**	**392,915**	**425,580**	**451,713**
	Total Carbon (tonnes CO2)	**504,008**	**488,427**	**385,931**	**482,905**	**435,140**	**482,523**	**508,325**
13.5	**Access / Right of Way / Wayleaves along Pipeline Corridors**							
	Potential restrictions Along Pipeline Corridors to WwTP Sites	11	11	8	11	8	11	12
13.6	**Crossings - Waterways, Rail, etc. along Pipeline Corridors**							
	Main River Crossings	7	7	2	7	2	7	7
	Stream Crossings	4	4	0	4	0	4	4
	Golf Courses	0	0	2	0	2	0	0
	Canal Crossings	0	0	0	0	0	0	0
	Motorway Crossings	2	2	1	2	1	2	2
	National Road Crossings	1	1	1	1	1	1	1
	Regional Road Crossings	15	15	10	15	10	15	15
	Railway Crossings	2	2	1	2	1	2	2
	Total Crossings	**31**	**31**	**17**	**31**	**17**	**31**	**31**
13.7	**Potential to Impact on Physical Infrastructure along Pipeline Corridors**							
		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
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	No known public utilities	1 number: ESB (MV) Overhead (38kv)	No known public utilities
13.10	**Land Ownership and Titles along Pipeline Corridors**							
		Most Ownerships	Most Ownerships	Least Ownerships	Most Ownerships	Least Ownerships	Most Ownerships	Most Ownerships
13.11	**Route Traffic Management**							
		Moderate Impact during Construction stage	Moderate Impact during Construction stage	Imperceptible Impact during Construction stage	Moderate Impact during Construction stage	Imperceptible Impact during Construction stage	Moderate Impact during Construction stage	Moderate Impact during Construction stage
		No Impact After Construction Stage	No Impact After Construction Stage	No Impact After Construction Stage	No Impact After Construction Stage	No Impact After Construction Stage	No Impact After Construction Stage	No Impact After Construction Stage
13.12	**Construction Risk along Pipeline Corridors**							
		(1) Deep Tunnel to Site, (2) Deep Tunnel to Coast.	(1) Deep Tunnel to Site, (2) Deep Tunnel to Coast.	(1) Deep Tunnel to Site, (2) Difficult Sea Outfall.	(1) Deep Tunnel to Site, (2) Deep Tunnel to Coast.	(1) Deep Tunnel to Site, (2) Difficult Sea Outfall.	(1) Deep Tunnel to Site, (2) Deep Tunnel to Coast.	(1) Deep Tunnel to Site
		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 Bedrock	Most Variability in Depth to Bedrock	Most Variability in Depth to Bedrock

13.13	**Operation and Maintenance - WwTP, Pumping Stations & Pipeline ancillaries**							
		Most Issues	Most Issues	Least Issues	Most Issues	Least Issues	Most Issues	Most Issues

Phase 2 Alternative Sites Assessment and Route Selection - Environmental & Technical Criteria Evaluation Matrix

Stage 2 of Criteria Evaluation (Sites, Pipeline Routes & Marine Outfall) - Identification of 'least favourable' cells - assignment of 'amber colour' 4

Ref	Environmental Criteria	Annsbrook	Baldurgan	Clonshagh	Cookstown	Newtowncorduff
1.0	Cultural Heritage	Annsbrook	Baldurgan	Clonshagh	Cookstown	Newtowncorduff
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:** 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	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)	**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)
1.1.6	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
1.1.7	Potential to impact (direct) on townland boundaries (cultural heritage significance)	Two moderate negative	None	One moderate negative	Two moderate negative	One moderate negative

1.2	**Cultural Heritage -Pipelines**					
1.2.1	**Potential to impact on RMPs**	32 RMP sites located within corridor	32 RMP sites located within corridor	20 RMP sites located within corridor	32 RMP sites located within 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 corridor	No national monuments located within corridor	One national monument located within corridor	One national monument located within corridor
1.2.3	**Potential to impact on RPS/NIAH**	27 RPS and 12 NIAH sites located within corridor	27 RPS and 12 NIAH sites located within corridor	15 RPS and 6 NIAH sites located within corridor	27 RPS and 12 NIAH sites located within corridor	27 RPS and 12 NIAH sites located within corridor
1.2.4	**Potential to impact on CH sites**	27 CH sites located within corridor	27 CH sites located within corridor	9 CH sites located within corridor	27 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 corridor	22 demesne landscapes located within corridor	14 demesne landscapes located within corridor	22 demesne landscapes located within corridor	22 demesne landscapes located within corridor
1.3	**Cultural Heritage - Marine Outfalls**					
1.3.1	**Potential to impact on RMPs**	11 RMP sites located within outfall area	11 RMP sites located within outfall area	No RMP sites located within outfall area	11 RMP sites located within outfall area	11 RMP sites located within outfall area
1.3.3	**Potential to impact on RPS/NIAH**	29 RPS/NIAH sites located within corridor	29 RPS/NIAH sites located within corridor	No 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 sites located within outfall area	12 CH sites located within outfall area	1 CH site located within outfall area	12 CH sites located within outfall area	12 CH sites located within outfall area
1.3.5	**Recorded shipwreck sites**	40 shipwrecks in and within vicinity of the outfall area	40 shipwrecks 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	40 shipwrecks in and within vicinity of the outfall area

2.0	Landscape & 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	Significant - one 0.5km E with relatively clear views towards the site afforded from here - also distant elevated views from scenic routes >5km N	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
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 - 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	Significant - open rural landscape character of high integrity within and around the site	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
2.1.6	**Potential to impact on views from settlements**	Imperceptible - Crossroads settlement (Ballyboghill) 2.5km W has no view of site	Moderate - Crossroads settlement (Ballyboghill) 1.5km NW and associated dwellings stretch southwards along R108 closer to the site (1km)	Slight - Densely populated Nth Dublin suburb of Darndale <1km S, other estates 1km N and E - No clear views afforded toward the site from any of these	Moderate - Crossroads settlement (Ballyboghill) 1.7km NW and associated dwellings stretch southwards along R108 closer to the site (1km)	Slight - settlement of Lusk 1.5km E but no views available - small settlement of Dunganstown 1km SE may be afforded restricted views
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 dwellings lining local road 0.5km N and old N1 0.5km E

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 afforded from local road overpass 1km NE	Imperceptible - M1 passes 2.5km E and views of the scheme would not be afforded	Slight - M1 passes 1km W - clear views only afforded from highest point of M1/M50 interchange	Imperceptible - M1 passes 3km E and views of the scheme would not be afforded	Significant - site is located directly adjacent to E of M1 motorway and filtered views of site through roadside screening will be afforded
2.1.10	**Potential to impact on views from other major roads (national or regional roads)**	Moderate - regional road (R129) 0.6km S glimpses may be afforded 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 at < 0.5km - clear views afforded from some sections and site access from R129	Slight / Significant - heavily used N32 national secondary road 0.3km to S and R107 regional road 1km E - neither has clear views towards site due to roadside screening - Note future malahide Rd realignment adjacent to site	Significant - R108 regional road 0.3km W and clear views afforded from some sections	Significant - slightly elevated R132 regional road (old N1) 0.5km E affords occasional clear views over site
2.1.11	**Potential to impact on arrival views from Dublin Airport including aerial approach and vehicular egress**	Imperceptible - airport 10km S	Imperceptible - airport 8.5km S	Significant - airport 2km NW - clear views not afforded towards the site at ground level but it would be a prominent feature of the low level landing approach from the E	Imperceptible - airport 7.5km S	Imperceptible - airport 10km S
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
2.1.13	**Potential to impact on historic designed landscapes**	Moderate - Woodpark demesne 0.15km NE	Imperceptible - No demesne landscapes within or near 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 surrounded to the north and east by the site at the minimum setback (0.3km)	Imperceptible - No demesne landscapes within or near this site

2.2	**Landscape & Visual - Pipelines**					
2.2.10	**Potential to disrupt landscape structure (treelines / hedgerows / field pattern etc.)**	A - Moderate - landscape is relatively unstructured and irregular along this pipeline 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 field patterns F - Significant - this corridor section passes almost entirely through fields and hedgerows G - Slight - Moderate - landscape is relatively unstructured and open along this pipeline corridor section but with some hedgerow field patterns	A - Moderate - landscape is relatively unstructured and irregular along this pipeline 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 field patterns F - Significant - this corridor section passes almost entirely through fields and hedgerows G - Slight - Moderate - landscape is relatively unstructured and open along this pipeline corridor section but with some hedgerow field patterns	A - Moderate - landscape is relatively unstructured and irregular along this pipeline corridor section but with some hedgerow field patterns ..... B- Moderate - landscape is relatively unstructured and irregular along this pipeline corridor section but with some hedgerow field patterns G - Slight - Moderate - landscape is relatively unstructured and open along this pipeline corridor section but with some hedgerow field patterns	A - Moderate - landscape is relatively unstructured and irregular along this pipeline 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 field patterns F - Significant - this corridor section passes almost entirely through fields and hedgerows G - Slight - Moderate - landscape is relatively unstructured and open along this pipeline corridor section but with some hedgerow field patterns	A - Moderate - landscape is relatively unstructured and irregular along this pipeline 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 field patterns F - Significant - this corridor section passes almost entirely through fields and hedgerows G - Slight - Moderate - landscape is relatively unstructured and open along this pipeline corridor section but with some hedgerow field patterns
2.2.13	**Potential to impact on historic designed landscapes**	A - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section D -Significant - passes across corner of Abbeyville estate at eastern end of corridor F - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section G - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section	A - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section D -Significant - passes across corner of Abbeyville estate at eastern end of corridor F - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section G - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section	A - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section ..... B - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section . G - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section	A - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section D -Significant - passes across corner of Abbeyville estate at eastern end of corridor F - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section G - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section	A - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section D -Significant - passes across corner of Abbeyville estate at eastern end of corridor F - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section G - Imperceptible - There does not appear to be any demesne landscapes in the vicinity of this pipeline corridor section
2.3	**Landscape & Visual - Marine Outfalls**					

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)	**Slight:** 5.3km upstream of Natura 2000 wetland sites Rogerstown Estuary SPA/SAC and 7.0km upstream of Natura 2000 wetland sites Malahide Estuary SPA/SAC	**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)	**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 corridor.	**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**	**Significant**: 2.4km of hedges within the site	**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.	**Slight:** 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 (I.e. 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**					
3.2.1	**Potenital to impact on Natura 2000 Sites and Natural Heritage Areas**	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 D - 0.5km Malahide estuary SPA/SAC; 2.0km Baldoyle Bay SPA/SAC/pNHA F - Malahide Estuary SPA/SAC/pNHA; Rogerstown Estuary SPA/SAC/pNHA; Balcunnin Stream flows out to WFD coastal waters G - 0.5km Baldoyle Bay SAC/SPA/pNHA F - Also crosses Balcunnin Stream which flows out to WFD coastal waters	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 D - 0.5km Malahide estuary SPA/SAC; 2.0km Baldoyle Bay SPA/SAC/pNHA F - Malahide Estuary SPA/SAC/pNHA; Rogerstown Estuary SPA/SAC/pNHA; Balcunnin Stream flows out to WFD coastal waters G - 0.5km Baldoyle Bay SAC/SPA/pNHA F - Also crosses Balcunnin Stream which flows out to WFD coastal waters	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 B - 8.0km North Dublin BAY SAC and North Bull Island SPA; 4.5km Baldoyle Bay SAC/SPA/pNHA G - 0.5km Baldoyle Bay SAC/SPA/pNHA G - Also interfaces with Baldoyle Bay SAC/SPA/pNHA and Ramsar site	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 D - 0.5km Malahide estuary SPA/SAC; 2.0km Baldoyle Bay SPA/SAC/pNHA F - Malahide Estuary SPA/SAC/pNHA; Rogerstown Estuary SPA/SAC/pNHA; Balcunnin Stream flows out to WFD coastal waters G - 0.5km Baldoyle Bay SAC/SPA/pNHA F - Also crosses Balcunnin Stream which flows out to WFD coastal waters	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 D - 0.5km Malahide estuary SPA/SAC; 2.0km Baldoyle Bay SPA/SAC/pNHA F - Malahide Estuary SPA/SAC/pNHA; Rogerstown Estuary SPA/SAC/pNHA; Balcunnin Stream flows out to WFD coastal waters G - 0.5km Baldoyle Bay SAC/SPA/pNHA F - Also crosses Balcunnin Stream which flows out to WFD coastal waters
3.2.2	**Potential to impact upon ecological buffer zones or Nature Development Areas idenitifed in the Fingal Development Plan 2011 - 2017**	Impinges upon 6 ecological buffer zones (3 No. D; 3 No. G) Impinges upon four nature developoment areas Potenitally impinges on 6 No. Nature Development Areas	Impinges upon 6 ecological buffer zones (3 No. D; 3 No. G) Impinges upon four nature developoment areas Potenitally impinges on 6 No. Nature Development Areas	Impinges upon 3 ecological buffer zones (Route G) Impinges upon four nature developoment areas Crosses 1 No. nature development area Potenitally impinges on 1 No. Nature Development Areas	Impinges upon 6 ecological buffer zones (3 No. D; 3 No. G) Impinges upon four nature developoment areas Potenitally impinges on 6 No. Nature Development Areas	Impinges upon 6 ecological buffer zones (3 No. D; 3 No. G) Impinges upon four nature developoment areas Potenitally impinges on 6 No. Nature Development Areas

3.2.3	**Potential to impact upon ecological corridor, nature development area or high value habitats**	Crosses 10 No. ecological corridors Potentially crosses 1 No. ecological corridor Impinges upon TPO sites Potentially impinges upon TPO areas Potentially crosses 36 rivers or streams Loss of hedgerow habitat along 41km	Crosses 10 No. ecological corridors Potentially crosses 1 No. ecological corridor Impinges upon TPO sites Potentially impinges upon TPO areas Potentially crosses 36 rivers or streams Loss of hedgerow habitat along 41km	Crosses 2 No. ecological corridors Potentially crosses 1 No. ecological corridor Impinges upon TPO sites Crosses 1 No. TPO site Potentially crosses 4 rivers or streams Potentially crosses one area of deciduous woodland Loss of hedgerow habitat along 17km	Crosses 10 No. ecological corridors Potentially crosses 1 No. ecological corridor Impinges upon TPO sites Potentially impinges upon TPO areas Potentially crosses 36 rivers or streams Loss of hedgerow habitat along 41km	Crosses 10 No. ecological corridors Potentially crosses 1 No. ecological corridor Impinges upon TPO sites Potentially impinges upon TPO areas Potentially crosses 36 rivers or streams Loss of hedgerow habitat along 41km
3.2.4	**Potenitial to impact on a salmonid system**	Crosses 8 No. salmonid systems.	Crosses 8 No. salmonid systems.	Crosses 2 No. salmonid systems.	Crosses 8 No. salmonid systems.	Crosses 8 No. salmonid systems.
3.2.6	**Potential to impact on the breeding habitat for Annex 1 species Kingfisher**	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 River where possible suitable habitat for breeding kingfisher occurs	No suitable riparian habitat for breeding kingfisher	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 River where possible suitable habitat for breeding kingfisher occurs
3.2.8	**Potential to impact on IWeBS identified areas of importance to birds adjacent to Malahide Estuary**	Portion of route located within Malahide Estuary IWEBS area Portion of route located within 'Skerries Grasslands' IWEBS area	Portion of route located within Malahide Estuary IWEBS area Portion of route located within 'Skerries Grasslands' IWEBS area	No IWEB areas located on pipeline route	Portion of route located within Malahide Estuary IWEBS area Portion of route located within 'Skerries Grasslands' IWEBS area	Portion of route located within Malahide Estuary IWEBS area Portion of route located within 'Skerries Grasslands' IWEBS area

3.3	**Ecology - Marine Outfall**					
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)	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 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)
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)
3.3.6	**Potential to impact on water quality and bathing waters designated under the Bathing Water Directive**	Slight (to be determined following hydrodynamic modelling)	Slight (to be determined following hydrodynamic modelling)	Moderate (to be determined following hydrodynamic modelling)	Slight (to be determined following hydrodynamic modelling)	Slight (to be determined following hydrodynamic modelling)
4.0	**Hydrology -**	**Annsbrook**	**Baldurgan**	**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 site 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.	***Slight:*** 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.	***Moderate:*** Belinstown River (10m north) and Broadmeadow tributary (1km south) (water quality Q3) 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 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 permanent impact on small proportion of attribute.	**Slight:** Crossing Ballough Tributary , Medium importance. Will have permanent impact on small proportion of attribute.

4.1.3	**Area prone to flooding (based on historical data and predicted flood extents adjacent to the site as well as up and downstream locations)**	***Imperceptible:*** No flooding to the site from the Ballough and Ballyboghill rivers. The Ballyboghill has extensive overland flooding approx. 3km downstream, Low importance. Will have permanent impact on small proportion of attribute.	***Slight:*** Ballyboghill have overland flooding approx. 200m to the north of the site. The Belinstown has extensive overland flooding approx. 2km downstream, medium importance. Will have permanent impact on small proportion of attribute.	***Imperceptible:*** No flooding from the Mayne / Cuckoo Rivers to the site. The Mayne has history of flooding; and predicted overland flooding approx. 2km downstream, Low importance. Will have permanent impact on small proportion of attribute.	***Imperceptible:*** The Belinstown has extensive predicted overland flooding (both tidal & fluvial) and recurrence historic flooding approx. 3.5km downstream, Low importance. Will have permanent impact on small proportion of attribute.	***Imperceptible:*** No flooding from Ballough River. The eastern tributary was not modelled in FEM FRAMS, but has a history of flooding upstream, Low 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. 4.6km 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 5km downstream respectively, Low importance. Will have permanent impact on small proportion of attribute.	***Slight:*** 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.
4.2	**Hydrology - Pipelines**					
4.2.1	**Proximity to water bodies in terms of flooding and as an indicator of sensitive surface water receptors**	18 river catchments and some coastal areas	18 river catchments and some coastal areas	7 river catchments and some coastal areas	18 river catchments and some coastal areas	18 river catchments and some coastal areas
4.3	**Hydrology - Marine Outfall**					

5.0	Hydrogeology -	Annsbrook	Baldurgan	Clonshagh	Cookstown	Newtowncorduff
5.1	Hydrogeology - Sites					
5.1.4	Groundwater Supplies - identification of water supply springs and bored wells based on GSI, EPA & FCC records	**None:** No Groundwater Supplies within 500m however unconfirmed information from FCC suggests the possibility of additional groundwater abstraction points and wells nearby (Appendix A). If present, well would be of Low importance and would have a permanent impact on a significant proportion of attribute.	**Slight:** 1x Spring; St. Bridget's Well 400m South. Unconfirmed information from FCC suggests the possibility of additional groundwater abstraction points and wells nearby (Appendix A). Low importance. Will have permanent impact on a significant proportion of attribute.	**None:** No Groundwater Supplies within 500m	**Slight:** 1x Spring; St. Bridget's Well 210m South East. Unconfirmed information from FCC suggests the possibility of additional groundwater abstraction points and wells nearby (Appendix A). Low importance. Will have permanent impact on a significant proportion of attribute.	**Slight:** 1x bored well; for agriculture and domestic use with good yields 510m North. Unconfirmed information from FCC suggests the possibility of additional groundwater abstraction points and wells nearby (Appendix A). Low importance. Will have permanent impact on a significant proportion of attribute.
5.1.6	Identification of hydrogeological features from the GSI Karst database	***None:*** No Karst Feature within 2km	***None:*** 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.	***None:*** No Karst Feature within 2km	***Slight:*** 4 x springs; Horlakes Well, St. Catherine's Well, Bridetree Well and St. Maccullins Well within 1.8km north east to south east of the site, Low importance. Will have permanent impact on a significant proportion of attribute.
5.2	Hydrogeology - Pipelines					
5.2.2	Vulnerability Classification - potential for groundwater contamination	A - predominantly high D - predominantly high F - predominantly low G - predominantly 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 D - predominantly high F - predominantly low G - predominantly low

5.3	**Hydrogeology - Marine Outfall**					
5.3.2	**Vulnerability Classification - potential for groundwater contamination**	predominantly low	predominantly low	predominantly high	predominantly low	predominantly low
5.3.3	**Groundwater Supplies - identification of water supply springs and bored wells based on GSI, EPA & FCC records**	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	No groundwater supplies within 500m	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
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	2 No. springs within the corridor
6.0	**Soils and Geology**	**Annsbrook**	**Baldurgan**	**Clonshagh**	**Cookstown**	**Newtowncorduff**
6.1	**Soils and Geology - Sites**					
6.2	**Soils and Geology - Pipelines**					
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.	1 No.
6.2.2	**Potential to interact with contaminated land**	35 No.	35 No.	24 No.	35 No.	35 No.
6.2.4	**Potential to encounter shallow bedrock during construction (interactions with other disciplines during construction - noise, dust etc)**	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 surface)	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 surface)	A - 95% shallow bedrock (15% bedrock at surface) B - 5% Shallow bedrock (0% bedrock at surface) G - 5% shallow bedrock (0% at surface)	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 surface)	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 surface)
6.2.5	**Potential impact on karst features**	2 No.	2 No.	No karst features within corridor	2 No.	2 No.

6.2.6	**Potential to encounter soft ground**	A - 1% Alluvium deposits D - Small area of lithosols/Peats (basic); 10% of alluvium deposits F - 5% Alluvium deposits G - 10% Alluvium Deposits	A - 1% Alluvium deposits D - Small area of lithosols/Peats (basic); 10% of alluvium deposits F - 5% Alluvium deposits G - 10% Alluvium Deposits	A - 1% Alluvium deposits B - 1% Alluvium deposits G - 10% Alluvium Deposits	A - 1% Alluvium deposits D - Small area of lithosols/Peats (basic); 10% of alluvium deposits F - 5% Alluvium deposits G - 10% Alluvium Deposits	A - 1% Alluvium deposits D - Small area of lithosols/Peats (basic); 10% of alluvium deposits F - 5% Alluvium deposits G - 10% Alluvium Deposits
6.3	**Soils and Geology - Marine Outfall**					
6.3.1	**Potential to impact on Geological Heritage Sites/County Geological Sites**	2 No	2 No	No Geological Heritage Sites within corridor	2 No	2 No
6.3.2	**Potential to interact with contaminated land**	9 No.	9 No.	1 No.	9 No.	9 No.
6.3.4	**Potential to encounter shallow bedrock during construction (interactions with other disciplines during construction - noise, dust etc)**	5% shallow bedrock (2% bedrock at surface)	5% shallow bedrock (2% bedrock at surface)	15% shallow bedrock	5% shallow bedrock (2% bedrock at surface)	5% shallow bedrock (2% bedrock at surface)
6.3.5	**Potential impact on karst features**	3 No.	3 No.	No karst features within corridor	3 No.	3 No.
6.3.6	**Potential to encounter soft ground**	1% Alluvium deposits	1% Alluvium deposits	15% Alluvium deposits	1% Alluvium deposits	1% Alluvium deposits
7.0	**Agronomy & Agriculture - Sites**	**Annsbrook**	**Baldurgan**	**Clonshagh**	**Cookstown**	**Newtowncorduff**
7.1	**Approximate% Reduction in overall farm holding**	36%	21%	28%, 18%,24 %	21%	21%
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**
8.4	**Construction Phase Impact rating**	slight	imperceptible	slight	imperceptible	slight
8.5	**Operational Phase Impact rating**	slight	imperceptible	slight	imperceptible	slight

9.0	Air and Odour	Annsbrook	Baldurgan	Clonshagh	Cookstown	Newtowncorduff
10.0	People and Communities	Annsbrook	Baldurgan	Clonshagh	Cookstown	Newtowncorduff
10.1	Number of residential & commercial buildings 300-500m from site boundary	44	21	83	53	33
10.3	Potential to impact on known community amenities and facilities within 1km from site boundary.	Ballyboghill Hedgerow Round (Sli na Sceacha) - c. 480m to the SW.	Ballyboghill Hedgerow Round (Sli na Sceacha) - c. 280m to the east.	Football grounds c. 700m to the NW, Darndale and Belcamp Parks c. 800m to the SW and SE respectively and Innisfail GAA club c. 500m to the south.	Swords Roganstown golf club c. 990m to the south and Ballyboghill Hedgerow Round c. 980m to the NE.	None
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.
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 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.	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)	few 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**	RU (Rural)	RU (Rural)	GB (Greenbelt) HT (High Tech)	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	N/A
12.4	**Local Objectives on Site**	None	None	432 (Prepare Masterplan)	None	None
12.5	**Other Local Objectives on Site**	None	None	Road objectives	None	None
12.6	**Land Uses present within 300m of site boundary**	Agricultural	Agricultural	Agricultural Open Space Urban Commercial	Agricultural	Agricultural Motorway
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)
12.8	**Airport Public Safety and Noise Zones within 300m of site boundary**	N/A	N/A	Inner PSZ Outer PSZ Inner Noise Zone Outer Noise Zone	N/A	N/A
12.9	**Local Objectives within 300m of site boundary**	180 (2 dwellings)	None	432 (prepare roads masterplan)	None	None
12.10	**Other Local Objectives present within 300m of site boundary**	None	None	Road objectives	None	None
12.11	**Land Uses present within 1km of Land Parcel Boundary**	Agricultural Rural Residential Rural Commercial Motorway	Agricultural Rural Residential (including Village) Rural Commercial	Agricultural Open Space Urban Residential Urban Commercial Hotel Burial Ground	Agricultural Rural Residential (including Village) Rural Commercial	Agricultural Rural Residential Rural Commercial Urban Residential Motorway

12.12	**Zoning present within 1km of Land Parcel Boundary**	RU (Rural) RC (Rural Cluster) RB (Rural Business)	RU (Rural) RV (Rural Village) GB (Green Belt)	GB (Greenbelt) HT (High Tech) OS (Open Space) RA (New Residential) RS (Residential)	RU (Rural) GB (Greenbelt) RV (Rural Village)	RU (Rural) RB (Rural Business) RC (Rural Cluster) GE (Enterprise) RA (New Residential) RS (Residential)
12.13	**Airport Public Safety and Noise Zones within 1km of land parcel boundary**	N/A	N/A	Outer PSZ Inner Noise Zone Outer Noise Zone	N/A	N/A
12.14	**Local Objectives within 1km of Land Parcel Boundary**	144 (ELV facility) 180 (2 dwellings) 203 (sports facility) 214 (1 dwelling) 219 (employment opportunity)	203 (sports facility) 219 (employment opportunity) 228 (1 dwelling)	383 (local shop) 411 (foot path) 413 (nursing home) 423 (prepare office masterplan) 432 (prepare roads masterplan) 436 (cemetery) 439 (high tech uses) 442 (FRA required) 443 (local shops) 446 (riverside walk)	228 (1 dwelling) 258 (tourism complex)	145, 148, 149, 152,, 156, 158, 156, 158, 159, 160, 161, 163, 164 (all relating to development of western edge of Lusk)
12.15	**Other Local Objectives present within 1km of Land Parcel Boundary**	None	Preserved Views to north and southeast	None	Preserved views to east	Preserved views to north, northeast Road objective to west
13.0	**Engineering Design - Pipelines**	**Annsbrook**	**Baldurgan**	**Clonshagh**	**Cookstown**	**Newtowncorduff**
13.1	**Pipeline Length**					

13.1.6	**Total Pipeline Lengths**					
	Total Length as Open Cut	30,950 m	28,950 m	19,600 m	28,950 m	29,450 m
	Total Length as Tunnel	14,400 m	16,400 m	5,000 m	16,450 m	15,900 m
	Total Length in Marine	2,500 m	2,500 m	6,000 m	2,500 m	2,500 m
	Total Pipeline Length	**47,850 m**	**47,850 m**	**30,600 m**	**47,900 m**	**47,850 m**
13.2	**Power Requirements**					
	Power Requirement from 9C to WWTP Site	7,000 kW	6,700 kW	5,450 kW	6,600 kW	6,750 kW
	Power Requirement from North Dublin to WWTP Site	3,000 kW	3,000 kW	2,400 kW	3,000 kW	2,550 kW
	Total Power Requirements	**10,000 kW**	**9,700 kW**	**7,850 kW**	**9,600 kW**	**9,300 kW**
13.3	**Carbon Emissions**					
	Total embodied Carbon	**56,029**	**57,247**	**35,947**	**57,325**	**56,942**
	Total Lifetime Operational Carbon	**447,979**	**431,180**	**349,984**	**425,580**	**425,580**
	Total Carbon (tonnes CO2)	**504,008**	**488,427**	**385,931**	**482,905**	**482,523**
13.5	**Access / Right of Way / Wayleaves along Pipeline Corridors**					
	Potential restrictions Along Pipeline Corridors to WwTP Sites	11	11	8	11	11
13.6	**Crossings - Waterways, Rail, etc. along Pipeline Corridors**					
	Main River Crossings	7	7	2	7	7
	Stream Crossings	4	4	0	4	4
	Golf Courses	0	0	2	0	0
	Canal Crossings	0	0	0	0	0
	Motorway Crossings	2	2	1	2	2
	National Road Crossings	1	1	1	1	1
	Regional Road Crossings	15	15	10	15	15
	Railway Crossings	2	2	1	2	2
	Total Crossings	**31**	**31**	**17**	**31**	**31**
13.7	**Potential to Impact on Physical Infrastructure along Pipeline Corridors**					
		More Impact on local Roads	More Impact on local Roads	Least Impact on Local Roads	More Impact on local Roads	More Impact on local Roads

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**					
		Most Ownerships	Most Ownerships	Least Ownerships	Most Ownerships	Most Ownerships
13.11	**Route Traffic Management**					
		Moderate Impact during Construction stage	Moderate Impact during Construction stage	Imperceptible Impact during Construction stage	Moderate Impact during Construction stage	Moderate Impact during Construction stage
		No Impact After Construction Stage	No Impact After Construction Stage	No Impact After Construction Stage	No Impact After Construction Stage	No Impact After Construction Stage
13.12	**Construction Risk along Pipeline Corridors**					
		(1) Deep Tunnel to Site, (2) Deep Tunnel to Coast.	(1) Deep Tunnel to Site, (2) Deep Tunnel to Coast.	(1) Deep Tunnel to Site, (2) Difficult Sea Outfall.	(1) Deep Tunnel to Site, (2) Deep Tunnel to Coast.	(1) Deep Tunnel to Site, (2) Deep Tunnel to Coast.
		Most Variability in Depth to Bedrock	Most Variability in Depth to Bedrock	Least Variability in Depth to Bedrock	Most Variability in Depth to Bedrock	Most Variability in Depth to Bedrock
13.13	**Operation and Maintenance - WwTP, Pumping Stations & Pipeline ancillaries**					
		Most Issues	Most Issues	Least Issues	Most Issues	Most Issues