
Appendix 18.1
Details of Utility Conflicts
and Diversions

APPENDIX 18.1 Details of Utility Conflicts and Diversions

A.1. Utility Conflicts and Diversions in Zone A

Location	Utility Type	Utility ID	Specific Location	Utility Details	Conflict	Diversion Details	Comments/Notes	Baseline Rating	Impact Magnitude	Significance of Impact
Adamstown Station - west of Hazelhatch and Celbridge Station - east of	Electricity	ESB-54	Crosses over tracks at Celbridge Golf Club.	MV OH	Vertical clearance to proposed OHLE	PERMANENT: 2x160mm ESB MV Duct	HDD solution	Medium	Low	Slight
Station Rd Bridge (OBC11) - west of	Electricity	ESB-47	Crosses over tracks west of Station Rd Bridge (OBC11).	LV OH	Vertical clearance to proposed OHLE	PERMANENT: 2x125mm ESB LV Duct	HDD solution	Medium	Low	Slight
Adamstown Rd Bridge (OBC19) - 200m west of	Electricity	ESB-37	Crosses over tracks 200m west of Adamstown Rd Bridge (OBC19).	MV OH	Vertical clearance to proposed OHLE	PERMANENT: 2x160mm ESB MV Duct	HDD solution	Medium	Low	Slight
Kishoge Station - west of	Electricity	ESB-30	Crossover under tracks west of Kishoge Station	MV OH	Conflict with proposed 38kV substation	PERMANENT: 200m 2x125mm ESB MV Duct	No comments	Medium	Low	Slight
Kishoge Station - west of	Electricity	ESB-29	Crosses over tracks west of Kishoge Station.	MV OH	Vertical clearance to proposed OHLE	PERMANENT: 2x160mm ESB MV Duct	HDD solution	Medium	Low	Slight

Location	Utility Type	Utility ID	Specific Location	Utility Details	Conflict	Diversion Details	Comments/Notes	Baseline Rating	Impact Magnitude	Significance of Impact
Parkwest & Cherry Orchard Station	Electricity	ESB-15	Crosses above tracks at Parkwest & Cherry Orchard Station.	38 kV OH	Vertical clearance to proposed OHLE	PERMANENT: 2x160mm ESB MV Duct	Diversion will be necessary due to conflict with proposed OHLE.	High	High	Significant

A.2. Utility Conflicts and Diversions in Zone B

Location	Utility Type	Utility ID	Specific Location	Utility Details	Conflict	Diversion Details	Comments/ Notes	Baseline Rating	Impact Magnitude	Significance of Impact
Le Fanu Bridge (OBC7) - run parallel to tracks on south verge for 1,500m until Parkwest & Cherry Orchard Station	Electricity	ESB-13	Runs parallel to tracks on south side for 1500m until Parkwest & Cherry Orchard Station.	38 kV OH	Proposed retaining walls and OBC7 reconstruction.	INCLUDED ABOVE (ESB-12)	Diversion required due to the proximity of works for OBO7 and 23m wayleave for adjacent 38kV OH lines.	High	High	Significant
Le Fanu Bridge (OBC7) - runs parallel to tracks on south verge for 1500m until Parkwest & Cherry Orchard Station.	Electricity	ESB-12	Runs parallel to tracks on south side for 1500m until Parkwest & Cherry Orchard Station.	38 kV OH	Proposed retaining walls and OBC7 reconstruction.	PERMANENT: 1800m 2x 38kV duct	Diversion required due to the proximity of works for OBO7 and 23m wayleave for adjacent 38kV OH lines	High	High	Significant

Location	Utility Type	Utility ID	Specific Location	Utility Details	Conflict	Diversion Details	Comments/ Notes	Baseline Rating	Impact Magnitude	Significance of Impact
Le Fanu Bridge (OBC7) - 20m west of, also runs parallel to tracks on north verge to Cherry Orchard Ave.	Water Mains / Sewers	CS-09	Crosses under tracks west of Le Fanu Bridge (OBC7)	Underground combined sewer pipe Diameter: 300mm / 600mm IL: 39.7 Material: steel/ 600mm.	Proposed track lowering	PERMENENT: 270m 600mm concrete	Current estimates on sewer and permanent way levels suggest that the pipe lies between 0.65m - 0.83m from crest below track level. Too close to tracks. Diversion works will be within the 23m wayleave for ESB-12, 13.	Medium	High	Significant
Le Fanu Bridge (OBC7)	Water Mains / Sewers	WM-10	Crosses tracks through Le Fanu Bridge (OBC7)	Underground watermain pipe Diameter: 304.8 mm IL: unknown Material: unknown	OBC7 Bridge reconstruction	INCLUDED ABOVE (WM-09)	12" CI on approach to bridge, with 2 x 12" CI within bridge deck.	Medium	Low	Slight
Le Fanu Bridge (OBC7)	Water Mains / Sewers	WM-09	Crosses tracks through Le Fanu Bridge (OBC7)	Underground watermain pipe Diameter: 304.8 mm IL: unknown Material: unknown	OBC7 Bridge reconstruction	PERMANENT: 43m 2x304.8mm Pipes EXTRAS: 115m of existing watermain to be removed & 4xSluice Valves to Irish Water Specification	12" CI on approach to bridge, with 2 x 12" CI within bridge deck.	Medium	Low	Slight

Location	Utility Type	Utility ID	Specific Location	Utility Details	Conflict	Diversion Details	Comments/ Notes	Baseline Rating	Impact Magnitude	Significance of Impact
Le Fanu Bridge (OBC7) - 8m east of	Electricity	ESB-11	Crosses under tracks east of Le Fanu Bridge (OBC7)	MV underground	OBC7 Bridge reconstruction / track lowering	AS ABOVE (ESB-10)	ESBN will require a temp diversion to maintain supply to customers	Medium	Low	Slight
Le Fanu Bridge (OBC7) - 8m east of	Electricity	ESB-10	Crosses under tracks east of Le Fanu Bridge (OBC7)	MV underground	OBC7 Bridge reconstruction / track lowering	TEMP: 96m 2x160mm ESB MV Duct PERMANENT:111m 2x160mm ESB MV Duct EXTRAS: 2xESB Mini pillar	No comments	Medium	Low	Slight
Kylemore Rd Bridge (OBC5A)	Telecommunications	BT-02	Crosses under tracks west of Kylemore Rd Bridge (OBC5A)	Underground longitudinal BT duct and BT Chamber	OBC5A Bridge reconstruction	PERMANENT: 50m BT Duct	No comments	High	Low	Slight
Kylemore Rd Bridge (OBC5A)	Telecommunications	EIR-06	Crosses tracks through Kylemore Rd Bridge (OBC5A)	4 x 110 duct, 1 x 3way MD	OBC5A Bridge reconstruction	TEMP: 75m 6x110mm EIR Duct PERMANENT: 50m 5x110mm EIR Duct EXTRAS: 2x JB4B to EIR Specification	No comments	High	Low	Slight

Location	Utility Type	Utility ID	Specific Location	Utility Details	Conflict	Diversion Details	Comments/ Notes	Baseline Rating	Impact Magnitude	Significance of Impact
Kylemore Rd Bridge (OBC5A)	Water Mains / Sewers	WM-07	Crosses tracks through Kylemore Rd Bridge (OBC5A)	Underground watermain pipe Diameter: 228.6 mm IL: unknown Material: unknown	OBC5A Bridge reconstruction	PERMANENT: 50m 1x300mm watermain in steel sleeves between PC conc. Beams EXTRAS: 50m of existing watermain to be removed & 1xSluice Valves to Irish Water Specification	9" across bridge and 6" CI crossing Kylemore Rd	Medium	Low	Slight
Kylemore Rd Bridge (OBC5A)	Telecommunications	VM-04	Crosses tracks through Kylemore Rd Bridge (OBC5A)	1x144-core and 1x48-core fibre optic cables, trunk coax cable, within 2x110PVC ducts. All cables feed cabinets located immediately north of the bridge. BT cable is the 1x48 core.	OBC5A Bridge reconstruction	TEMP: 67m 2x110mm VM Duct PERMANENT: 62m 2x110mm VM Duct EXTRAS: 1xJB4B to VM Specification	No comments	High	Low	Slight

Location	Utility Type	Utility ID	Specific Location	Utility Details	Conflict	Diversion Details	Comments/ Notes	Baseline Rating	Impact Magnitude	Significance of Impact
Kylemore Rd Bridge (OBC5A)	Electricity	ESB-09	Crosses tracks through Kylemore Rd Bridge (OBC5A)	LV underground	OBC5A Bridge reconstruction	TEMP: 101m 2x160mm ESB MV Duct PERMANENT: 54m 2x160mm ESB MV Duct	No comments	Medium	Medium	Moderate
Kylemore Rd Bridge (OBC5A)	Electricity	ESB-08	Crosses tracks through Kylemore Rd Bridge (OBC5A)	MV underground	OBC5A Bridge reconstruction	TEMP: 101m 2x125mm ESB LV Duct PERMANENT: 54m 2x125mm ESB LV Duct EXTRAS: 2xESB Mini pillar	No comments	Medium	Medium	Moderate
Kylemore Rd Bridge (OBC5A)	Telecommunications	EIR-05	Crosses tracks through Kylemore Rd Bridge (OBC5A)	1 x 110 conc. duct	OBC5A Bridge reconstruction	TEMP: 84m 6x110mm EIR Duct PERMANENT: 52m 1x110mm EIR Duct EXTRAS: 2x JB4B to EIR Specification	No comments	High	Medium	Moderate

Location	Utility Type	Utility ID	Specific Location	Utility Details	Conflict	Diversion Details	Comments/ Notes	Baseline Rating	Impact Magnitude	Significance of Impact
Kylemore Rd Bridge (OBC5A)	Gas	GNI-09b	Runs parallel to tracks west of southern abutment of Kylemore Rd Bridge (OBC5A)	Low pressure distribution pipe 63 PE 25 mbar Diameter: unknown	OBC5A Bridge reconstruction	INCLUDED ABOVE (GNI-06)	GNI will require a temp diversion to maintain supply to customers.	Medium	Medium	Moderate
Kylemore Rd Bridge (OBC5A)	Gas	GNI-09a	Runs parallel to tracks west of southern abutment of Kylemore Rd Bridge (OBC5A)	Low pressure distribution pipe 63 PE 25 mbar Diameter: unknown	OBC5A Bridge reconstruction	INCLUDED ABOVE (GNI-06)	GNI will require a temp diversion to maintain supply to customers.	Medium	Medium	Moderate
Kylemore Rd Bridge (OBC5A)	Gas	GNI-09	Runs parallel to tracks west of southern abutment of Kylemore Rd Bridge (OBC5A)	Low pressure distribution pipe 63 PE 25 mbar Diameter: unknown	OBC5A Bridge reconstruction	INCLUDED ABOVE (GNI-06)	GNI will require a temp diversion to maintain supply to customers.	Medium	Medium	Moderate
Kylemore Rd Bridge (OBC5A)	Gas	GNI-08b	Kylemore Rd - east footpath	Medium pressure distribution pipe 250 PE 4 bar Diameter: unknown	Levels from redesigned bridge requires the pipe to be raised / moved / diverted	INCLUDED ABOVE (GNI-06)	Refer to GNI-08 note	Medium	Medium	Moderate

Location	Utility Type	Utility ID	Specific Location	Utility Details	Conflict	Diversion Details	Comments/ Notes	Baseline Rating	Impact Magnitude	Significance of Impact
Kylemore Rd Bridge (OBC5A)	Gas	GNI-08a	Kylemore Rd - east footpath	Medium pressure distribution pipe 250 PE 4 bar Diameter: unknown	Levels from redesigned bridge requires the pipe to be raised / moved / diverted	INCLUDED ABOVE (GNI-06)	Refer to GNI-08 note	Medium	Medium	Moderate
Kylemore Rd Bridge (OBC5A)	Gas	GNI-08	Crosses tracks through Kylemore Rd Bridge (OBC5A)	Low pressure distribution pipe 250 PE-80 25mbar Diameter: 304.8mm	OBC5A Bridge reconstruction	INCLUDED ABOVE (GNI-06)	Temp diversions will be necessary - across bridge.	Medium	Medium	Moderate
Kylemore Rd Bridge (OBC5A)	Gas	GNI-07b	Cul-de-sac south east of OBC5A	Medium pressure distribution pressure 63 PE 4 bar (unverified) Diameter: unknown	Levels from redesigned bridge requires the pipe to be raised / moved / diverted	INCLUDED ABOVE (GNI-06)	Refer to GNI-07 note	Medium	Medium	Moderate

Location	Utility Type	Utility ID	Specific Location	Utility Details	Conflict	Diversion Details	Comments/ Notes	Baseline Rating	Impact Magnitude	Significance of Impact
Kylemore Rd Bridge (OBC5A)	Gas	GNI-07a	Cul-de-sac south east of OBC5A	Medium pressure distribution pressure 125 PE-80 4 bar (unverified) Diameter: unknown	Levels from redesigned bridge requires the pipe to be raised / moved / diverted	INCLUDED ABOVE (GNI-06)	Refer to GNI-07 note	Medium	Medium	Moderate
Kylemore Rd Bridge (OBC5A)	Gas	GNI-07	Runs parallel to tracks on southern abutment of Kylemore Rd Bridge (OBC5A)	Low pressure service pipe 32 PE 25 mbar Diameter: unknown	OBC5A Bridge reconstruction	INCLUDED ABOVE (GNI-06)	Temp diversions will be necessary - across bridge.	Medium	Medium	Moderate
Kylemore Rd Bridge (OBC5A)	Gas	GNI-06e	Kylemore Rd / Landen Rd corner	DRI (Distribution Regulation Installation). Located beneath the footpath	Levels from redesigned bridge requires GNI to further investigate if DRI needs to be altered	INCLUDED ABOVE (GNI-06)	Refer to GNI-06 note	High	Medium	Moderate
Kylemore Rd Bridge (OBC5A)	Gas	GNI-06d	Landen Rd - south footpath	Low pressure distribution pipe 125 PE-80 [6 In]	Levels from redesigned bridge requires	INCLUDED ABOVE (GNI-06)	Refer to GNI-06 note	Medium	Medium	Moderate

Location	Utility Type	Utility ID	Specific Location	Utility Details	Conflict	Diversion Details	Comments/ Notes	Baseline Rating	Impact Magnitude	Significance of Impact
				25 mbar Diameter: 152.4mm	the pipe to be raised / moved / diverted					
Kylemore Rd Bridge (OBC5A)	Gas	GNI-06c	Landen Rd - north footpath	Low pressure distribution pipe 250 PE-80 25 mbar Diameter: unknown	Levels from redesigned bridge requires the pipe to be raised / moved / diverted	INCLUDED ABOVE (GNI-06)	Refer to GNI-06 note	Medium	Medium	Moderate
Kylemore Rd Bridge (OBC5A)	Gas	GNI-06b	Landen Rd - north footpath	Low pressure distribution pipe 90 PE-80 [4 In] 25 mbar Diameter: 101.6mm	Levels from redesigned bridge requires the pipe to be raised / moved / diverted	INCLUDED ABOVE (GNI-06)	Refer to GNI-06 note	Medium	Medium	Moderate
Kylemore Rd Bridge (OBC5A)	Gas	GNI-06a	Kylemore Rd - east footpath	Low pressure distribution pipe 250 PE-80 [12 In] 25mbar Diameter: 304.8mm	Levels from redesigned bridge requires the pipe to be raised / moved / diverted	INCLUDED ABOVE (GNI-06)	Refer to GNI-06 note	Medium	Medium	Moderate

Location	Utility Type	Utility ID	Specific Location	Utility Details	Conflict	Diversion Details	Comments/ Notes	Baseline Rating	Impact Magnitude	Significance of Impact
Kylemore Rd Bridge (OBC5A)	Gas	GNI-06	Crosses tracks through Kylemore Rd Bridge (OBC5A)	Medium pressure distribution pipe 200mm steel 4 bar Diameter: unknown	OBC5A Bridge reconstruction	Below diversions account for GNI-06 to GNI-09b inclusive TEMP: 61m 1x250mm PE Pipe PERMANENT: 97m 1x250mm PE Pipe 23m 1x32 PE Low Pressure gas main 23m 1x63 PE Low Pressure gas main EXTRAS: Removal of 531m of abandoned gas main	Temp diversions will be necessary - across bridge.	Medium	Medium	Moderate
Kylemore Business Park	Electricity	ESB-07a	170m west of Kylemore Rd Bridge (OBC5A)	ESB 1000KVA sub station	Retaining wall works and headshunt location	Diversion/Relocation agreed with EBS in principle.	Design to progress during detailed design stage.	Medium	Medium	Moderate

Location	Utility Type	Utility ID	Specific Location	Utility Details	Conflict	Diversion Details	Comments/ Notes	Baseline Rating	Impact Magnitude	Significance of Impact
Inchicore Works	Water Mains / Sewers	ST-07	Crosses under tracks at Inchicore works and continues to Landen Rd	Unknown material CL: 37.24 IL:33.59	Retaining wall works and headshunt location	PERMANENT: 40m 600mm concrete pipe and 2 no. manholes	Utility Investigation Survey confirmed position of pipe and requirement of diversion	Medium	Low	Slight
Inchicore Works	Water Mains / Sewers	CS-06	Crosses under tracks west of Inchicore Works at Kylemore Business Park	Underground foul sewer pipe Diameter: 300mm IL: unknown Material: concrete	Retaining wall works and headshunt location	PERMANENT: 40m 300mm concrete pipe and 2 no. manholes	Utility Investigation Survey confirmed position of pipe and requirement of diversion	Medium	Medium	Moderate
Inchicore Works	Electricity	ESB-07	Crosses under tracks west of Inchicore Works at Kylemore Business Park	MV underground	Track lowering and headshunt location	PERMANENT: 70m 2x160mm ESB MV Duct	No comments	Medium	Medium	Moderate

Location	Utility Type	Utility ID	Specific Location	Utility Details	Conflict	Diversion Details	Comments/ Notes	Baseline Rating	Impact Magnitude	Significance of Impact
Inchicore Works	Gas	GNI-05	Runs parallel to tracks on south side at Inchicore Works	Medium pressure distribution pipe 90 PE 4 bar Diameter: 152.4mm	Track widening	Diversion dependent on site survey	Must maintain 3m lateral clearance from building (The Turret) and access availability.	Medium	Medium	Moderate
Sarsfield Rd Bridge (UBC4)	Gas	GNI-04	Crosses tracks under Sarsfield Rd Bridge (UBC4)	Low pressure distribution pipe 250 PE-80 25mbar Diameter: 304.8mm	Piling works for UBC4 reconstruction	INCLUDED ABOVE (GNI-02)	2no temp diversions to avoid piling work in close proximity.	Medium	Medium	Moderate
Sarsfield Rd Bridge (UBC4)	Water Mains / Sewers	WM-06a	Visible along northern side of the railway, immediately west of UBC4 Sarsfield Road Bridge, running parallel to the tracks	Underground watermain pipe Diameter: 150mm (assumed) Material: uPVC	Piling works for UBC4 reconstruction	INCLUDED ABOVE (WM-05)	Private supply pipe, connected to Heuston Yard for train wash facilities	Medium	Low	Slight

Location	Utility Type	Utility ID	Specific Location	Utility Details	Conflict	Diversion Details	Comments/ Notes	Baseline Rating	Impact Magnitude	Significance of Impact
Sarsfield Rd Bridge (UBC4)	Water Mains / Sewers	WM-06	Crosses tracks under Sarsfield Rd Bridge (UBC4)	Underground watermain pipe Diameter: 304.8mm IL: unknown Material: unknown	Piling works for UBC4 reconstruction	INCLUDED ABOVE (WM-05)	No temp diversion required.	Medium	Low	Slight
Sarsfield Rd Bridge (UBC4)	Gas	GNI-03	Crosses tracks under Sarsfield Rd Bridge (UBC4)	Low pressure distribution pipe 125 PE-80 Diameter: 152.4mm	Piling works for UBC4 reconstruction	INCLUDED ABOVE (GNI-02)	2no temp diversions to avoid piling work in close proximity.	Medium	Medium	Moderate

Location	Utility Type	Utility ID	Specific Location	Utility Details	Conflict	Diversion Details	Comments/ Notes	Baseline Rating	Impact Magnitude	Significance of Impact
Sarsfield Rd Bridge (UBC4)	Water Mains / Sewers	WM-05	Crosses tracks under Sarsfield Rd Bridge (UBC4)	Underground watermain pipe Diameter: 152.4mm IL: unknown Material: unknown	Piling works for UBC4 reconstruction	PERMANENT: 54m 1x150mm HDPE Pipe 55m 1x300mm HDPE Pipe EXTRAS: 109m of existing watermain to be removed & 4xSluice Valves to Irish Water Specification	No comments	Medium	Low	Slight
Sarsfield Rd Bridge (UBC4)	Electricity	ESB-06	Crosses tracks under Sarsfield Rd Bridge (UBC4)	LV underground	Piling works for UBC4 reconstruction	PERMANENT: 75m 2x125mm ESB LV Duct	No comments	Medium	Low	Slight

Location	Utility Type	Utility ID	Specific Location	Utility Details	Conflict	Diversion Details	Comments/ Notes	Baseline Rating	Impact Magnitude	Significance of Impact
Sarsfield Rd Bridge (UBC4)	Gas	GNI-02	Crosses tracks under Sarsfield Rd Bridge (UBC4)	Low pressure distribution pipe 125 PE-80 25 mbar Diameter: 152.4mm	Piling works for UBC4 reconstruction	Below diversions account for GNI-02 to GNI-04 inclusive TEMP: 60m 1x125mm PE Pipe & 60m 1x150mm PE Pipe PERMANENT: 64m 1x125mm PE Pipe & 64m 1x150mm PE Pipe EXTRAS: Removal of 120m of abandoned gas main	2 no. temporary diversions required to avoid piling works in close proximity.	Medium	Medium	Moderate
West of Memorial Road Bridge	Telecommunications	BT-01	Crosses tracks 40m west of Memorial Rd Bridge (OBC3)	Underground BT duct	OBC3 Bridge reconstruction / Track lowering	PERMANENT: 40m BT Duct EXTRAS: 2x JB4B to BT Specification	No comments	High	Low	Moderate
Memorial Rd Bridge (OBC3)	Telecommunications	EIR-04	Crosses the tracks through Memorial Rd Bridge (OBC3)	2 x 100 ducts and 1 x 1way MD	OBC3 Bridge reconstruction	TEMP: 54m 2x110mm EIR Duct PERMANENT: 51m 6x110mm EIR Duct EXTRAS: 2x JB4B to EIR Specification	No comments	High	Low	Slight

Location	Utility Type	Utility ID	Specific Location	Utility Details	Conflict	Diversion Details	Comments/ Notes	Baseline Rating	Impact Magnitude	Significance of Impact
Memorial Rd Bridge (OBC3)	Electricity	ESB-05	Crosses the tracks through Memorial Rd Bridge (OBC3)	LV underground	OBC3 Bridge reconstruction	TEMP: 47m 1x125mm ESB LV Duct PERMANENT: 40m 2x125mm ESB LV Duct EXTRAS: 2xESB Mini pillar	No comments	Medium	Low	Slight
Memorial Rd Bridge (OBC3)	Water Mains / Sewers	WM-04	Crosses the tracks through Memorial Rd Bridge (OBC3)	Underground watermain pipe Diameter: 457.2mm (connects to 685.8mm north of bridge) IL: unknown Material: steel	OBC3 Bridge reconstruction	INCLUDED ABOVE (WM-02)	No comments	High	Medium	Moderate
Memorial Rd Bridge (OBC3)	Water Mains / Sewers	WM-03	Crosses the tracks through Memorial Rd Bridge (OBC3)	Underground watermain pipe Diameter: 457.2 mm (connects to 685.8mm north of bridge) IL: unknown Material: steel	OBC3 Bridge reconstruction	INCLUDED ABOVE (WM-02)	No comments	High	Medium	Moderate

Location	Utility Type	Utility ID	Specific Location	Utility Details	Conflict	Diversion Details	Comments/ Notes	Baseline Rating	Impact Magnitude	Significance of Impact
Memorial Rd Bridge (OBC3)	Water Mains / Sewers	WM-02	Crosses the tracks through Memorial Rd Bridge (OBC3)	Underground watermain pipe Diameter: 101.6mm IL: unknown Material: cast iron	OBC3 Bridge reconstruction	PERMANENT: 1x100mm Watermain placed within concrete screed bridge deck 2x460mm Trunk watermains within steel sleeves between PC conc beams EXTRAS: 80m of existing watermain to be removed & 2x Sluice Valves to Irish Water Specification	No comments	Medium	Low	Slight
Con Colbert Rd - westbound verge	Telecommunications	EIR-03	Runs parallel tracks on southern verge of Con Colbert Rd. Connected to EIR-02	6 x 100 ducts	OBC1 Bridge reconstruction	TEMP: 182m 6x110mm EIR Duct PERMANENT: 155m 6x110mm EIR Duct EXTRAS: 2x JB4B to EIR Specification	No comments	High	Medium	Moderate

Location	Utility Type	Utility ID	Specific Location	Utility Details	Conflict	Diversion Details	Comments/ Notes	Baseline Rating	Impact Magnitude	Significance of Impact
SCR Bridge (OBC1)	Telecommunications	EIR-02	Crosses tracks on west side of SCR Bridge (OBC1)	4 x 100 ducts	OBC1 Bridge reconstruction	PERMANENT: 30m 4x100mm EIR Duct EXTRAS: 2x JB4B to EIR Specification	No comments	High	Medium	Moderate
SCR Bridge (OBC1)	Gas	GNI-01	Crosses tracks on western side of SCR Bridge (OBC1). Pipe changes from plastic to steel directly above the tracks, with protection slabbing on either side.	Low pressure distribution pipe 203.2mm ST 25 mbar 315 PE-80 25 mbar	OBC1 Bridge reconstruction	TEMP: 65m 1x315mm PE-80 Pipe PERMANENT: 67m 1x315mm PE-80 Pipe	No comments	Medium	Medium	Moderate
SCR Bridge (OBC1)	Electricity	ESB-04	Crosses tracks through SCR Bridge (OBC1) on western side	MV underground	OBC1 Bridge reconstruction	AS ABOVE (ESB-01)	No comments	Medium	Medium	Moderate
SCR Bridge (OBC1)	Electricity	ESB-03	Crosses tracks through SCR Bridge (OBC1) on western side	LV underground	OBC1 Bridge reconstruction	AS ABOVE (ESB-01)	No comments	Medium	Medium	Moderate

Location	Utility Type	Utility ID	Specific Location	Utility Details	Conflict	Diversion Details	Comments/ Notes	Baseline Rating	Impact Magnitude	Significance of Impact
SCR Bridge (OBC1)	Electricity	ESB-02	Crosses tracks through SCR Bridge (OBC1) on western side	MV underground	OBC1 Bridge reconstruction	AS ABOVE (ESB-01)	No comments	Medium	Medium	Moderate
SCR Bridge (OBC1)	Electricity	ESB-01	Crosses tracks through SCR Bridge (OBC1) on western side	MV underground	OBC1 Bridge reconstruction	TEMP: 30m 4x160mm ESB Duct PERMANENT: 59m 2x125mm ESB LV Duct & 59m 6x160mm ESB MV Duct EXTRAS: 1xESB Mini pillar	No comments	Medium	Medium	Moderate
SCR Bridge (OBC1)	Telecommunications	AUR-01	Crosses tracks through the centre of SCR Bridge (OBC1)	Aurora duct - 3 no. sub ducts Same ducts as AUR-100 located within OBO2	OBC1 Bridge reconstruction	TEMP: 76m 3x100mm AURORA Duct PERMANENT: 37M 3x100mm AURORA Duct EXTRAS: JB4B to AURORA Specification	No comments	High	Medium	Moderate

Location	Utility Type	Utility ID	Specific Location	Utility Details	Conflict	Diversion Details	Comments/ Notes	Baseline Rating	Impact Magnitude	Significance of Impact
SCR Bridge (OBC1)	Telecommunications	VM-01	Crosses tracks through SCR Bridge (OBC1) on east side	1x144-core 'supertrunk', 2x144-core and 1x8-core fibre optic cables present in 2x110 PVC ducts.	OBC1 Bridge reconstruction	TEMP: 89m 2x110mm VM Duct PERMANENT: 42m 2x110mm VM Duct EXTRAS: 4xJB4B to VM Specification	Major customers include St James Hospital (HSE).	High	Medium	Moderate
SCR Bridge (OBC1)	Water Mains / Sewers	WM-01	Crosses tracks through SCR Bridge (OBC1) on east side	Underground watermain pipe Diameter: 228.6mm across bridge 304.8mm at southern abutment IL: unknown Material: cast iron	OBC1 Bridge reconstruction	PERMANENT: 52m 1Xx228.6mm (9") Pipe EXTRAS: 52m of existing watermain to be removed 2xSluice Valves to Irish Water standard	Note meter and valve (for potential historic supply to Heuston Yard) located immediately north of structure. IE to confirm if this still required. Temp diversion can be avoided if 2no valves installed in advance of work to allow removal of pipework between valves.	High	Low	Slight
SCR Bridge (OBC1)	Telecommunications	EIR-01	Crosses tracks on east side of SCR Bridge (OBC1)	2 x 100 ducts	OBC1 Bridge reconstruction	TEMP: 85m 2x110mm EIR Duct PERMANENT: 19m 2x110mm EIR Duct EXTRAS: 2x JB4B to EIR Specification	No comments	High	Low	Slight

A.3. Utility Conflicts and Diversions in Zone C

Location	Utility Type	Utility ID	Specific Location	Utility Details	Conflict	Diversion Details	Comments/Notes	Baseline Rating	Impact Magnitude	Significance of Impact
Heuston Station	Telecommunications	BT-01a	Heuston Yard and crosses to west of tracks	Underground BT duct and chamber used for IÉ signalling/comms	Conflict with proposed Heuston West Station and attenuation tank	Diversion to be coordinated with proposed signalling design.	Diversion required due to works for Heuston West station.	High	Low	Slight

A.4. Utility Conflicts and Diversions in Zone D

Location	Utility Type	Utility ID	Specific Location	Utility Details	Conflict	Diversion Details	Comments/Notes	Baseline Rating	Impact Magnitude	Significance of Impact
Blackhorse Ave Rd Bridge (OBO4)	Water Mains / Sewers	CS-105	Crosses tracks adjacent to Blackhorse Ave Rd Bridge (OBO4) on a separate pipe bridge that needs to be removed to accommodate for rail electrification infrastructure	Combined sewer pipe bridge Diameter: 300mm IL: unknown Material: unknown	Vertical clearance to proposed OHLE	40m x 100mm cement lined ductile iron pipe 40m x 300mm cement lined ductile iron pipe Pumping station arrangement	Proposed pumping station located on west bank to divert pipe through OBO4 bridge deck and to connect to existing network on east side of bridge	High	Medium	Moderate

Location	Utility Type	Utility ID	Specific Location	Utility Details	Conflict	Diversion Details	Comments/Notes	Baseline Rating	Impact Magnitude	Significance of Impact
Blackhorse Ave Rd Bridge (OBO4)	Electricity	ESB-122	Runs parallel to tracks on west side along McKee Barracks. Diversion is dependent on plans to remove Irish Water Combined Sewer pipe bridge at Blackhorse Ave Rd Bridge (OBO4)	LV Underground	Located adjacent to proposed pumping station for CS-105	40m x 125mm MV ESB duct	No comments	Medium	Low	Slight
Maynooth Line Twin Arch (OBO9)	Electricity	ESB-101a	Located in north ccess of tracks underneath Maynooth Line Twin Arch (OBO9)	MV Underground	Proposed track lowering	PERMANENT: 40m 2x125mm ESB LV Duct	Ducts are quite shallow, located in ballast. Diversion required due to track lowering.	Medium	Low	Slight
Glasnevin Cemetery (OBO10) bridge	Electricity	ESB-101	Located north of tracks at Glasnevin Cemetery foot bridge	LV Underground	OBO10 Bridge deck reconstruction	PERMANENT: 25m 2x125mm ESB LV Duct & 25m 2x160mm ESB MV Duct EXTRAS: 2xESB Mini pillar	Diversion required due to proximity to OBO10 bridge deck	Medium	Low	Slight