Appendix C
Deviations / Departures / Relaxations from Standards

DEVIATIONS FROM STANDARD (BCPDGB)

Departure Ref.	Design Discipline	Zone	Location: Road Name	Location: Chainage (Global)	Location: Alignment (Geometric)	Location: Chainage (Geometric)	Design Speed	Description of departure	Relevant Design Guideline/Standard	Standard Required
DEV-5.001	Alignment - Horizontal	1	Blanchardstown South - Bus Interchange Link Road	Ch. E0+333 to Ch. E0+395	Z1-Main-Alignm-0002	Ch. 0+329 to Ch. 0+391	60 km/h	Horizontal Curve, R=71m	DMURS, Table 4.3	R = 178m
	Justification A horizontal curve, R=71m is provided along the alignment to form the junction with the Bus Interchange. To facilitate the formation of the junction, superelevation has not been applied along this curve. Due to the provision of the signal controlled junction in this location, it is anticipated that vehicles will be travelling at a speed less than the speed limit while also negotiating the junction layout.									
DEV-5.002	Alignment - Horizontal	1	Bus Lane - Crowne Plaza to Blanchardstown Rd South	Ch. D0+000 to Ch. D0+100	Z1-Main-Alignm-0004A	Ch. 0+000 to Ch. 0+150	60 km/h	Horizontal Curve, R= 70m & R=66m	DMURS, Table 4.2	R = 178m or R = 136m, S=2.5%
	Justification A series of left-hand horizontal curves of radius 70m and 66m are provided to facilitate this segregated left-turn bus lane linking the Bus Interchange at Blanchardstown Shopping Centre with the Blanchardstown Road South. Provision of the desirable minimum horizontal geometry would require widening and land-take to the existing Blanchardstown Shopping Centre. Buses travelling along this alignment will be slowing on approach to the junction with Blanchardstown Rd South.									
DEV-5.003	Alignment - Horizontal	1	Bus Lane - Crowne Plaza to Blanchardstown Rd South	Ch. A0+ 168 to Ch. A0+120	Z1-Main-Alignm-0005	Ch. 0+795 to Ch. 0+843	60 km/h	Horizontal Curve, R= 66m, S=3.5%	DMURS, Table 4.3	R = 178m or R = 136m, S=2.5%
	Justification Proposed horizontal geometry matches the existing at this location. Works will involve a new junction layout and the facilitation of a new segregated left-turn bus lane. The existing superelevation of 3.5% to the carriageway has been maintained.									
DEV-5.004	Alignment - Vertical	1	Bus Interchange	Ch. F0+364 to Ch. F0+384	Z1-Main-Alignm-0006	Ch. 0+000 to Ch. 0+020	60 km/h	Vertical Crest Curve, K=6.5	DMURS, Table 4.3	K = 8.2
	Justification Proposed vertical geometry is similar to the existing at this location. Works will involve a new signalised junction to replace the existing roundabout. The sub-standard vertical alignment is required to tie-in to the new junction arrangement. Due to the provision of the signal-controlled junction in this location, it is anticipated that vehicles will be travelling at a speed less than the speed limit while also negotiating the junction layout.									
DEV-5.005	Alignment - Horizontal	1	Bus Interchange	Ch. F0+194 to Ch. F0+219	Z1-Main-Alignm-0006A	Ch. 0+015 to Ch. 0+047	60 km/h	Horizontal Curve, R= 27m	DMURS, Table 4.3	R=178m
	Justification A sub-standard horizontal curve, R=27m, is required to form junction with main alignment of the Bus Interchange. Vehicles travelling along this horizontal curve are travelling on approach to or will have just negotiated the signalised junction with the main Bus Interchange, therefore it is envisaged that vehicles will be travelling at a slower speed.									
DEV-5.006	Alignment - Horizontal	1	Bus Interchange	Ch. F0+025 to Ch. F0+060	Z1-Main-Alignm-0006A	Ch. 0+178 to Ch. 0+219	60 km/h	Horizontal Curve, R= 50m	DMURS, Table 4.3	R=178m
	Justification A sub-standard horizontal curve, R=50m, is required to form the junction with the main alignment of the Bus Interchange. Vehicles travelling along this horizontal curve are travelling on approach to or will have just negotiated the signalised junction with the main Bus Interchange therefore it is envisaged that vehicles will be travelling at a slower speed.									

DEVIATIONS FROM STANDARD (BCPDGB)

Departure Ref.	Design Discipline	Zone	Location: Road Name	Location: Chainage (Global)	Location: Alignment (Geometric)	Location: Chainage (Geometric)	Design Speed	Description of departure	Relevant Design Guideline/Standard	Standard Required
DEV-5.007	Junction Visibility	1	Blanchardstown Shopping Centre	Ch. A0+390	Z1-Main-Alignm-0005	Ch. 0+510	60 km/h	X = 2.4m YRHS = 30m	DMURS Section 4.4.5, DMURS Table 4	X = 2.4m Y = 65m
	Justification The existing carriageway is widened towards the adjacent Blanchardstown Shopping Centre car park facility to provide dedicated bus lanes and a segregated two-way cycle track. A proposed bus shelter is located within the visibility envelope for vehicles exiting this junction reducing the Y-distance visibility to 30m when looking to the right. This access serves as a delivery only access and as such, usage is expected to be low.									
DEV-5.008	Junction Visibility	4	Navan Rd Entrance to Mary Help of Christian GNS	Ch. A6+220	Z4-Main-Alignm-0002	Ch. 3+270	50 km/h	X = 2.4m YRHS = 10m	DMURS Section 4.4.5, DMURS Table 4	X = 2.4m Y = 49m
	Justification The existing carriageway and junction layout is retained in this location. An existing on-street parking layby is retained and is located within the visibility envelope of this junction for drivers exiting and looking to the right. This reduces the Y-distance visibility to 10m if parked cars are sited in the layby. This on-street parking is existing and has been retained in the design. When the parking layby is not in use, the desirable minimum Y-distance visibility is achieved.									
DEV-5.009	Junction Visibility	5	Arbour Hill/ Stoneybatter	Ch. A9+110	Z5-Main-Alignm-0002	Ch. 0+385	30km/h	X = 2.4m YRHS = 12m	DMURS Section 4.4.5, DMURS Table 4	X = 2.4m Y = 24m
	Justification Works will involve the redesignation of an existing traffic lane to a bus lane with a new bus stop being located to the right of this existing junction. As a result, a new proposed bus shelter is located within the visibility envelope for drivers exiting this junction and looking to the right reducing the Y-distance visibility to 12m. This is a heavily constrained area, and the bus shelter has been located to minimise adverse impacts on existing residential properties while still serving the adjacent bus stop.									
DEV-5.010	Junction Visibility	5	Paul St/ Blackhall St	Ch. J0+100	Z5-Main-Alignm-0002B	Ch. 0+105	30km/h	X = 2.4m YLHS = 10m YRHS = 10m	DMURS Section 4.4.5, DMURS Table 4	X = 2.4m Y = 24m
	Justification An on-street parking bay is located within the visibility envelope for drivers exiting this junction reducing the Y-distance visibility to 10m looking in both directions if all spaces are in use. This on-street parking is retained as existing within the design. This junction provides local access to housing and as such, usage is expected to be low.									
DEV-5.011	Junction Visibility	5	Blackhall Parade/ Blackhall St	Ch. J0+050	Z5-Main-Alignm-0002B	Ch. 0+055	30km/h	X = 2.4m YLHS = 8m YRHS = 8m	DMURS Section 4.4.5, DMURS Table 4	X = 2.4m Y = 24m
	Justification An on-street parking bay is located within the visibility envelope for drivers exiting this junction reducing the Y-distance visibility to 10m looking in both directions if all spaces are in use. This on-street parking is retained as existing within the design. This junction provides local access to housing and as such, usage is expected to be low.									
DEV-5.012	SSD	1	Blanchardstown Rd South - New Bus Lane	Ch. B0+185 to Ch. E0+130	Z1-Main-Alignm-0002A	Ch. 0+012 to Ch. 0+080	60 km/h	SSD= 50m	DMURS, Table 4.2	SSD= 65m
	Justification Works involve converting an existing roundabout junction to a signalised junction and widening into an existing embankment to introduce a new dedicated left-turn bus lane. The alignment of the left-turn bus lane on the extremity of the junction results in the forward visibility splay encroaching over the reprofiled embankment and thus forward visibility to the low object height is reduced to 50m. Provision of the desirable minimum SSD would require widening to the verge and re-profiling of the embankment requiring additional land take at this location at the Blanchardstown Shopping Centre.									

DEVIATIONS FROM STANDARD (BCPDGB)

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DEV-5.013	SSD	5	King St North - George's Lane	Ch. K0+000 to Ch. K0+015	Z5-Main-Alignm-0004	Ch. 0+390 to Ch. 0+375	30km/h	SSD=20m	DMURS, Table 4.2	SSD=24m
	Justification The existing carriageway geometry is retained with slight narrowing of the lane width to minimise impacts of the scheme through this highly constrained built-up location. Due to the provision of existing substandard curve (R=12) the forward visibility splay encroaches towards the adjacent Blackhall Square Apartment building and is reduced by the property boundary to 20m as vehicles navigate the left-turn lane. Due to the nature of the road and junction layout in this area including the pedestrian crossing it is likely that vehicles will be travelling at a reduced speed.									
DEV-5.014	Cross-section	1	Blanchardstown Rd South-North	Ch. B0+660 to Ch. B0+760 (Overbridge)	Z1-Main-Alignm-0001	Ch. 0+660 to Ch. 0+760	60km/h	Southern cycle track width = 1.5m	BCPDGB - Section 5.3	Cycle track width = 2.0m
	Justification Cross section has been developed to match the existing across the overbridge structure to minimise any impact. It should be noted that the BCPDGB acknowledges a reduction in cycle track width to 1.5m is permitted as the absolute minimum.									
DEV-5.015	Cross-section	1	Blanchardstown Rd South-North	Ch. B0+660 to Ch. B0+760 (Overbridge)	Z1-Main-Alignm-0001	Ch. 0+660 to Ch. 0+761	60km/h	Lane width = 2.5m	BCPDGB - Section 5.1	Lane width = 3.0m
	Justification Cross section has been developed to match the existing across the overbridge structure to minimise any impact. It should be noted that the BCPDGB acknowledges a reduction in lane width to 2.75m is permitted as the absolute minimum. The minimum lane width provided is 2.5m and this is assigned to a right-turn filter lane on the overbridge. In conjunction, a single lane width of 2.75m is provided. All other lane widths are 3.0m as a minimum.									
DEV-5.016	Cross-section	1	Blanchardstown Rd South-North	Ch. B0+875 to Ch. B0+895	Z1-Main-Alignm-0001	Ch. 0+875 to Ch. 0+895	60km/h	Southern footpath width = 1.5m - 2.0m	BCPDGB - Section 5.8	Footpath width = 2.0m
	Justification Existing boundary and footpath width will be retained along this section of the Proposed Scheme, as tying into existing width of 1.5m.									
DEV-5.017	Cross-section	1	Blanchardstown Rd South-North	Ch. B0+825 to Ch. B0+895	Z1-Main-Alignm-0001	Ch. 0+825 to Ch. 0+895	60km/h	Northern cycle track width = 1.8m	BCPDGB- Section 5.3	Cycle track width = 2.0m
	Justification Existing boundary and cycle track width will be retained along this section of the Proposed Scheme, as tying into existing. A 0.25m kerb buffer will be introduced alongside the cycle track to provide segregation where this does not currently exist. It should be noted that the BCPDGB acknowledges a reduction in cycle track width to 1.5m is permitted as the absolute minimum.									
DEV-5.018	Cross-section	4	Navan Road	Ch. A5+190 to Ch. A5+400	Z4-Main-Alignm-0001	Ch. 4+090 to Ch. 4+300	50km/h	Footpath width = 1.6- 1.8m	BCPDGB - Section 5.8	Footpath width = 2.0m
	Justification To retain existing trees along this stretch of the Proposed Scheme, the existing footpath and verge will be retained at this location. The width varies from 1.6m to 1.8m.									
DEV-5.019	Cross-section	5	Old Cabra Road	Ch. A7+630 to Ch. A7+660	Z5-Main-Alignm-0001	Ch. 1+830 to Ch. 1+860	30km/h	Cycle track width = 1.75m	BCPDGB - Section 5.3	Cycle track width = 2.0m
	Justification The eastbound/inbound cycle track width will be reduced to provide 2m wide footpath and a cycle track of consistent width on approach to Glenbeigh Road Junction and railway bridge. It should be noted that the BCPDGB acknowledges a reduction in cycle track width to 1.5m is permitted as the absolute minimum.									

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Departure Ref.	Design Discipline	Zone	Location: Road Name	Location: Chainage (Global)	Location: Alignment (Geometric)	Location: Chainage (Geometric)	Design Speed	Description of departure	Relevant Design Guideline/Standard	Standard Required
DEV-5.020	Cross-section	5	Old Cabra Road	Ch. A7+660 to Ch. A7+820	Z5-Main-Alignm-0001	Ch. 1+670 to Ch. 1+830	30km/h	Cycle track width = 1.5m	BCPDGB - Section 5.3	Cycle track width = 2.0m
	Justification The eastbound/inbound cycle track width will be reduced to provide 2m wide footpath and a cycle track of consistent width through Glenbeigh Road Junction and across the railway bridge. It should be noted that the BCPDGB acknowledges a reduction in cycle track width to 1.5m is permitted as the absolute minimum.									
DEV-5.021	Cross-section	5	Old Cabra Road	Ch. A7+700 to Ch. A7+840	Z5-Main-Alignm-0001	Ch. 1+650 to Ch. 1+831	30km/h	Cycle track width = 1.75m	BCPDGB - Section 5.3	Cycle track width = 2.0m
	Justification The westbound/ outbound cycle track width will be reduced to maintain existing footpath width and to negate impact on railway bridge. It should be noted that the BCPDGB acknowledges a reduction in cycle track width to 1.5m is permitted as the absolute minimum.									
DEV-5.022	Cross-section	5	Old Cabra Road	Ch. A7+650 to Ch. A7+670	Z5-Main-Alignm-0001	Ch. 1+820 to Ch. 1+840	30km/h	Footpath width = 1.8m	BCPDGB - Section 5.8	Footpath width = 2.0m
	Justification It should be noted that the BCPDGB acknowledges a reduction in footpath width to 1.8m is permitted as the absolute minimum.									
DEV-5.023	Cross-section	5	Old Cabra Road	Ch. A7+750 to Ch. A7+790	Z5-Main-Alignm-0001	Ch. 1+700 to Ch. 1+740	30km/h	Footpath width = 1.3m -1.8m	BCPDGB - Section 5.8	Footpath width = 2.0m
	Justification To minimise impact on the existing railway bridge, the footpath layout in the westbound/ outbound direction will match existing across the structure. Width varies from 1.3m to 1.5m over a distance of 5m.									
DEV-5.024	Cross-section	5	Old Cabra Road	Ch. A7+990 to Ch. A8+200	Z5-Main-Alignm-0001	Ch. 1+300 to Ch. 1+500	30km/h	Cycle track width = 1.5m	BCPDGB - Section 5.3	Cycle track width = 2.0m
	Justification The cycle track width in both directions will be reduced along this stretch, in conjunction with footpath width, to reduce impact to existing residential access steps and footpath widths. It should be noted that the BCPDGB acknowledges a reduction in cycle track width to 1.5m is permitted as the absolute minimum.									
DEV-5.025	Cross-section	5	Old Cabra Road	Ch. A8+000 to Ch. A8+170	Z5-Main-Alignm-0001	Ch. 1+320 to Ch. 1+490	30km/h	Western Footpath width = 1.7m - 2.0m	BCPDGB - Section 5.8	Footpath width = 2.0m
	Justification The footpath width will be reduced to in conjunction with cycle track width to a minimum of 1.7m to reduce impact to existing residential access steps.									
DEV-5.026	*Not used*	*Not used*	*Not used*	*Not used*	*Not used*	*Not used*	*Not used*	*Not used*	*Not used*	*Not used*
	Not used									
DEV-5.027	Cross-section	5	Prussia Street	Ch. A8+200 to Ch. A8+250	Z5-Main-Alignm-0002	Ch. 1+230 to Ch. 1+ 280	30km/h	Cycle track width = 1.5m	BCPDGB - Section 5.3	Cycle track width = 2.0m
	Justification A short length of cycle track / cycle lane, 1.5m in width, will be provided to facilitate cyclist priority at North Circular Rd. Junction in the eastbound/inbound direction. A 2m wide footpath will be provided along this stretch. It should be noted that the BCPDGB acknowledges a reduction in cycle track width to 1.5m is permitted as the absolute minimum.									

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DEV-5.028	Cross-section	5	Stoneybatter	Ch. A9+050 to Ch. A9+100	Z5-Main-Alignm-0002	Ch. 0+390 to Ch. 0+440	30km/h	Cycle track width = 1.75m	BCPDGB - Section 5.3	Cycle track width = 2.0m
	Justification The cycle track width in the eastbound/ inbound direction will be reduced behind a proposed loading bay to provide 2m wide footpath. It should be noted that the BCPDGB acknowledges a reduction in cycle track width to 1.5m is permitted as the absolute minimum.									
DEV-5.029	Cross-section	5	Brunswick Street North	Ch. H0+030 to Ch. H0+160	Z5-Main-Alignm-0003	Ch. 0+015 to Ch. 0+145	30km/h	Cycle track width = 1.5m	BCPDGB - Section 5.3	Cycle track width = 2.0m
	Justification Cycle track width in both directions will be reduced to minimise impact on footpath widths and achieve 3m traffic lane.									
DEV-5.030	Cross-section	5	Brunswick Street North	Ch. H0+100 to Ch. H0+150	Z5-Main-Alignm-0003	Ch. 0+025 to Ch. 0+075	30km/h	Footpath width = 1.5m - 2.0m	BCPDGB - Section 5.8	Footpath width = 2.0m
	Justification The southern footpath will be retained as existing due to property boundaries; width varies from 1.5m to 2.0m in conjunction with reduced cycle track width and 3m traffic lane.									
DEV-5.031	Cross-section	1	Blakestown Way to Bus Interchange Link Road	Ch. E0+190 to Ch. E0+350	Z1-Main-Alignm-0002	Ch. 0+190 to Ch. 0+350	60km/h	Cycle track width = 3.0m	BCPDGB - Section 5.3	Cycle track width = 3.25m
	Justification A two-way cycle track 3.0m in width will be provided to reduce impact on the existing shopping centre carpark. It should be noted that the BCPDGB acknowledges a reduction in cycle track width can be considered on a case-by-case basis in consultation with the national cycle manual. The cycle track will be provided with a 0.5m buffer to the carriageway while a 2.0m min width footpath will be provided to the rear.									
DEV-5.032	Cross-section	1	Bus Interchange	Ch. F0+000 to Ch. F0+340	Z1-Main-Alignm-0006	Ch. 0+000 to Ch. 0+340	30km/h	Cycle track width = 3.0m	BCPDGB - Section 5.3	Cycle track width = 3.25m
	Justification A two-way cycle track 3.0m in width will be provided to reduce impact on the existing footpath, service yard access and shopping centre car park. It should be noted that the BCPDGB acknowledges a reduction in cycle track width can be considered on a case-by-case basis in consultation with the national cycle manual. The cycle track will be provided with a 0.5m buffer to the carriageway while a 2.0m min width footpath will be provided to the rear.									
DEV-5.033	Cross-section	1	Blanchardstown Road South / N3 Eastbound Diverge at Mulhuddart Junction to Liberty Insurance Junction	Ch. A0+000 to Ch. A0+580	Z1-Main-Alignm-0005	Ch. 0+320 to Ch. 0+900	50km/h	Cycle track width = 3.0m	BCPDGB - Section 5.3	Cycle track width = 3.25m
	Justification A two-way cycle track 3.0m in width will be provided to reduce impact on the existing retail/service delivery yard boundary wall, embankment and retail car park. It should be noted that the BCPDGB acknowledges a reduction in cycle track width can be considered on a case-by-case basis in consultation with the national cycle manual. The cycle track will be provided with a 0.5m buffer to the carriageway while a 2.0m min width footpath will be provided to the rear.									

DEVIATIONS FROM STANDARD (BCPDGB)

Departure Ref.	Design Discipline	Zone	Location: Road Name	Location: Chainage (Global)	Location: Alignment (Geometric)	Location: Chainage (Geometric)	Design Speed	Description of departure	Relevant Design Guideline/Standard	Standard Required
DEV-5.034	Cross-section	3	R147 Navan Road	Ch. A3+400 to Ch. A4+500	Z3-Main-Alignm-0001	Ch. 3+400 to Ch. 4+500	70km/h	Cycle track width = 3.0m	BCPDGB - Section 5.3	Cycle track width = 3.25m
	Justification A two-way cycle track 3.0m in width will be provided to reduce impact on the boundary to existing properties and a proposed large development site at this location. It should be noted that the BCPDGB acknowledges a reduction in cycle track width can be considered on a case-by-case basis in consultation with the national cycle manual. The design of the R147 Navan Road along this section has taken cognisance of the TII Publications. It should be noted that the desirable minimum two-way cycle track width of 3.0m as stated in DN-GEO-03036 has been achieved here. The cycle track will be provided with a 0.5m buffer to the carriageway while a 2.0m min width footpath is provided to the rear.									
DEV-5.035	Cross-section	3	R147 Navan Road	Ch. A4+520 to Ch. A4+850	Z3-Main-Alignm-0001	Ch. 4+520 to Ch. 4+850	50km/h	Cycle track width = 3.0m	BCPDGB - Section 5.3	Cycle track width = 3.25m
	Justification A two-way cycle track 3.0m in width will be provided to reduce impact on the boundary to existing properties and a proposed large development site at this location. It should be noted that the BCPDGB acknowledges a reduction in cycle track width can be considered on a case-by-case basis in consultation with the national cycle manual. The design of the R147 Navan Road along this section has taken cognisance of the TII Publications. It should be noted that the desirable minimum two-way cycle track width of 3.0m as stated in DN-GEO-03036 has been achieved here. The cycle track will be provided with a 0.5m buffer to the carriageway while a 2.0m min width footpath is provided to the rear.									
DEV-5.036	Cross-section	5	Blackhall Street	Ch. J0+000 to Ch. J0+130	Z5-Main-Alignm-00XX	Ch. 0+000 to Ch. 0+130	30km/h	Cycle track width = 3.0m	BCPDGB - Section 5.3	Cycle track width = 3.25m
	Justification A two-way cycle track 3.0m in width will be provided to minimise impact on footpath width through this area. It should be noted that the BCPDGB acknowledges a reduction in cycle track width can be considered on a case-by-case basis in consultation with the national cycle manual. The cycle track will be provided with a 0.5m buffer to the carriageway while a 2.0m min width footpath is provided to the rear.									
DEV-5.037	Cross-section	4	Navan Road	Ch. A6+200	Z4-Main-Alignm-0001	Ch. 3+290	50km/h	Parking Layby = 2.4m min. Cycle track width = 1.5m Buffer = N/A Footpath width = 1.8m	BCPDGB - Section 6	Parking Layby = 2.1m min. Cycle track width = 1.5m Buffer = 0.75m Footpath width = 2.0m
	Justification To facilitate the existing junction with a school and nearby pedestrian crossing, the existing parking layby layout has been retained with the cycle track aligned alongside the road, with the parking layby located behind the cycle track. This layout is not in accordance with the BCPDGB which requires the cycle track to be deflected to the rear of the parking layby with a 0.75m buffer provided. In addition, minimum footpath width achieved behind layby is 1.8m at pinch point.									
DEV-5.038	Cross-section	1	Blanchardstown South-North	Ch. B0+660 to Ch. B0+760 (Overbridge)	Z1-Main-Alignm-0001	Ch. 0+660 to Ch. 0+760	60km/h	Footpath width = 1.8m - 2.0m	BCPDGB - Section 5.8	Footpath width = 2.0m
	Justification Cross section has been developed to match the existing across the overbridge structure to minimise any impact. It should be noted that the BCPDGB acknowledges a reduction in footpath width to 1.8m is permitted as the absolute minimum.									
DEV-5.039	*Not used*	*Not used*	*Not used*	*Not used*	*Not used*	*Not used*	*Not used*	*Not used*	*Not used*	*Not used*
	Not used									

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DEV-5.040	Cross-section	5	Blackhall Street	Ch. J0+000 to Ch. J0+140	Z5-Main-Alignm-00XX	Ch. 0+000 to Ch. 0+140	30 km/h	Footpath width = 1.5m	BCPDGB - Section 5.8	Footpath width = 2.0m
	Justification The footpath width is locally reduced to a minimum of 1.5m at two locations where there is existing pedestrian ramps (both approximately 7m in length). The footpath width along the rest of Blackhall Street meets the minimum width of 2m.									
DEV-5.041	Cross-section	1	Liberty Insurance Junction to Snugborough Upgrade scheme tie-in	Ch. A0+620 to Ch. A0+750	Z1-Main-Alignm-0005	Ch. 0+160 to Ch. 0+290	50km/h	Cycle track width = 3.0m	BCPDGB - Section 5.3	Cycle track width = 3.25m
	Justification A two-way cycle track 3.0m in width will be provided to reduce impact on existing trees and embankment. It should be noted that the BCPDGB acknowledges a reduction in cycle track width can be considered on a case-by-case basis in consultation with the national cycle manual. The cycle track will be provided to the rear of a 2m wide footpath.									
DEV-5.042	Cross-section	1	Blanchardstown Rd South-North	Ch. B0+825 to Ch. B0+895	Z1-Main-Alignm-0001	Ch. 0+825 to Ch. 0+895	60km/h	Southern cycle track width = Varies 1.8m - 1.5m	BCPDGB - Section 5.3	Cycle track width = 2.0m
	Justification Existing boundary and cycle track width will be retained along this section of the Proposed Scheme, as tying into existing. A 0.25m buffer will be introduced alongside the cycle track to provide segregation where this does not currently exist. It should be noted that the BCPDGB acknowledges a reduction in cycle track width to 1.5m is permitted as the absolute minimum.									
DEV-5.043	Cross-section	5	Old Cabra Road	Ch. A8+000 to Ch. B8+030 and Ch. A8+140 to Ch. A8+145	Z5-Main-Alignm-0001	Ch. 1+460 to Ch. 1+490 and Ch. 1+345 to Ch. 1+350	30km/h	Eastern Footpath width = 1.7m - 2.0m	BCPDGB - Section 5.8	Footpath width = 2.0m
	Justification The footpath width will be reduced to in conjunction with cycle track width to a minimum of 1.7m to reduce impact to existing residential access steps.									
DEV-5.044	Cross-section	5	Manor Street	Ch. A8+920 to Ch. A8+950	Z5-Main-Alignm-0002	Ch. 0+540 to Ch. 0+570	30km/h	Cycle track width = 1.5m	BCPDGB - Section 5.3	Cycle track width = 2.0m
	Justification The cycle track width in the eastbound/ inbound direction will be reduced behind a proposed disabled parking bay. It should be noted that the BCPDGB acknowledges a reduction in cycle track width to 1.5m is permitted as the absolute minimum.									

DEPARTURES FROM STANDARD (TII Publications)

Departure Ref.	Design Discipline	Zone	Location: Road Name	Location: Chainage (Global)	Location: Alignment (Geometric)	Location: Chainage (Geometric)	Design Speed	Description of departure	Relevant Design Guideline/Standard	Standard Required	Supporting Information
DEP-5.001	Alignment - Horizontal	1	N3 Eastbound Diverge at Mulhuddart Junction	Ch. L0+030 to Ch. L0+152	Z1-Main-Alignm-0003A	Ch. 0+035 to 0+158	60 km/h	Horizontal Curve, R= 130m, S=7%	DN-GEO-03031, Table 3	R =720m or R=255m, S=5%	BCIDC-ARP-GEO_HV-0005_XX_00-DR-CR-0001
	Justification The existing carriageway is retained through this section of the diverge. Works will involve the redesignation of the existing traffic lane to a bus lane on approach to the signalised junction. The existing offside traffic lane is retained. Appropriate road markings and regulation signage will be provided.										
DEP-5.002	SSD	1	N3 Eastbound Diverge at Mulhuddart Junction	Ch. L0+000 to Ch. L0+080	Z1-Main-Alignm-0003A	Ch. 0+000 to 0+085	60 km/h	SSD = 85m	DN-GEO-03031, Table 3	SSD = 90m	BCIDC-ARP-GEO_HV-0005_XX_00-DR-CR-0001
	Justification The existing carriageway is retained through this section of the diverge. Works will involve the redesignation of the existing traffic lane to a bus lane on approach to the signalised junction. The provision of a sub-standard curve (R=130m) results in the forward visibility splay for vehicles travelling along the diverge and into the bus lane on approach to the signalised junction. The visibility splay encroaches over the nearside verge, towards a cut embankment where existing mature vegetation has established. Provision of the desirable minimum SSD would require widening to this existing verge and cut embankment, requiring additional land take at this location. It is likely that vehicles will be slowing on approach to the junction with the Mulhuddart Link Road.										
DEP-5.003	Alignment - Horizontal	2	N3 Mainline Dual Carriageway (Westbound)	Ch. A1+985 to Ch. A1+870	Z2-Main-Alignm-0001 WB	Ch. 0+120 to 0+238	85 km/h	Horizontal Curve, R= 503m, S=5%	DN-GEO-03031, Table 3	R=510m, S=5%	BCIDC-ARP-GEO_HV-0005_XX_00-DR-CR-0011
	Justification The existing carriageway is retained at this location to minimise impacts of the scheme on the existing road layout through this heavily constrained grade separated junction. The existing R=503m curve is replicated as the outbound bus lane is introduced along the N3 westbound merge at the Navan Road/ Old Navan Road Junction and hence this sub-standard horizontal curve is provided on approach to a junction. The carriageway is superelevated at 5% through this horizontal curve. This represents a one design speed step relaxation in horizontal curvature.										
DEP-5.004	Alignment - Vertical	2	N3 Mainline Dual Carriageway (Westbound & Eastbound)	Ch. A1+925 to Ch. A1+985	Z2-Main-Alignm-0001 WB Z2-Main-Alignm-0001 EB	Ch. 0+120 to 0+162 (westbound) Ch. 0+895 to 0+956 (eastbound)	85 km/h	Crest Curve = 30K	DN-GEO-03031, Table 3	Crest Curve = 55K	BCIDC-ARP-GEO_HV-0005_XX_00-DR-CR-0010 BCIDC-ARP-GEO_HV-0005_XX_00-DR-CR-0011
	Justification The existing carriageway is retained at this location to minimise impacts of the scheme on the existing road layout through this heavily constrained grade separated junction. The existing 30K crest curve represents a one step relaxation below desirable minimum. The existing 30K crest curve is retained along the mainline dual carriageway as the outbound bus lane is introduced along the N3 westbound merge at the Navan Road/ Old Navan Road Junction and the eastbound bus lane diverges off the dual carriageway mainline at the Connolly Hospital Access. Hence this sub-standard crest curve is provided on approach to a junction.										
DEP-5.005	Alignment - Vertical	2	N3 Eastbound Merge at Snugborough Junction	Ch. A1+070 to Ch. A1+095	Z2-Main-Alignm-0004A	Ch.0+133 to 0+164	60 km/h	Sag Curve = 9K	DN-GEO-03031, Table 3	Sag Curve = 13K	BCIDC-ARP-GEO_HV-0005_XX_00-DR-CR-0005
	Justification The existing carriageway is widened at this location to facilitate the addition of the bus lane. The existing geometry has been retained to minimise impacts of the scheme on the existing road layout through this heavily constrained grade separated junction. The existing 9K sag curve is replicated as the inbound bus lane is introduced to the N3 Dual Carriageway at the Snugborough junction merge. Hence this sub-standard crest curve is provided on approach to a junction.										

DEPARTURES FROM STANDARD (TII Publications)

Departure Ref.	Design Discipline	Zone	Location: Road Name	Location: Chainage (Global)	Location: Alignment (Geometric)	Location: Chainage (Geometric)	Design Speed	Description of departure	Relevant Design Guideline/Standard	Standard Required	Supporting Information
DEP-5.006	Alignment - Horizontal	2	N3 Eastbound Diverge at Connolly Hospital	Ch. A1+905 to Ch. A1+969	Z2-Main-Alignm-0002B	Ch. 0+284 to 0+348	60 km/h	Horizontal Curve, R= 150m, S=5%	DN-GEO-03031, Table 3	R=255m, S=5%	BCIDC-ARP-GEO_HV-0005_XX_00-DR-CR-0002 BCIDC-ARP-GEO_HV-0005_XX_00-DR-CR-0003
	Justification The existing carriageway is widened at this location to facilitate the addition of the bus lane. The existing geometry has been retained to minimise impacts of the scheme on the existing road layout through this heavily constrained grade separated junction. The existing R=150m curve, represents a two-step relaxation in horizontal geometry and is replicated to facilitate the junction with the Connolly Hospital Entrance at Ch. 0+280. Hence this sub-standard curve is provided on approach to a junction without the provision of transition curves.										
DEP-5.007	Alignment - Horizontal	2	N3 Eastbound Diverge at Connolly Hospital	Ch. A1+905 to Ch. A1+969	Z2-Main-Alignm-0002B	Ch. 0+284 and 0+348	60 km/h	No transition curves provided	DN-GEO-03031, Cl 3.10	L = 60m (√24R)	BCIDC-ARP-GEO_HV-0005_XX_00-DR-CR-0002 BCIDC-ARP-GEO_HV-0005_XX_00-DR-CR-0003
	Justification The existing carriageway is widened at this location to facilitate the addition of the bus lane. The existing geometry has been retained to minimise impacts of the scheme on the existing road layout through this heavily constrained grade separated junction. The existing R=150m curve, represents a two-step relaxation in horizontal geometry and is replicated to facilitate the junction with the Connolly Hospital Entrance at Ch. 0+280. Hence this sub-standard curve is provided on approach to a junction without the provision of transition curves.										
DEP-5.008	Alignment - Horizontal	2	N3 Eastbound Diverge at Connolly Hospital Access (Overbridge)	Ch. M0+215 to Ch. M0+270	Z2-Main-Alignm-0002B	Ch. 0+015 to 0+070	60 km/h	Horizontal Curve, R= 65m, S=2.5%	DN-GEO-03031, Table 3	R=510m, S=2.5%	BCIDC-ARP-GEO_HV-0005_XX_00-DR-CR-0002
	Justification The existing carriageway is retained at this location on the overbridge structure of the N3 eastbound diverge at Connolly Hospital to facilitate the redesignation of an existing traffic lane as a dedicated bus lane. The existing geometry has been retained to minimise impacts of the scheme on the overbridge structure. The existing R=65m curve, represents a greater than four-step relaxation in horizontal geometry and is replicated to facilitate the Navan Road/ N3 eastbound diverge overbridge junction. Hence this sub-standard curve is provided on approach to a junction without the provision of transition curves.										
DEP-5.009	Alignment - Horizontal	2	N3 Eastbound Diverge at Connolly Hospital Access (Overbridge)	Ch. M0+215 to Ch. M0+270	Z2-Main-Alignm-0002B	Ch. 0+015 and 0+070	60 km/h	No transition curves provided	DN-GEO-03031, Cl 3.10	L = 38m (√24R)	BCIDC-ARP-GEO_HV-0005_XX_00-DR-CR-0002
	Justification The existing carriageway is retained at this location on the overbridge structure of the N3 eastbound diverge at Connolly Hospital to facilitate the redesignation of an existing traffic lane as a dedicated bus lane. The existing geometry has been retained to minimise impacts of the scheme on the overbridge structure. The existing R=65m curve, represents a greater than four-step relaxation in horizontal geometry and is replicated to facilitate the Navan Road/ N3 eastbound diverge overbridge junction. Hence this sub-standard curve is provided on approach to a junction without the provision of transition curves.										
DEP-5.010	Alignment - Horizontal	2	N3 Eastbound Diverge at Connolly Hospital Access (Overbridge)	Ch. M0+135 to Ch. M0+195	Z2-Main-Alignm-0002B	Ch. 0+092 to 0+145	60 km/h	Horizontal Curve, R= 50m, S=5.0%	DN-GEO-03031, Table 3	R=255m, S=5%	BCIDC-ARP-GEO_HV-0005_XX_00-DR-CR-0002
	Justification The existing carriageway is retained at this location on the overbridge structure of the N3 eastbound diverge at Connolly Hospital to facilitate the redesignation of an existing traffic lane as a dedicated bus lane. The existing geometry has been retained to minimise impacts of the scheme on the overbridge structure. The existing R=50m curve, represents a greater than four-step relaxation in horizontal geometry and is replicated to facilitate the Navan Road/ N3 eastbound diverge overbridge junction. Hence this sub-standard curve is provided on approach to a junction without the provision of transition curves.										

DEPARTURES FROM STANDARD (TII Publications)

Departure Ref.	Design Discipline	Zone	Location: Road Name	Location: Chainage (Global)	Location: Alignment (Geometric)	Location: Chainage (Geometric)	Design Speed	Description of departure	Relevant Design Guideline/Standard	Standard Required	Supporting Information
DEP-5.011	Alignment - Horizontal	2	N3 Eastbound Diverge at Connolly Hospital Access (Overbridge)	Ch. M0+135 to Ch. M0+195	Z2-Main-Alignm-0002B	Ch. 0+092 and 0+145	60 km/h	No transition curves provided	DN-GEO-03031, Cl 3.10	L = 35m (v24R)	BCIDC-ARP-GEO_HV-0005_XX_00-DR-CR-0002
	Justification The existing carriageway is retained at this location on the overbridge structure of the N3 eastbound diverge at Connolly Hospital to facilitate the redesignation of an existing traffic lane as a dedicated bus lane. The existing geometry has been retained to minimise impacts of the scheme on the overbridge structure. The existing R=50m curve, represents a greater than four-step relaxation in horizontal geometry and is replicated to facilitate the Navan Road/ N3 eastbound diverge overbridge junction. Hence this sub-standard curve is provided on approach to a junction without the provision of transition curves.										
DEP-5.012	Alignment - Vertical	2	N3 Eastbound Diverge at Connolly Hospital Access (Overbridge)	Ch. M0+175 to Ch. M0+210	Z2-Main-Alignm-0002B	Ch. 0+076 to 0+111	60 km/h	Crest Curve = 15K	DN-GEO-03031, Table 3	Crest Curve = 17K	BCIDC-ARP-GEO_HV-0005_XX_00-DR-CR-0002
	Justification The existing carriageway is retained at this location on the overbridge structure of the N3 eastbound diverge at Connolly Hospital to facilitate the redesignation of an existing traffic lane as a dedicated bus lane. The existing geometry has been retained to minimise impacts of the scheme on the overbridge structure. The existing 15K crest curve represents a one-step relaxation in vertical geometry and is replicated to minimise any impact of the scheme on the existing overbridge structure and facilitate the Navan Road/ N3 eastbound diverge overbridge junction. Hence this sub-standard curve is provided on approach to a junction.										
DEP-5.013	Alignment - Vertical	2	N3 Eastbound Diverge at Connolly Hospital Access (Overbridge)	Ch. M0+135 to Ch. M0+175	Z2-Main-Alignm-0002B	Ch. 0+111 to 0+148	60 km/h	Crest Curve = 13K	DN-GEO-03031, Table 3	Crest Curve = 17K	BCIDC-ARP-GEO_HV-0005_XX_00-DR-CR-0002
	Justification The existing carriageway is retained at this location on the overbridge structure of the N3 eastbound diverge at Connolly Hospital to facilitate the redesignation of an existing traffic lane as a dedicated bus lane. The existing geometry has been retained to minimise impacts of the scheme on the overbridge structure. The existing 13K crest curve represents a one-step relaxation in vertical geometry and is replicated to minimise any impact of the scheme on the existing overbridge structure and facilitate the Navan Road/ N3 eastbound diverge overbridge junction and Connolly Hospital junction. Hence this sub-standard curve is provided on approach to a junction.										
DEP-5.014	Alignment - Vertical	2	N3 Eastbound Link Road; Navan Road/ N3 Eastbound Diverge junction to M50 Roundabout Junction	Ch. A2+350 to Ch. A2+380	Z2-Main-Alignm-0002A	Ch. 8+229 to 8+279	70 km/h	Crest Curve = 20K	DN-GEO-03031, Table 3	Crest Curve = 30K	BCIDC-ARP-GEO_HV-0005_XX_00-DR-CR-0015
	Justification The existing geometry of the carriageway is retained at the location between the overbridge structure of the N3 eastbound diverge at Connolly Hospital and the M50 Roundabout Junction. On approach to the M50 roundabout junction, carriageway widening works are proposed to facilitate a segregated left-turn bus lane at the Navan Road/ N3 eastbound diverge overbridge junction and a new bus lane entry to the M50 roundabout. The existing 20K crest curve represents a one-step relaxation in vertical geometry and is replicated to minimise any impact of the scheme on the existing road layout and facilitate the junctions with the Navan Road/ N3 eastbound diverge overbridge junction at Ch. A 2+180 (Global) and M50 Roundabout Junction at Ch. A 2+400 (Global). Hence this sub-standard curve is provided on approach to a junction.										

DEPARTURES FROM STANDARD (TII Publications)

Departure Ref.	Design Discipline	Zone	Location: Road Name	Location: Chainage (Global)	Location: Alignment (Geometric)	Location: Chainage (Geometric)	Design Speed	Description of departure	Relevant Design Guideline/Standard	Standard Required	Supporting Information
DEP-5.015	Alignment - Vertical	2	N3 Westbound Link Road; M50 Junction to N3 Westbound Merge at Navan Road/ Old Navan Road Junction	Ch. A2+019 to Ch. A2+035	Z2-Main-Alignm-0002	Ch. 8+601 to 8+617	70 km/h	Sag Curve = 9K	DN-GEO-03031, Table 3	Sag Curve = 20K	BCIDC-ARP-GEO_HV-0005_XX_00-DR-CR-0007
	Justification The existing carriageway is retained at this location of the N3 westbound merge at Navan Road/ Old Navan Road junction. The existing 9K sag curve represents a two-step relaxation in vertical geometry and is replicated to minimise any impact of the scheme on the existing road layout and facilitate the Navan Road/ Old Navan Road junction. Hence this sub-standard curve is provided on approach to a junction.										
DEP-5.016	Alignment - Horizontal	3	N3 Westbound Link Road, Auburn Avenue to M50 Junction	Ch. A2+809 to Ch. A2+877	Z2-Main-Alignm-0003	Ch. 6+611 and 6+679	70 km/h	No transition curves provided	DN-GEO-03031, Cl 3.10	L = 48m (q=0.3)	BCIDC-ARP-GEO_HV-0005_XX_00-DR-CR-0018
	Justification The existing carriageway is retained at this location of the N3 to facilitate the redesignation of an existing traffic lane as a dedicated bus lane. The existing geometry has been retained to minimise impacts of the scheme on the existing infrastructure and overbridge structures at this location. The existing horizontal alignment (R=510m, S=3.5%) is replicated without the provision of transition curves to minimise any impact of the scheme on the existing road layout and facilitate the adjacent junctions.										
DEP-5.017	Alignment - Horizontal	3	N3 Westbound Link Road, Auburn Avenue to M50 Junction	Ch. A2+651 to Ch. A2+748	Z2-Main-Alignm-0003	Ch. 6+740 to Ch. 6+837	70 km/h	Horizontal Curve, R=172m, S=5%	DN-GEO-03031, Table 3	R=360m, S=5%	BCIDC-ARP-GEO_HV-0005_XX_00-DR-CR-0018
	Justification The existing carriageway is retained at this location of the N3 westbound to facilitate the redesignation of an existing traffic lane as a dedicated bus lane. The existing geometry has been retained to minimise impacts of the scheme on the existing infrastructure (gantries) and overbridge structures at this location. The existing horizontal alignment (R=172m, S=5%) represents a three-step relaxation in horizontal geometry and is replicated without the provision of transition curves to minimise any impact of the scheme on the existing road layout and facilitate the adjacent junctions between Auburn Ave and M50 Roundabout.										
DEP-5.018	Alignment - Horizontal	3	N3 Westbound Link Road, Auburn Avenue to M50 Junction	Ch. A2+651 to Ch. A2+749	Z2-Main-Alignm-0003	Ch. 6+843 to 6+910	70 km/h	Horizontal Curve, R= 280m, S=2.5%	DN-GEO-03031, Table 3	R=510m, S=2.5%	BCIDC-ARP-GEO_HV-0005_XX_00-DR-CR-0018
	Justification The existing carriageway is retained at this location of the N3 westbound to facilitate the redesignation of an existing traffic lane as a dedicated bus lane. The existing geometry has been retained to minimise impacts of the scheme on the existing infrastructure (gantries) and overbridge structures at this location. The existing horizontal alignment (R=280m, S=2.5%) represents a two-step relaxation in horizontal geometry and is replicated without the provision of transition curves to minimise any impact of the scheme on the existing road layout and facilitate the adjacent junctions between Auburn Ave and M50 Roundabout.										
DEP-5.019	Alignment - Horizontal	3	N3 Westbound Link Road, Auburn Avenue to M50 Junction	Ch. A2+651 to Ch. A2+748	Z2-Main-Alignm-0003	Ch. 6+740 and 6+837	70 km/h	No transition curves provided	DN-GEO-03031, Cl 3.10	L = 64m (√24R)	BCIDC-ARP-GEO_HV-0005_XX_00-DR-CR-0018
	Justification The existing carriageway is retained at this location of the N3 westbound to facilitate the redesignation of an existing traffic lane as a dedicated bus lane. The existing geometry has been retained to minimise impacts of the scheme on the existing infrastructure (gantries) and overbridge structures at this location. The existing horizontal alignment (R=172m, S=5%) represents a three-step relaxation in horizontal geometry and is replicated without the provision of transition curves to minimise any impact of the scheme on the existing road layout and facilitate the adjacent junctions between Auburn Ave and M50 Roundabout.										

DEPARTURES FROM STANDARD (TII Publications)

Departure Ref.	Design Discipline	Zone	Location: Road Name	Location: Chainage (Global)	Location: Alignment (Geometric)	Location: Chainage (Geometric)	Design Speed	Description of departure	Relevant Design Guideline/Standard	Standard Required	Supporting Information
DEP-5.020	Alignment - Horizontal	3	N3 Westbound Link Road, Auburn Avenue to M50 Junction	Ch. A2+580 to Ch. A2+647	Z2-Main-Alignm-0003	Ch. 6+843 and 6+910	70 km/h	No transition curves provided	DN-GEO-03031, Cl 3.10	L = 82m (√24R)	BCIDC-ARP-GEO_HV-0005_XX_00-DR-CR-0018
	Justification The existing carriageway is retained at this location of the N3 westbound to facilitate the redesignation of an existing traffic lane as a dedicated bus lane. The existing geometry has been retained to minimise impacts of the scheme on the existing infrastructure (gantries) and overbridge structures at this location. The existing horizontal alignment (R=280m, S=2.5%) represents a two-step relaxation in horizontal geometry and is replicated without the provision of transition curves to minimise any impact of the scheme on the existing road layout and facilitate the adjacent junctions between Auburn Ave and M50 Roundabout.										
DEP-5.021	Alignment - Vertical	3	N3 Westbound Link Road, Auburn Avenue to M50 Junction	Ch. A2+745 to Ch. A2+789	Z2-Main-Alignm-0003	Ch. 6+701 to 6+745	70 km/h	Crest Curve = 10K	DN-GEO-03031, Table 3	Crest Curve = 30K	BCIDC-ARP-GEO_HV-0005_XX_00-DR-CR-0018
	Justification The existing carriageway is retained at this location of the N3 westbound to facilitate the redesignation of an existing traffic lane as a dedicated bus lane. The existing vertical geometry has been retained to minimise impacts of the scheme on the existing infrastructure (gantries) and overbridge structures at this location. The existing vertical alignment (crest curve = 10K) represents a two-step relaxation in vertical geometry and is replicated to minimise any impact of the scheme on the existing road layout, maintain headroom to the overbridge and facilitate the adjacent junctions between Auburn Ave and M50 Roundabout.										
DEP-5.022	Alignment - Vertical	3	N3 Westbound Link Road, Auburn Avenue to M50 Junction	Ch. A2+640 to Ch. A2+709	Z2-Main-Alignm-0003	Ch. 6+779 to 6+848	70 km/h	Sag Curve = 6.5K	DN-GEO-03031, Table 3	Sag Curve = 20K	BCIDC-ARP-GEO_HV-0005_XX_00-DR-CR-0018
	Justification The existing carriageway is retained at this location of the N3 westbound to facilitate the redesignation of an existing traffic lane as a dedicated bus lane. The existing vertical geometry has been retained to minimise impacts of the scheme on the existing infrastructure (gantries) and overbridge structures at this location. The existing vertical alignment (sag curve = 6.5K) represents a two-step relaxation in vertical geometry and is replicated to minimise any impact of the scheme on the existing road layout, maintain headroom to the structural overbridge and facilitate the adjacent junctions between Auburn Ave and M50 Roundabout.										
DEP-5.023	Alignment - Vertical	3	N3 Westbound Link Road, Auburn Avenue to M50 Junction	Ch. A2+565 to Ch. A2+612	Z2-Main-Alignm-0003	Ch. 6+878 to 6+925	70 km/h	Crest Curve = 6.5K	DN-GEO-03031, Table 3	Crest Curve = 30K	BCIDC-ARP-GEO_HV-0005_XX_00-DR-CR-0018
	Justification The existing carriageway is retained at this location of the N3 westbound to facilitate the redesignation of an existing traffic lane as a dedicated bus lane. The existing vertical geometry has been retained to minimise impacts of the scheme on the existing infrastructure (gantries) and overbridge structures at this location. The existing vertical alignment (crest curve = 6.5K) represents a two-step relaxation in vertical geometry and is replicated to minimise any impact of the scheme on the existing road layout, maintain headroom to the structural overbridge, to minimise any impact of the scheme on the existing road layout and facilitate the adjacent junctions between Auburn Ave and M50 Roundabout.										
DEP-5.024	Alignment - Horizontal	3	N3 Eastbound Link Road (Bus Lane); M50 Roundabout Junction to Auburn Avenue Junction	Ch. A2+810 to Ch. A2+869	Z2-Main-Alignm-0003D	Ch. 6+620 to 6+679	60 km/h	Horizontal Curve, R=80m, S=3.5%	DN-GEO-03031, Table 3	R=360m, S=3.5%	BCIDC-ARP-GEO_HV-0005_XX_00-DR-CR-0022
	Justification This is a proposed length of carriageway to facilitate a dedicated bus lane between the M50 Roundabout and Auburn Avenue junction in the citybound direction. The proposed alignment is required to tie-in with the existing lengths of carriageway along the N3 close to the M50 roundabout and Auburn Avenue junction. Due to the existing overbridge structure carrying the N3/M50 southbound off-slip, Auburn Avenue junction itself and existing services located in the verge, the alignment is extremely constrained through this area and results in the provision of a sub-standard horizontal and vertical geometry. The provision of this R=80m horizontal curve without transition curves represents a greater than four-step relaxation in horizontal geometry.										

DEPARTURES FROM STANDARD (TII Publications)

Departure Ref.	Design Discipline	Zone	Location: Road Name	Location: Chainage (Global)	Location: Alignment (Geometric)	Location: Chainage (Geometric)	Design Speed	Description of departure	Relevant Design Guideline/Standard	Standard Required	Supporting Information
DEP-5.025	Alignment - Horizontal	3	N3 Eastbound Link Road (Bus Lane); M50 Roundabout Junction to Auburn Avenue Junction	Ch. A7+759 to Ch. A2+798	Z2-Main-Alignm-0003D	Ch. 6+690 to 6+729	60 km/h	Horizontal Curve, R=45m, S=5%	DN-GEO-03031, Table 3	R=255m, S=5%	BCIDC-ARP-GEO_HV-0005_XX_00-DR-CR-0022
	Justification This is a proposed length of carriageway to facilitate a dedicated bus lane between the N3/M50 Roundabout and Auburn Avenue Junction in the citybound direction. The proposed alignment is required to tie-in with the existing lengths of carriageway along the N3 close to the M50 roundabout and Auburn Avenue junction. Due to the existing overbridge structure carrying the N3/M50 southbound off-slip, Auburn Avenue Junction itself and existing services located in the verge, the alignment is extremely constrained through this area and results in the provision of a sub-standard horizontal and vertical geometry. The provision of this R=45m horizontal curve without transition curves represents a greater than four-step relaxation in horizontal geometry.										
DEP-5.026	Alignment - Horizontal	3	N3 Eastbound Link Road (Bus Lane); M50 Roundabout Junction to Auburn Avenue Junction	Ch. A2+810 to Ch. A2+869	Z2-Main-Alignm-0003D	Ch. 6+620 and 6+679	60 km/h	No transition curves provided	DN-GEO-03031, Cl 3.10	L = 44m (√24R)	BCIDC-ARP-GEO_HV-0005_XX_00-DR-CR-0022
	Justification This is a proposed length of carriageway to facilitate a dedicated bus lane between the N3/M50 Roundabout and Auburn Avenue Junction in the citybound direction. The proposed alignment is required to tie-in with the existing lengths of carriageway along the N3 close to the M50 roundabout and Auburn Avenue junction. Due to the existing overbridge structure carrying the N3/M50 southbound off-slip, Auburn Avenue Junction itself and existing services located in the verge, the alignment is extremely constrained through this area and results in the provision of a sub-standard horizontal and vertical geometry. The provision of this R=80m horizontal curve without transition curves represents a greater than four-step relaxation in horizontal geometry.										
DEP-5.027	Alignment - Horizontal	3	N3 Eastbound Link Road (Bus Lane); M50 Roundabout Junction to Auburn Avenue Junction	Ch. A2+759 to Ch. A2+798	Z2-Main-Alignm-0003	Ch. 6+690 and 6+729	60 km/h	No transition curves provided	DN-GEO-03031, Cl 3.10	L = 33m (√24R)	BCIDC-ARP-GEO_HV-0005_XX_00-DR-CR-0022
	Justification This is a proposed length of carriageway to facilitate a dedicated bus lane between the N3/M50 Roundabout and Auburn Avenue Junction in the citybound direction. The proposed alignment is required to tie-in with the existing lengths of carriageway along the N3 close to the M50 roundabout and Auburn Avenue junction. Due to the existing overbridge structure carrying the N3/M50 southbound off-slip, Auburn Avenue Junction itself and existing services located in the verge, the alignment is extremely constrained through this area and results in the provision of a sub-standard horizontal and vertical geometry. The provision of this R=45m horizontal curve without transition curves represents a greater than four-step relaxation in horizontal geometry.										
DEP-5.028	*Not used*	*Not used*	*Not used*	*Not used*	*Not used*	*Not used*	*Not used*	*Not used*	*Not used*	*Not used*	*Not used*
	Not used										
DEP-5.029	Alignment - Vertical	3	N3 Eastbound Link Road (Bus Lane); M50 Roundabout Junction to Auburn Avenue Junction	Ch. A2+775 to Ch. A2+841	Z2-Main-Alignm-0003D	Ch. 6+665 to 6+719	60 km/h	Crest Curve = 10K	DN-GEO-03031, Table 3	Crest Curve = 17K	BCIDC-ARP-GEO_HV-0005_XX_00-DR-CR-0022
	Justification This is a proposed length of carriageway to facilitate a dedicated bus lane between the N3/M50 Roundabout and Auburn Avenue Junction in the citybound direction. The proposed alignment is required to tie-in with the existing lengths of carriageway along the N3 close to the M50 roundabout and Auburn Avenue junction. Due to the existing overbridge structure carrying the N3/M50 southbound off-slip, Auburn Avenue Junction itself and existing services located in the verge, the alignment is extremely constrained through this area and results in the provision of a sub-standard horizontal and vertical geometry. The provision of this 10K crest curve on approach to a junction represents a two-step relaxation in vertical geometry.										

DEPARTURES FROM STANDARD (TII Publications)

Departure Ref.	Design Discipline	Zone	Location: Road Name	Location: Chainage (Global)	Location: Alignment (Geometric)	Location: Chainage (Geometric)	Design Speed	Description of departure	Relevant Design Guideline/Standard	Standard Required	Supporting Information
DEP-5.030	Alignment - Vertical	3	N3 Eastbound Link Road (Bus Lane); M50 Roundabout Junction to Auburn Avenue Junction	Ch. A2+750 to Ch. A2+775	Z2-Main-Alignm-0003D	Ch. 6+719 to 6+744	60 km/h	Sag Curve = 9K	DN-GEO-03031, Table 3	Sag Curve = 13K	BCIDC-ARP-GEO_HV-0005_XX_00-DR-CR-0022
	Justification This is a proposed length of carriageway to facilitate a dedicated bus lane between the N3/M50 Roundabout and Auburn Avenue Junction in the citybound direction. The proposed alignment is required to tie-in with the existing lengths of carriageway along the N3 close to the M50 roundabout and Auburn Avenue junction. Due to the existing overbridge structure carrying the N3/M50 southbound off-slip, Auburn Avenue Junction itself and existing services located in the verge, the alignment is extremely constrained through this area and results in the provision of a sub-standard horizontal and vertical geometry. The provision of this 9K sag curve on approach to a junction represents a two-step relaxation in vertical geometry.										
DEP-5.031	Alignment - Horizontal	3	R147 Navan Parkway Eastbound Merge	Ch. A3+998 to Ch. A4+050	Z3-Main-Alignm-0003A	Ch. 0+160 to 0+212	60 km/h	Horizontal Curve, R= 400m, S=2.5%	DN-GEO-03031, Table 3	R=510m, S=2.5%	N/A
	Justification The existing carriageway is retained at this location of the R147 eastbound merge at the Navan Parkway Junction to facilitate the redesignation of an existing traffic lane as a dedicated bus lane. The existing geometry has been retained to minimise impacts of the scheme on the existing road layout. The bus lane continues onto the main R147 dual carriageway where carriageway widening is undertaken. The existing R=400m curve represents a one-step relaxation in horizontal geometry and is replicated here.										
DEP-5.032	Alignment - Horizontal	3	R147 Navan Parkway Eastbound Merge	Ch. A3+945 + to Ch. A3+998	Z3-Main-Alignm-0003A	Ch. 0+212 to 0+265	60 km/h	Horizontal Curve, R= 200m, S=2.5%	DN-GEO-03031, Table 3	R=510m, S=2.5%	N/A
	Justification The existing carriageway is retained at this location of the R147 eastbound merge at the Navan Parkway junction to facilitate the redesignation of an existing traffic lane as a dedicated bus lane. Closer to the junction with the R147, the existing geometry is amended, and carriageway widening is undertaken to facilitate an appropriate merging layout. To minimise impacts of the scheme on the existing nearside highway boundary at the location of an embankment to railway infrastructure, the carriageway widening is limited to the offside only. The bus lane continues onto the main R147 dual carriageway where carriageway widening is undertaken. The provision of a R=200m curve represents a three-step relaxation in horizontal geometry.										
DEP-5.033	Alignment - Horizontal	3	R147 Navan Parkway Eastbound Merge	Ch. A3+998 to Ch. A4+050	Z3-Main-Alignm-0003A	Ch. 0+160 & 0+212	60 km/h	No transition curves provided	DN-GEO-03031, Cl 3.10	L = 38.5m (q=0.3)	N/A
	Justification The existing carriageway is retained at this location of the R147 eastbound merge at the Navan Parkway Junction to facilitate the redesignation of an existing traffic lane as a dedicated bus lane. The existing geometry has been retained to minimise impacts of the scheme on the existing road layout. The bus lane continues onto the main R147 dual carriageway where carriageway widening is undertaken. The existing R=400m curve represents a one-step relaxation in horizontal geometry and is replicated here without the provision of transition curves.										
DEP-5.034	Alignment - Horizontal	3	R147 Navan Parkway Eastbound Merge	Ch. A3+945 + to Ch. A3+998	Z3-Main-Alignm-0003A	Ch. 0+212 & 0+265	60 km/h	No transition curves provided	DN-GEO-03031, Cl 3.10	L = 69m (√24R)	N/A
	Justification The existing carriageway is retained at this location of the R147 eastbound merge at the Navan Parkway Junction to facilitate the redesignation of an existing traffic lane as a dedicated bus lane. Closer to the junction with the R147, the existing geometry is amended, and carriageway widening is undertaken to facilitate an appropriate merging layout. To minimise impacts of the scheme on the existing nearside highway boundary at the location of an embankment to railway infrastructure, the carriageway widening is limited to the offside only. The bus lane continues onto the main R147 dual carriageway where carriageway widening is undertaken. The provision of an R=200m curve represents a three-step relaxation in horizontal geometry and is provided here without the provision of transition curves.										

DEPARTURES FROM STANDARD (TII Publications)

Departure Ref.	Design Discipline	Zone	Location: Road Name	Location: Chainage (Global)	Location: Alignment (Geometric)	Location: Chainage (Geometric)	Design Speed	Description of departure	Relevant Design Guideline/Standard	Standard Required	Supporting Information
DEP-5.035	Alignment - Horizontal	3	R147 Navan Parkway Westbound Diverge	Ch. A3+885 + to Ch. A3+912	Z3-Main-Alignm-0003B	Ch 0+195 to 0 +224	60 km/h	Horizontal Curve, R= 255m	DN-GEO-03031, Table 3	R=720m	N/A
	Justification The existing carriageway is retained along the R147 westbound diverge at the Navan Parkway Junction to facilitate the introduction of a dedicated bus lane. The existing geometry has been modified to minimise impacts of the scheme on the existing road layout. The bus lane diverges from the main R147 dual carriageway where carriageway widening is undertaken to facilitate the new layout. The R=255m curve represents a three-step relaxation in horizontal geometry and is implemented here without the provision of transition curves to form a junction with the Navan Parkway Overbridge.										
DEP-5.036	Alignment - Horizontal	3	R147 Navan Parkway Westbound Diverge	Ch. A3+885 + to Ch. A3+912	Z3-Main-Alignm-0003B	Ch 0+195 to 0 +224	60 km/h	No transition curves provided	DN-GEO-03031, Cl 3.10	L = 78m (√24R)	N/A
	Justification The existing carriageway is retained along the R147 westbound diverge at the Navan Parkway Junction to facilitate the introduction of a dedicated bus lane. The existing geometry has been modified to minimise impacts of the scheme on the existing road layout. The bus lane diverges from the main R147 dual carriageway where carriageway widening is undertaken to facilitate the new layout. The R=255m curve represents a three-step relaxation in horizontal geometry and is implemented here without the provision of transition curves to form a junction with the Navan Parkway Overbridge.										
DEP-5.037	Alignment - Vertical	3	R147 Navan Parkway Westbound Diverge	Ch. A4+011 + to Ch. A4+053	Z3-Main-Alignm-0003B	Ch. 0+054 to 0+096	60 km/h	Sag Curve = 9.9k	DN-GEO-03031, Table 3	Sag Curve = 13k	N/A
	Justification The existing carriageway is retained along the R147 westbound diverge at the Navan Parkway Junction to facilitate the introduction of a dedicated bus lane. The existing vertical geometry has been replicated to minimise impacts of the scheme on the existing road layout. The bus lane diverges from the main R147 dual carriageway where carriageway widening is undertaken to facilitate the new layout. The 9.9k sag curve represents a one-step relaxation in vertical geometry and is required to facilitate an appropriate tie-in with the mainline carriageway.										
DEP-5.038	Alignment - Vertical	3	R147 Navan Parkway Westbound Diverge	Ch. A3+876 + to Ch. A3+900	Z3-Main-Alignm-0003B	Ch. 0+208 to 0+232	60 km/h	Crest Curve = 10k	DN-GEO-03031, Table 3	Crest Curve = 17k	N/A
	Justification The existing carriageway is retained along the R147 westbound diverge at the Navan Parkway Junction to facilitate the introduction of a dedicated bus lane. The existing vertical geometry has been replicated to minimise impacts of the scheme on the existing road layout. The bus lane diverges from the main R147 dual carriageway where carriageway widening is undertaken to facilitate the new layout. The 10k crest curve represents a one-step relaxation in vertical geometry and is required to facilitate an appropriate tie-in with the Navan Parkway Overbridge.										
DEP-5.039	Alignment - Vertical	3	R147 Navan Parkway Westbound Merge	Ch. A3+662 to Ch. A3+722	Z3-Main-Alignm-0003C	Ch. 0+138 to 0+198	60 km/h	Sag Curve = 10k	DN-GEO-03031, Table 3	Sag Curve = 13k	N/A
	Justification The existing carriageway is retained along the R147 westbound merge at the Navan Parkway Junction to facilitate the introduction of a dedicated bus lane. The existing vertical geometry has been replicated to minimise impacts of the scheme on the existing road layout. The bus lane merges onto the main R147 dual carriageway where carriageway widening is undertaken to facilitate the new layout. The 10k sag curve represents a one-step relaxation in vertical geometry and is required to facilitate an appropriate tie-in with the mainline carriageway.										

DEPARTURES FROM STANDARD (TII Publications)

Departure Ref.	Design Discipline	Zone	Location: Road Name	Location: Chainage (Global)	Location: Alignment (Geometric)	Location: Chainage (Geometric)	Design Speed	Description of departure	Relevant Design Guideline/Standard	Standard Required	Supporting Information
DEP-5.040	Alignment - Horizontal	3	R147 Navan Parkway Westbound Merge	Ch. A3+760 to Ch. A3+829	Z3-Main-Alignm-0003C	Ch. 0+030 to 0+099	60 km/h	Horizontal Curve, R= 510m	DN-GEO-03031, Table 3	R=720m	N/A
	Justification The existing carriageway is retained at this location of the R147 westbound merge at the Navan Parkway Junction to facilitate the provision of a dedicated bus lane. The existing geometry has been retained to minimise impacts of the scheme on the existing road layout and adjacent infrastructure. The bus lane continues onto the main R147 dual carriageway where carriageway widening is undertaken. The existing R=510m curve along the merge lane is replicated without the removal of adverse camber and represents a one-step relaxation in horizontal geometry.										
DEP-5.041	Alignment - Horizontal	3	R147 Navan Parkway Westbound Merge	Ch. A3+760 to Ch. A3+829Ch. A3+712 to Ch. A3+749	Z3-Main-Alignm-0003C	Ch. 0+030 & 0+099, Ch. 0+111 & 0+148	60 km/h	No transition curves provided	DN-GEO-03031, Cl 3.10	L = 30m (q=0.3)	N/A
	Justification The existing carriageway is retained at this location of the R147 westbound merge at the Navan Parkway Junction to facilitate the redesignation of an existing traffic lane as a dedicated bus lane. The existing geometry has been retained to minimise impacts of the scheme on the existing road layout. The bus lane continues onto the main R147 dual carriageway where carriageway widening is undertaken. The existing R=510m curves represent a one-step relaxation in horizontal geometry and is replicated here without the provision of transition curves.										
DEP-5.042	Alignment - Horizontal	3	R147 Navan Parkway Eastbound Diverge	Ch. A3+718 to Ch. A3+796	Z3-Main-Alignm-0003D	Ch. 0+070 to 0+148	60 km/h	Horizontal Curve, R= 360m	DN-GEO-03031, Table 3	R=720m	N/A
	Justification The existing carriageway is retained at this location of the R147 westbound diverge at the Navan Parkway Junction to facilitate the provision of a dedicated bus lane. The existing geometry has been retained to minimise impacts of the scheme on the existing road layout and adjacent infrastructure. The bus lane diverges from the main R147 dual carriageway up to the Navan Parkway Railway Station where carriageway widening is undertaken. The existing R=360m curve along the diverge lane is replicated without the removal of adverse camber and represents a two-step relaxation in horizontal geometry.										
DEP-5.043	Alignment - Vertical	3	R147 Navan Parkway Eastbound Diverge	Ch. A3+662 to Ch. A3+713	Z3-Main-Alignm-0003D	Ch. 0+154 to 0+205	60 km/h	Sag Curve = 10k	DN-GEO-03031, Table 3	Sag Curve = 13k	N/A
	Justification The existing carriageway is retained along the R147 westbound diverge at the Navan Parkway Junction to facilitate the introduction of a dedicated bus lane. The existing vertical geometry has been replicated to minimise impacts of the scheme on the existing road layout. The bus lane diverges from the main R147 dual carriageway towards the Navan Parkway Railway Station where carriageway widening is undertaken to facilitate the new layout. The 10k sag curve represents a one-step relaxation in vertical geometry and is required to facilitate an appropriate tie-in with the mainline carriageway.										
DEP-5.044	Junction Visibility	2	N3 Eastbound Diverge at Connolly Hospital	Ch. A2+200	Z2 Main-Alignm 0002B	Ch. 0+040	60 km/h	X = 9.0m YRHS = 90m YLHS = 30m	DN-GEO-03031, Table 1.3	X = 2.4m Y = 90m	BCIDC-ARP-GEO_HV-0005_XX_00-DR-CR-0002
	Justification The existing carriageway of the overbridge is generally retained as existing with the redesignation of an existing traffic lane as a dedicated bus lane. The existing geometry of the carriageway and junction has been retained to minimise impacts of the scheme on the overbridge structure. However, a dedicated left-turn bus lane has been introduced at the Navan Road/ N3 eastbound diverge overbridge junction, resulting in widening. Subsequently, this pushes the carriageway edge back into the junction of the 'Junction 6 Castleknock' retail park with impacts to the junction visibility looking for drivers exiting this commercial access. When looking left from this junction, full y-distance visibility is provided to the Navan Road/ N3 eastbound diverge overbridge junction, 30m away from a reduced x-distance setback of 2.4m. When looking right from this junction, where the visibility splay crosses the carriageway centreline, full desirable minimum y-distance visibility of 90m is achieved from a reduced x-distance setback of 2.4m.										

DEPARTURES FROM STANDARD (TII Publications)

Departure Ref.	Design Discipline	Zone	Location: Road Name	Location: Chainage (Global)	Location: Alignment (Geometric)	Location: Chainage (Geometric)	Design Speed	Description of departure	Relevant Design Guideline/Standard	Standard Required	Supporting Information
DEP-5.045	SSD	2	N3 Eastbound Merge at Snugborough Junction	Ch. A1+060 to Ch. A1+180	Z2-Main-Alignm-0004A	Ch 0+135 to 0+255	60 km/h	SSD = 75m	DN-GEO-03031, Table 1.3	SSD= 90m	BCIDC-ARP-GEO_HV-0005_XX_00-DR-CR-0005
	Justification Works involve minor carriageway widening to the nearside carriageway to facilitate the introduction of the bus lane from Snugborough onto the N3 dual carriageway. The carriageway layout results in a reduced SSD for drivers in the bus lane of this eastbound merge. The SSD is restricted by the provision of a VRS on the nearside verge. The reduction in SSD occurs to the low object height of 0.26m and represents a one-step relaxation however full desirable minimum SSD of 90m is provided to the high object height when looking over the VRS. Full desirable minimum SSD is provided for drivers in the traffic merge lane.										
DEP-5.046	SSD	2	N3 Mainline Dual Carriageway (Westbound)	Ch. A1+985 to Ch. A1+900 (Lane 2)Ch. A1+985 to Ch. A1+960 (Lane 1)	Z2-Main-Alignm-0001 WB	Ch. 0+120 - 0+205 (Lane 2)Ch. 0+120 - 0+145 (Lane 1)	85km/h	SSD=100m (Lane 2)SSD= 155m (Lane 1)	DN-GEO-03031, Table 1.3	SSD=160m	BCIDC-ARP-GEO_HV-0005_XX_00-DR-CR-0011
	Justification The existing carriageway is generally retained at this location to minimise impacts of the scheme on the existing road layout through this heavily constrained grade separated junction. Minor carriageway widening works are proposed within the central reserve to facilitate the introduction of the bus lane. The SSD reduces to 155m (one-step relaxation) and 100m (two-step relaxation) in lanes 1 and 2 respectively for westbound vehicles travelling along the existing stretch of the N3 dual carriageway. The SSD is restricted by the provision of a VRS in the central reserve on approach to a gantry structure at the Navan Road/Old Navan Road junction. Full SSD is provided for merging vehicles at Navan Road/Old Navan Road junction including buses travelling within the bus lane. The reduction in SSD occurs to the low object height of 0.26m and represents a two-step relaxation however full desirable minimum SSD of 160m is provided to the high object height when looking over the VRS in the central reserve and a portion of the eastbound carriageway to the high object height of 1.05m. The reduction in SSD is experienced on approach to the westbound merge at Navan Road/Old Navan Road junction and is coincident with a sub-standard horizontal curve (R=503m).										
DEP-5.047	SSD	2	N3 Mainline Dual Carriageway (Eastbound)	Ch. A1+780 to A1+980	Z2-Main-Alignm-0001 EB	Ch. 0+750 to 0+950 (END)	85km/h	SSD = 120m	DN-GEO-03031, Table 1.3	SSD=160m	BCIDC-ARP-GEO_HV-0005_XX_00-DR-CR-0010
	Justification The existing carriageway is retained at this location of the N3 Eastbound Diverge at Connolly Hospital. The diverge lane is widened from one carriageway lane width to two (one traffic lane, one bus lane) to facilitate the transition of the bus lane off the N3 dual carriageway towards Connolly Hospital Access junction and along the existing overbridge. The existing SSD along the N3 dual carriageway is retained at this location along the R=510m horizontal curve. The SSD for lane 1 only is reduced by the provision of a VRS in the nearside verge between the mainline corridor and the diverge lane and the associated earthworks embankment. Furthermore, established planting on the embankment results in a reduced SSD to both the low and high object heights at this location on approach to the junction. The desirable minimum SSD is achieved for vehicles in lane 2.										
DEP-5.048	SSD	2	N3 Eastbound Diverge at Connolly Hospital	Ch. A1+810 - Ch. A1+930	Z2-Main-Alignm-0002B	Ch. 0+440 to 0+320	60 km/h	SSD = 60m	DN-GEO-03031, Table 1.3	SSD= 90m	BCIDC-ARP-GEO_HV-0005_XX_00-DR-CR-0002 BCIDC-ARP-GEO_HV-0005_XX_00-DR-CR-0003
	Justification The SSD is restricted for drivers in the bus lane only by the provision of a VRS on the nearside verge. Verge widening is limited by the existing River Tolka and associated earthworks and culvert structures located at the back of verge. In addition, overgrown mature trees are located at the back of the existing verge and forms part of this area of ecological significance. As such the reduction in SSD occurs for drivers to both the high and low object heights on approach to the junction with Connolly Hospital. Full SSD is provided for drivers in the main traffic lane on approach to the junction.										

DEPARTURES FROM STANDARD (TII Publications)

Departure Ref.	Design Discipline	Zone	Location: Road Name	Location: Chainage (Global)	Location: Alignment (Geometric)	Location: Chainage (Geometric)	Design Speed	Description of departure	Relevant Design Guideline/Standard	Standard Required	Supporting Information
DEP-5.049	SSD	2	N3 Eastbound Diverge at Connolly Hospital (Eastbound; Connolly Hospital Junction to Navan Road/N3 Eastbound Diverge junction)	Ch. M0+000 to Ch. M0+180	Z2-Main-Alignm-0002B	Ch. 0+275 to 0+105	60 km/h	SSD = 60m	DN-GEO-03031, Table 1.3	SSD= 90m	BCIDC-ARP-GEO_HV-0005_XX_00-DR-CR-0002
	Justification The existing carriageway is retained at this location on the overbridge structure of the N3 eastbound diverge at Connolly Hospital to facilitate the redesignation of an existing traffic lane as a dedicated bus lane. The existing geometry has been retained to minimise impacts of the scheme on the overbridge structure. As a result, the reduced SSD of 60m min. is provided as existing for drivers in the main traffic lane travelling eastbound. Forward visibility is restricted by the provision of a sub-standard horizontal curve (R=50m) in the vicinity of the overbridge structure which results in the visibility splays for drivers travelling along the N3 diverge heading towards the Navan Road/N3 eastbound diverge junction encroaching on the existing bridge parapet provided in the offside verge.										
DEP-5.050	SSD	2	N3 Eastbound Diverge at Connolly Hospital (Westbound; Navan Road/N3 Eastbound Diverge junction to Connolly Hospital Junction)	Ch. M0+280 to Ch. M0+160	Z2-Main-Alignm-0002B	Ch. 0+010 to 0+120	60 km/h	SSD = 38m	DN-GEO-03031, Table 1.3	SSD= 90m	BCIDC-ARP-GEO_HV-0005_XX_00-DR-CR-0002
	Justification The existing carriageway is retained at this location on the overbridge structure of the N3 eastbound diverge at Connolly Hospital to facilitate the redesignation of an existing traffic lane as a dedicated bus lane. The existing geometry has been retained to minimise impacts of the scheme on the overbridge structure. As a result, SSD will remain the same as existing. SSD is restricted by the provision of a sub-standard horizontal curve (R=50m) which results in the visibility splays encroaching on the existing bridge parapet and as a result is reduced to a minimum of 38m for drivers heading from the Navan Road/N3 eastbound diverge junction to Connolly Hospital Junction.										
DEP-5.051	SSD	2	N3 Eastbound Diverge at Connolly Hospital (Bus Lane)	Ch. M0+190 to Ch. M0+280	Z2-Main-Alignm-0002B	Ch. 0+095 to 0+000	60 km/h	SSD = 35m	DN-GEO-03031, Table 1.3	SSD= 90m	BCIDC-ARP-GEO_HV-0005_XX_00-DR-CR-0002
	Justification The existing carriageway is retained at this location on the overbridge structure of the N3 Eastbound Diverge at Connolly Hospital to facilitate the redesignation of an existing traffic lane as a dedicated bus lane. The existing geometry has been retained to minimise impacts of the scheme on the overbridge structure. Carriageway widening works are proposed to facilitate a segregated left-turn bus lane at the Navan Road/N3 eastbound diverge overbridge junction, on approach to the M50 roundabout junction, and a new bus lane entry to the M50 roundabout. As a result, the SSD of this new bus lane layout is reduced by the provision of VRS within the nearside verge. Verge widening is limited by the existing boundary and requirement to provide a retaining solution at the back of verge to reduce impact on adjacent commercial premises. The SSD is reduced to a minimum of 35m as the left-turn bus lane exits the Navan Road/N3 Eastbound Diverge overbridge junction towards the M50 roundabout junction.										

DEPARTURES FROM STANDARD (TII Publications)

Departure Ref.	Design Discipline	Zone	Location: Road Name	Location: Chainage (Global)	Location: Alignment (Geometric)	Location: Chainage (Geometric)	Design Speed	Description of departure	Relevant Design Guideline/Standard	Standard Required	Supporting Information
DEP-5.052	SSD	2	N3 Eastbound Link Road; Navan Road/ N3 Eastbound Diverge Junction to M50 Roundabout Junction (Bus Lane)	Ch. A2+220 to Ch. A2+370	Z2-Main-Alignm-0002A	Ch. 8+400 to 8+250	70 km/h	SSD = 45m	DN-GEO-03031, Table 1.3	SSD= 120m	BCIDC-ARP-GEO_HV-0005_XX_00-DR-CR-0015
	Justification The existing carriageway is retained at the location on the overbridge structure of the N3 eastbound diverge at Connolly Hospital to facilitate the redesignation of an existing traffic lane as a dedicated bus lane. The existing geometry has been retained to minimise impacts of the scheme on the overbridge structure. On approach to the M50 roundabout junction, carriageway widening works are proposed to facilitate a segregated left-turn bus lane at the Navan Road/N3 eastbound diverge overbridge junction and a new bus lane entry to the M50 roundabout. As a result, the SSD of this new bus lane layout is reduced by the provision of VRS within the nearside verge. Verge widening is limited by the existing boundary and requirement to provide a retaining solution at the back of verge to reduce impact on adjacent commercial premises. The SSD is reduced to a minimum of 45m as the bus lane approaches the M50 Roundabout junction.										
DEP-5.053	SSD	2	N3 Westbound Link Road; M50 Roundabout Junction to Navan Road/ N3 Eastbound Diverge Junction	Ch. A2+400 - Ch. A2+320	Z2-Main-Alignm-0002	Ch. 8+240 to 8+320	70 km/h	SSD = 85m	DN-GEO-03031, Table 1.3	SSD= 120m	BCIDC-ARP-GEO_HV-0005_XX_00-DR-CR-0006
	Justification Works include widening into existing central reserve and redesignation of the existing area of nearside hatching on exit from the roundabout junction to introduce new dedicated bus lane exiting the M50 roundabout junction heading westbound.Forward visibility splays for drivers in the new bus lane encroach on existing boundary wall and as a result the SSD is reduced to a minimum of 85m. This reduction in SSD is limited to drivers in the bus lane only. This represents a two-step relaxation on approach to the signalised junction with the N3 eastbound diverge at Connolly Hospital. Provision of the desirable minimum SSD would require verge widening with the existing boundary wall to be demolished and additional associated land take at this location. It is likely that vehicle speeds will be reduced in this area due to the proximity to both the roundabout and signalised junctions.										
DEP-5.054	SSD	2	N3 Eastbound Link Road; M50 Roundabout Junction to Auburn Avenue	Ch. A2+575 to Ch. A2+620	Z2-Main-Alignm-0003A	Ch. 6+920 to 6+885	70 km/h	SSD = 30m (Lane 1) SSD = 60m (Lane 2) SSD = 90m (Lane 3)	DN-GEO-03031, Table 1.3	SSD= 120m	BCIDC-ARP-GEO_HV-0005_XX_00-DR-CR-0019
	Justification The existing carriageway is retained at this location along the roundabout. The existing N3 eastbound exit arm towards Auburn Avenue junction will be widened to increase the existing two-lane exit to a three-lane exit and accommodate a new bus lane in the citybound/inbound direction. Due to the existing parapet on the overbridge structure and the associated VRS in the nearside verge, the SSD is restricted to a minimum of 30m, 60m and 90m in lanes one, two and three respectively. This reduction occurs over a 35m length along the exit radius of the roundabout arm.										

DEPARTURES FROM STANDARD (TII Publications)

Departure Ref.	Design Discipline	Zone	Location: Road Name	Location: Chainage (Global)	Location: Alignment (Geometric)	Location: Chainage (Geometric)	Design Speed	Description of departure	Relevant Design Guideline/Standard	Standard Required	Supporting Information
DEP-5.055	SSD	3	N3 Eastbound Link Road (Bus Lane); M50 Roundabout Junction to Auburn Avenue Junction	Ch. A2+660 to Ch. A2+770	Z2-Main-Alignm-0003C to Z2-Main-Alignm-0003D	Ch. 0+243 (Z2-Main-Alignm 0003C) to Ch. 6+725 (Z2-Main-Alignm 0003D) Total Length = 85m	60 km/h	SSD = 35m	DN-GEO-03031, Table 1.3	SSD= 90m	BCIDC-ARP-GEO_HV-0005_XX_00-DR-CR-0021 BCIDC-ARP-GEO_HV-0005_XX_00-DR-CR-0022
	Justification This is a proposed length of carriageway to facilitate a dedicated bus lane between the M50 Roundabout junction and Auburn Avenue junction in the citybound/inbound direction. The proposed alignment is required to tie-in with the existing lengths of carriageway along the N3 close to the M50 roundabout and Auburn Avenue junction. Due to the existing overbridge structure carrying the N3/M50 southbound off-slip, Auburn Avenue Junction itself and existing services located in the verge, the alignment is extremely constrained through this area and results in the provision of a sub-standard horizontal and vertical geometry. The SSD is restricted to a minimum of 35m by the provision of a VRS on the off-side verge protecting drivers from the structural abutment. However, between Ch. 0+240 and Ch. 0+190 (geometric) a 70m SSD is achieved which represents a one step relaxation. Visibility to the high object height of 1.05m is also restricted by the existing abutment to the overbridge structure and the associated earthwork embankment in the off-side verge.										
DEP-5.056	SSD	3	N3 Westbound Link Road, Auburn Avenue to M50 Junction	Ch. A2+870 to Ch. A2+620	Z2-Main-Alignm-0003	Ch. 6+607 to 6+860	70 km/h	SSD = 56m	DN-GEO-03031, Table 1.3	SSD= 120m	BCIDC-ARP-GEO_HV-0005_XX_00-DR-CR-0018
	Justification The existing carriageway is retained at this location of the N3 westbound to facilitate the redesignation of an existing traffic lane as a dedicated bus lane. The existing geometry has been retained to minimise impacts of the scheme on the existing infrastructure (gantries) and overbridge structures at this location. The SSD achieved (56m min.) is as per the existing scenario for traffic travelling in the nearside lane heading on approach to the M50 roundabout. This lane will be redesignated as a dedicated bus lane. The SSD is restricted due to the provision of a VRS on the off-side of the carriageway. Additionally, the SSD is also restricted by the existing sub-standard crest curve (K=6.5) provided to match existing. Between Ch. 6+607 and Ch. 6+710 (geometric) a 70m min. SSD is achieved which represents a two-step relaxation.										
DEP-5.057	SSD	3	R147 Navan Parkway Eastbound Merge	Ch. A3+906 to Ch. A3+947	Z3-Main-Alignm-0003A	Ch. 0+305 to 0+264	60 km/h	SSD =55m	DN-GEO-03031, Table 1.3	SSD= 90m	N/A
	Justification The existing carriageway is retained at this location of the R147 eastbound merge at the Navan Parkway Junction to facilitate the redesignation of an existing traffic lane as a dedicated bus lane. Closer to the junction with the R147, the existing geometry is amended, and carriageway widening is undertaken to facilitate an appropriate merging layout. To minimise impacts of the scheme on the existing nearside highway boundary at the location of an embankment to railway infrastructure, the carriageway widening is limited to the offside only. The bus lane continues onto the main R147 dual carriageway where carriageway widening is undertaken. The SSD is restricted by the provision of a VRS in the offside verge. The reduction in SSD occurs to the low object height of 0.26m and represents a departure in standard however, full desirable minimum SSD of 120m is provided to the high object height when looking over the VRS to the high object height of 1.05m.										
DEP-5.058	*Not used*	*Not used*	*Not used*	*Not used*	*Not used*	*Not used*	*Not used*	*Not used*	*Not used*	*Not used*	*Not used*
	Not used										

DEPARTURES FROM STANDARD (TII Publications)

Departure Ref.	Design Discipline	Zone	Location: Road Name	Location: Chainage (Global)	Location: Alignment (Geometric)	Location: Chainage (Geometric)	Design Speed	Description of departure	Relevant Design Guideline/Standard	Standard Required	Supporting Information
DEP-5.059	Cross-section	3	R147 Navan Road	Ch. A2+900 to Ch. A4+500	Z3-Main-Align-0001	Ch. 4+960 to Ch. 6+560	70 km/h	Lane width = 3.25m	DN-GEO-03036, Table 4.4	Lane width = 3.5m	N/A
	Justification The lane widths along the R147 Navan Road will be reduced from 3.65m existing to 3.25m. This reduction will be applied to all traffic lanes and bus lanes along the R147 Navan Road between Auburn Ave Junction and Phoenix Park Ave Junction. The 'TII Standards Commission – Bus Lanes on Dual Carriageways and Motorways - Literature and Scheme Review Note – Draft' acknowledges that bus lane widths of 3.25m may be provided as an absolute minimum at constrained locations. The reduction in lane widths ensures a consistent lane width for drivers along this stretch of the regional road while facilitating carriageway widening to provide a continuous bus lane in each direction in addition to pedestrian and cycleway facilities. The reduction in lane widths is supported by a reduction in the speed limit to 60km/h. The R147 Navan Road is considered to be an Urban Dual Carriageway Relief Road linking the urban environment of the Navan Road with the N3 national road network. It is therefore considered appropriate to reduce the cross-section and implement a more constrained cross-section to encourage drivers to maintain a lower speed in an area where pedestrian and cyclist facilitates are provided in close proximity to the live carriageway. This width of 3.25m is less than the stated lane widths of 3.5m for an Urban Dual Carriageway Relief Road, DN-GEO-03036 Table 4.4.										
DEP-5.060	Cross-section	3	R147 Navan Road	Ch. A3+400 - Ch. A4+460	Z3-Main-Align-0003	Ch. 5+005 to Ch. 6+075	70 km/h	Cycleway separation = 1.25m	DN-GEO-03036, Table 4.4	Cycleway separation = 2.0m	N/A
	Justification The two-way cycleway provided immediately adjacent to the R147 Navan Parkway will have an associated separation width to the live carriageway of 1.25m. This is less than the recommended 2.0m specified in DN-GEO-03036. On the diverge and merge lanes on the Navan Parkway interchange this separation distance reduces to 1.0m (in conjunction with a speed limit reduction to 50 km/h) to minimise impact on the existing land boundary and overbridge structure. It should be noted that guidance from the UK DMRB was sought on this aspect of the design in the absence of design-speed related guidance within the TII publications. CD195 specifies a desirable minimum separation of 1.0m for carriageways with a 40mph speed limit.The separation will consist of a 0.5m wide physical buffer (raised with a 120mm upstand on the carriageway side) with the remaining separation provided by a hard strip along the main carriageway.In conjunction with a reduction in lane widths along the R147, this proposal ensures a consistent cross-section for both NMU's and drivers along this stretch of the regional road network areas while facilitating carriageway widening to provide a continuous bus lane in each direction, in addition to pedestrian and cycleway facilities.The reduction in cross-section is supported by a reduction in the speed limit to 60 km/h. The R147 Navan Road is considered to be an Urban Dual Carriageway Relief Road linking the urban environment of the Navan Road with the N3 national road network. It is therefore considered appropriate to reduce the cross-section and implement a more constrained cross-section to encourage drivers to maintain a lower speed in an area where pedestrian and cyclist facilitates are provided in close proximity to the live carriageway.										
DEP-5.061	Junction Intervisibility Zone	2	N3 Eastbound Diverge / Connolly Hospital Access Junction	Ch. M0+015	Z2-Main-Alignm-0002B	Ch. 0+260	60 km/h	Obstruction within the junction intervisibility zone	DN-GEO-03044 Cl 2.16	No obstruction within the junction intervisibility zone	BCIDC-ARP-GEO_HV-0005_XX_00-DR-CR-0002
	Justification The existing junction layout is generally retained at this location to minimise impacts of the scheme on the existing road layout. The existing bridge parapet and connecting VRS is located within the junction intervisibility zone. As such, this causes an obstruction to visibility to the crossing point at the Connolly Hospital Junction for vehicles travelling from the N3 diverge and turning left into the access.										
DEP-5.062	Junction Intervisibility Zone	2	Navan Road/N3 Eastbound Diverge Junction	Ch. A2+180	Z2-Main-Alignm-0002B	Ch. 0+000	70 km/h	Obstruction within the junction intervisibility zone	DN-GEO-03044 Cl 2.16	No obstruction within the junction intervisibility zone	BCIDC-ARP-GEO_HV-0005_XX_00-DR-CR-0002
	Justification The existing pedestrian crossing layout at the Navan Road/N3 eastbound diverge Junction is generally retained at this location. Additional pedestrian crossings are proposed on the N3 Link Road at the junction of Navan Road/N3 eastbound diverge junction to improve directness of walking routes to the inbound bus stop east of the junction. Existing woodland vegetation is located to the rear of the northern footpath adjacent to the overbridge. The existing mature woodland vegetation sits within the junction intervisibility zone and results in a loss of visibility for left-turning vehicles travelling onto the overbridge from the N3 Link Road.										

DEPARTURES FROM STANDARD (TII Publications)

Departure Ref.	Design Discipline	Zone	Location: Road Name	Location: Chainage (Global)	Location: Alignment (Geometric)	Location: Chainage (Geometric)	Design Speed	Description of departure	Relevant Design Guideline/Standard	Standard Required	Supporting Information
DEP-5.063	Junction Intervisibility Zone	3	Travelodge Access Junction	Ch. A2+900	Z2-Main-Alignm-0003C	Ch. 0+000	60 km/h	Obstruction within the junction intervisibility zone	DN-GEO-03044 Cl 2.16	No obstruction within the junction intervisibility zone	BCIDC-ARP-GEO_HV-0005_XX_00-DR-CR-0021
	Justification The existing junction layout is generally retained at this location to minimise impacts of the scheme on the existing road layout. Existing boundary wall/fence causes an obstruction within the intervisibility zone.										
DEP-5.064	Junction Intervisibility Zone	3	Navan Parkway Interchange – Railway Station Junction	Ch. A3+850	Z3-Main-Alignm-0004	Ch. 0+025	60 km/h	Obstruction within the junction intervisibility zone	DN-GEO-03044 Cl 2.16	No obstruction within the junction intervisibility zone	N/A
	Justification The existing junction layout is generally retained at this location to minimise impacts of the scheme on the existing road layout. The existing bridge parapet causes an obstruction within the intervisibility zone, and this obstruction is experienced by drivers entering the junction from the R147 diverge and the Navan Park Overbridge.										
DEP-5.065	Junction Intervisibility Zone	3	Navan Parkway Interchange – Development Access Junction	Ch. A3+850	Z3-Main-Alignm-0004	Ch. 0+100	60 km/h	Obstruction within the junction intervisibility zone	DN-GEO-03044 Cl 2.16	No obstruction within the junction intervisibility zone	N/A
	Justification The existing junction layout is generally retained at this location to minimise impacts of the scheme on the existing road layout. Existing bridge parapet and vegetation causes an obstruction within the intervisibility zone. This obstruction is experienced by drivers entering the junction from the R147 diverge and the Navan Park Overbridge.										
DEP-5.066	Junction Intervisibility Zone	3	R147 Navan Road - Phoenix Park Avenue - Phoenix Industrial Park Entrance Junction	Ch. A4+500	Z3-Main-Alignm-0001	Ch. 4+950	70 km/h	Obstruction within the junction intervisibility zone	DN-GEO-03044 Cl 2.16	No obstruction within the junction intervisibility zone	N/A
	Justification This junction is to be upgraded to a signalised junction to provide safe cycling facilities as well as a new pedestrian crossing on Phoenix Park Ave, Navan Rd and Phoenix Industrial Park entrance. The design has ensured existing vegetation at Phoenix Industrial Park entrance is retained and as a result this causes an obstruction within the intervisibility zone of the junction. This obstruction will be experienced by drivers approaching the junction from the Industrial Park access however although a portion of the intervisibility zone is obstructed, all pedestrian crossings are visible from the stop line of the access.										
DEP-5.067	VRS	3	N3 Eastbound Link Road (Bus Lane); M50 Roundabout Junction to Auburn Avenue Junction	Ch. A2+700 to Ch. A2+780	Z2-Main-Alignm-0003C	Ch. 0+140 to 0+200	60 km/h	Setback = 0.5m	DN-REQ-03034, Cl. 3.12	Setback = 0.6m	BCIDC-ARP-GEO_HV-0005_XX_00-DR-CR-0021
	Justification The nearside VRS at this location will be set back 0.5m from the carriageway edge to facilitate a W2 working width in front of the structure pier to the overbridge. A reduced lane width of 3.25m will be provided at this location to minimise the impact of widening on an existing overbridge structure. Carriageway widening is required to facilitate the provision of a bus lane between the M50 roundabout junction and Auburn Avenue Junction. As a result, the widening is required to the nearside carriageway edge resulting in a 1.5m min. offset to the bridge pier at this location. As a result, a reduced lane width of 3.25m is provided in conjunction with a reduced VRS setback of 0.5m, a carriageway hard strip width of 0.6m and a speed limit of 50 km/h which reflects the constrained nature of the location. The bus lane width through this section of carriageway is also 3.25m wide in accordance with TII's Draft Publication on Bus Lanes on Dual Carriageways and Motorways.										

DEPARTURES FROM STANDARD (TII Publications)

Departure Ref.	Design Discipline	Zone	Location: Road Name	Location: Chainage (Global)	Location: Alignment (Geometric)	Location: Chainage (Geometric)	Design Speed	Description of departure	Relevant Design Guideline/Standard	Standard Required	Supporting Information
DEP-5.068	Cross-section	3	N3 Eastbound Link Road (Bus Lane); M50 Roundabout Junction to Auburn Avenue Junction	Ch. A2+700 to Ch. A2+780	Z2-Main-Alignm-0003C	Ch. 0+140 to 0+200	60 km/h	Lane width = 3.25m	DN-GEO-03036, Table 4.4	Lane width = 3.65m	BCIDC-ARP-GEO_HV-0005_XX_00-DR-CR-0021
	Justification Reduced lane widths of 3.25m will be provided at this location to minimise the impact of widening on an existing overbridge structure. This width of 3.25m is less than the stated lane widths of 3.65m for a Dual 2/Dual 3 Lane Urban All-Purpose Road, DN-GEO-03036 Table 4.4 and is applied to both the traffic lane and bus lane at this location. In accordance with the 'TII Standards Commission - Bus Lanes on Dual Carriageways and Motorways - Literature and Scheme Review Note – Draft', a bus lane width of 3.25m is provided. It should be noted that this draft document acknowledges that bus lane widths of 3.25m may be provided as an absolute minimum at constrained locations. Carriageway widening will facilitate the provision of a bus lane between the M50 roundabout junction and Auburn Avenue Junction. As a result, widening will be required to the nearside carriageway edge resulting in a 1.5m min. offset to the bridge pier at this location. As a result, to minimise impact to the existing structural pier, a reduced lane width of 3.25m is required in conjunction with a reduced VRS setback of 0.5m, a carriageway hard strip width of 0.6m and a speed limit of 50 km/h which reflects the constrained nature of the location.										
DEP-5.069	*Not used*	*Not used*	*Not used*	*Not used*	*Not used*	*Not used*	*Not used*	*Not used*	*Not used*	*Not used*	*Not used*
	Not used										
DEP-5.070	Combination of Departures	2	N3 Mainline Dual Carriageway (Eastbound)	**Ch. A1+780 to Ch. A1+986** Ch. A 1+925 to A1+986 (vert) Ch. A1+780 to A1+980 (SSD)	Z2-Main-Alignm-0001 EB	**Ch. 0+750 to Ch 0+956** Ch. 0+895 to 0+956 (vert) Ch. 0+750 to 0+950 (SSD)	85 km/h	Crest Curve = 30K (DEP-5.004, 1 step relax.) SSD = 120m (DEP-5.047, 1 step relax.)	DN-GEO-03031 Cl 1.8.2.	Crest Curve = 55K SSD = 160m	Refer to individual geometric departures [DEP-5.004, DEP-5.046]
	Justification The existing carriageway is retained at this location to minimise impacts of the scheme on the existing road layout through this heavily constrained grade separated junction. The diverge lane is widened from one carriageway lane width to two (one traffic lane, one bus lane) to facilitate the transition of the bus lane off the N3 dual carriageway towards Connolly Hospital Access and along the existing overbridge structure. The existing 30K crest curve is replicated as the outbound bus lane is introduced along the N3 westbound merge at Navan Road/Old Navan Road junction and the inbound bus lane diverges off the dual carriageway mainline towards Connolly Hospital Access. Hence this sub-standard crest curve is provided on approach to a junction (refer to DEP-5.004). This relaxation coincides with a relaxation in SSD at this location. The SSD for lane 1 only is reduced by the provision of a VRS in the nearside verge between the mainline corridor and the diverge lane and the associated earthworks embankment. Furthermore, established planting on the embankment results in a reduced SSD to both the low and high object heights at this location on approach to the junction. The desirable minimum SSD is achieved for vehicles in lane 2 (refer to DEP-5.047). This combination of relaxations is not permitted according to Section 1.8.2 of DN-GEO-03031.										

DEPARTURES FROM STANDARD (TII Publications)

Departure Ref.	Design Discipline	Zone	Location: Road Name	Location: Chainage (Global)	Location: Alignment (Geometric)	Location: Chainage (Geometric)	Design Speed	Description of departure	Relevant Design Guideline/Standard	Standard Required	Supporting Information
DEP-5.071	Combination of Departures	2	N3 Mainline Dual Carriageway (Westbound)	**Ch. A 1+986 to Ch A 1+870** Ch. A 1+870 to Ch. 1+985 (horiz) Ch. A 1+826 to Ch. A 1+910 (vert) Ch. 1+985 to Ch. 1+900 (Lane 2 SSD) Ch. 1+985 to Ch. 1+960 (Lane 1 SSD)	Z2-Main-Alignm-0001 WB	**Ch. 0+120 to Ch 0+359** Ch. 0+120 to 0+359 (horiz) Ch. 0+198 to 0+282 (vert) Ch. 0+120 to Ch. 0+320 (Lane 2 SSD) Ch.0+120 to Ch. 0+250 (Lane 1 SSD)	85 km/h	Horizontal Curve, R= 503m, S=5% (DEP-5.003, 1 step relax.) Crest Curve = 30K(DEP-5.004, 1 step relax.) SSD=100m (Lane 2) SSD= 155m (Lane 1)(DEP-5.046, 2 step relax.)	DN-GEO-03031Cl 1.8.2.	R= 510m, S=5% Vertical Crest curve = 55K SSD = 160m	Refer to individual geometric departures[DEP-5.003, DEP-5.004, DEP-5.046]
	Justification The existing carriageway is retained at this location to minimise impacts of the scheme on the existing road layout through this heavily constrained grade separated junction. The existing R=500m curve is replicated as the outbound bus lane is introduced along the N3 westbound merge at the Navan Road/ Old Navan Road Junction and hence this sub-standard horizontal curve is provided on approach to a junction. The carriageway is superelevated at 5% through this horizontal curve. This represents a one design speed step relaxation in horizontal curvature. Simultaneously, the existing 30K crest curve along the mainline dual carriageway is retained and this represents a one step relaxation, refer to DEP-5.004. These relaxations coincide with a two-step relaxation in SSD at this location. Due to minor carriageway widening works within the central reserve to facilitate the introduction of the bus lane, the SSD reduces to 155m and 100m in lanes 1 and 2 respectively for westbound vehicles travelling along the existing stretch of the N3 dual carriageway. The SSD is restricted by the provision of a VRS in the central reserve on approach to a gantry structure at the junction. Full SSD is provided for merging vehicles at Navan Road/Old Navan Road junction including buses travelling within the bus lane. The reduction in SSD occurs to the low object height of 0.26m and represents a two-step relaxation however full desirable minimum SSD of 160m is provided to the high object height when looking over the VRS in the central reserve to the high object height of 1.05m, refer to DEP-5.046. This combination of relaxations is not permitted according to Section 1.8.2 of DN-GEO-03031.										
DEP-5.072	Combination of Departures	2	N3 Eastbound Diverge at Connolly Hospital	**Ch. A1+810 to Ch. A1+969** Ch. A1+905 to Ch.A1+969 (horiz) Ch. A1+810 - Ch. A1+930 (SSD)	Z2-Main-Alignm-0002B	**Ch. 0+440 to Ch. 0+248** Ch 0+248 to Ch 0+348 (horiz) Ch 0+440 to Ch 0+320 (SSD)	60 km/h	R= 150m, S=5% (DEP-5.006, 2 step relax.) SSD = 60m (DEP-5.048, 1 step relax.)	DN-GEO-03031 Cl 1.8.2.	R=255m, S=5% SSD = 90m	Refer to individual geometric departures [DEP-5.006, DEP-5.048]
	Justification The existing carriageway is widened at this location to facilitate the addition of the bus lane. The existing geometry has been retained to minimise impacts of the scheme on the existing road layout through this heavily constrained grade separated junction. The existing R=150m curve, represents a two-step relaxation in horizontal geometry and is replicated to facilitate the junction with the Connolly Hospital Entrance at Ch. 0+280 (geometric), refer to DEP-5.006. This relaxation coincides with a relaxation in SSD. The SSD is restricted by the provision of a VRS on the nearside verge. Verge widening is limited by the existing River Tolka and associated earthworks and culvert structures located at the back of verge. In addition, mature trees are located at the back of the existing verge and forms part of this area of ecological significance. As such the reduction in SSD occurs to both the high and low object heights on approach to the junction with Connolly Hospital, refer to DEP-5.048. This combination of relaxations is not permitted according to Section 1.8.2 of DN-GEO-03031.										

DEPARTURES FROM STANDARD (TII Publications)

Departure Ref.	Design Discipline	Zone	Location: Road Name	Location: Chainage (Global)	Location: Alignment (Geometric)	Location: Chainage (Geometric)	Design Speed	Description of departure	Relevant Design Guideline/Standard	Standard Required	Supporting Information
DEP-5.073	Combination of Departures	2	N3 Eastbound Diverge at Connolly Hospital (Eastbound; Connolly Hospital Junction to Navan Road/N3 Eastbound Diverge junction)	**Ch. M0+000 to Ch. M0+280** Ch. M0+000 to Ch.M0+180 (SSD) Ch. M0+135 to Ch. M0+175 (vert) Ch. M0+135 to Ch. M0+195 (horiz) Ch. M0+215 to Ch. M0+270 (horiz) Ch. M0+175 to Ch. M0+210 (vert) Ch.M0+190 to Ch.M0+280 (SSD)	Z2-Main-Alignm-0002B	**Ch 0+275 to Ch. 0+005** Ch 0+275 to 0+105 (SSD) Ch. 0+111 to 0+148 (vert) Ch.0+092 to 0+145 (horiz) Ch. 0+015 to 0+070 (horiz) Ch. 0+076 to 0+111 (vert) Ch. 0+095 to 0+005 (SSD)	60 km/h	SSD = 60m (DEP-5.049, 1 step relax.) Crest Curve = 13K (DEP-5.013, 1 step relax.) Horizontal Curve, R= 50m, S=5.0% (DEP-5.010, > 4 step relax.) Horizontal Curve, R= 65m, S=2.5% (DEP-5.008, > 4 step relax.) No Transition Curves (DEP-5.011 & DEP-5.009) Crest Curve = 15K (DEP-5.012, 1 step relax.) SSD= 35m (DEP-5.010, > 2 step relax.)	DN-GEO-03031 Cl 1.8.2.	SSD= 90m Crest Curve = 17K R=255m, S=5% R=510m, S=2.5% Crest Curve = 17K SSD = 90m	Refer to individual geometric departures [DEP-5.008, DEP-5.009, DEP-5.010, DEP-5.011, DEP-5.012, DEP-5.013, DEP-5.049, DEP-5.051]

Justification

The existing carriageway is retained at this location on the overbridge structure of the N3 eastbound diverge at Connolly Hospital Junction to facilitate the redesignation of an existing traffic lane as a dedicated bus lane. The existing geometry has been retained to minimise impacts of the scheme on the overbridge structure. As a result, multiple relaxations coincide at this location. These consist of the following: Crest Curve = 13K (DEP-5.013), Horizontal Curve R= 50m S=2.5% (DEP-5.010), Horizontal Curve R= 65m S=2.5% & No Transition Curve (DEP-5.008 & DEP-5.009), Crest Curve = 15K (DEP-5.012).

In addition, SSD is restricted in this location. For drivers travelling along the N3 diverge heading towards the Navan Road/N3 eastbound diverge junction, visibility is restricted by the provision of a sub-standard horizontal curve (R=50m) in the vicinity of the overbridge structure which results in the visibility splays encroaching on the existing bridge parapet provided in the offside verge. The R=50m horizontal curve is provided without transition curves (DEP-5.011). This results in the SSD being reduced to a minimum of 60m (refer to DEP-5.049).

On approach to the M50 roundabout junction, carriageway widening works are proposed to facilitate a segregated left-turn bus lane at the Navan Road/N3 eastbound diverge overbridge junction and a new bus lane entry to the M50 roundabout. As a result, the SSD of this new bus lane layout is reduced by the provision of VRS within the nearside verge. Verge widening is limited by the existing boundary and requirement to provide a retaining solution at the back of verge to reduce impact on adjacent commercial premises.

The SSD is reduced to a minimum of 35m as the left-turn bus lane exits the Navan Road/N3 eastbound diverge overbridge junction (refer to DEP-5.051).

This combination of relaxations is not permitted according to Section 1.8.2 of DN-GEO-03031.

DEPARTURES FROM STANDARD (TII Publications)

Departure Ref.	Design Discipline	Zone	Location: Road Name	Location: Chainage (Global)	Location: Alignment (Geometric)	Location: Chainage (Geometric)	Design Speed	Description of departure	Relevant Design Guideline/Standard	Standard Required	Supporting Information
DEP-5.074	Combination of Departures	2	N3 Eastbound Diverge at Connolly Hospital (Westbound; Navan Road/N3 Eastbound Diverge junction to Connolly Hospital Junction)	**Ch. M0+135 to Ch.M0+280** Ch.M0+280 to Ch. M0+160 (SSD) Ch. M0+215 to Ch. M0+270 (horiz) Ch. M0+175 to Ch. M0+210 (vert) Ch. M0+135 to Ch. M0+175 (vert) Ch. M0+135 to Ch. M0+195 (horiz)	Z2-Main-Alignm-0002B	**Ch. 0+010 to Ch. 0+148** Ch 0+010 to Ch 0+120 (SSD) Ch. 0+015 and 0+070 (horiz) Ch. 0+076 and 0+111 (vert) Ch. 0+111 and 0+148 (vert) Ch. 0+092 to 0+145 (horiz)	60 km/h	SSD= 38m(DEP-5.050, > 2 step relax.) Horizontal Curve, R= 65m, S=2.5%(DEP-5.008, > 4 step relax.) No Transition Curves(DEP-5.009 & DEP-5.011) Crest Curve = 15K (DEP-5.012, 1 step relax.) Crest Curve = 13K (DEP-5.013, 1 step relax.) Horizontal Curve, R= 50m, S=5.0%(DEP-5.010, 2 step relax.)	DN-GEO-03031Cl 1.8.2.	SSD = 90m R=510m, S=2.5% Crest Curve = 17K Crest Curve = 17K R=255m, S=5%	Refer to individual geometric departures [DEP-5.008, DEP-5.009, DEP-5.010, DEP-5.011, DEP-5.012, DEP-5.013 & DEP-5.050]
	Justification The existing carriageway is retained at this location on the overbridge structure of the N3 eastbound diverge at Connolly Hospital junction to facilitate the redesignation of an existing traffic lane as a dedicated bus lane. The existing geometry has been retained to minimise impacts of the scheme on the overbridge structure. As a result, multiple relaxations coincide at this location. These consist of the following: Vertical Crest Curve = 13K (DEP-5.013), Horizontal Curve R= 50m S=5% (DEP-5.010), Horizontal Curve R= 65m S=2.5% (DEP-5.008) both provided without Transition Curves (DEP-5.009 & DEP-5.011) and a Vertical Crest Curve = 15K (DEP-5.012). In addition, SSD is restricted in this location. For drivers travelling from Navan Road/N3 eastbound diverge overbridge junction to Connolly Hospital Junction, visibility is restricted by the provision of two sub-standard horizontal curves (R=65 and R=50m) in the vicinity of the overbridge structure which results in the visibility splays encroaching on the existing bridge parapet (refer to DEP-5.050). This combination of relaxations is not permitted according to Section 1.8.2 of DN-GEO-03031.										

DEPARTURES FROM STANDARD (TII Publications)

Departure Ref.	Design Discipline	Zone	Location: Road Name	Location: Chainage (Global)	Location: Alignment (Geometric)	Location: Chainage (Geometric)	Design Speed	Description of departure	Relevant Design Guideline/Standard	Standard Required	Supporting Information
DEP-5.075	Combination of Departures	3	N3 Westbound Link Road, Auburn Avenue to M50 Junction	**Ch. A2+883 to Ch. A2+565Ch**. A2+877 to Ch. A2+809 (horiz) Ch. A2+883 to Ch. A2+630 (SSD) Ch. A2+748 to Ch. A2+651 (horiz) Ch. A2+789 to Ch. A2+745 (vert) Ch. A2+709 Ch. A2+640 (vert) Ch. A2+749 to Ch. A2+651 (horiz))Ch. A2+612 to Ch. A2+565 (vert)	Z2-Main-Alignm-0003	**Ch. 6+611 to Ch. 6+925** Ch. 6+611 and 6+679 (horiz) Ch. 6+607 to 6+860 (SSD) Ch. 6+740 to 6+837 (horiz) Ch. 6+701 to 6+745 (vert) Ch. 6+779 to 6+848 (vert) Ch. 6+843 to 6+910 (horiz) Ch. 6+878 to 6+925 (vert)	70 km/h	No transition curves(DEP-5.016, DEP-5.019 & DEP-5.020))SSD =56m(DEP-5.056, 3 step relax.) R=172m, S=5% (DEP-5.017, 3 step relax.) Crest Curve = 10k (DEP-5.021, 2 step relax.) Sag Curve = 6.5K (DEP-5.022, 2 step relax.) Horizontal Curve, R= 280m, S=2.5% (DEP-5.018, 3 step relax.) Crest Curve = 6.5K (DEP-5.023, 3 step relax.)	DN-GEO-03031Cl 1.8.2.	L = 48m (q=0.3) SSD= 120m Horizontal Curve, R=360m, S=5% Crest Curve = 30K Sag Curve = 20KR=510m, S=2.5% Crest Curve = 30K	Refer to individual geometric departures [DEP-5.016, DEP-5.017, DEP-5.018, DEP-5.019, DEP-5.020, DEP-5.021, DEP-5.022, DEP-5.023 & DEP-5.056]

Justification

The existing carriageway is retained at this location of the N3 westbound to facilitate the redesignation of an existing traffic lane as a dedicated bus lane. The existing geometry has been retained to minimise impacts of the scheme on the existing infrastructure (gantries) and overbridge structures at this location. As a result, multiple relaxations coincide at this location. These consist of the following: Horizontal Curve R=172m S=5% (DEP-5.017), Crest Curve = 10K (DEP-5.021) , Sag curve = 6.5k (DEP-5.022), Horizontal Curve R=280m S=2.5 (DEP-5.018) and crest Curve =6.5k DEP-5.022). The horizontal curves of the alignment are provided without transitions at this location (DEP-5.016, DEP-5.019 & DEP-5.020). In addition, the SSD is restricted in this location (refer to DEP-5.056).

The SSD achieved (56m min.) is as per the existing scenario and is restricted due to the provision of a VRS on the off-side of the carriageway. Additionally, the SSD is also restricted by the existing sub-standard crest curve (K=6.5) provided to match existing. The reduction in SSD occurs in the proposed bus lane.

This combination of relaxations is not permitted according to Section 1.8.2 of DN-GEO-03031.

DEPARTURES FROM STANDARD (TII Publications)

Departure Ref.	Design Discipline	Zone	Location: Road Name	Location: Chainage (Global)	Location: Alignment (Geometric)	Location: Chainage (Geometric)	Design Speed	Description of departure	Relevant Design Guideline/Standard	Standard Required	Supporting Information
DEP-5.076	Combination of Departures	3	N3 Eastbound Link Road (Bus Lane) M50 Junction to Auburn Avenue Junction	Ch. A2+665 - Ch. A2+775 (SSD) Ch. A2+765 to Ch. A2+800 (horiz) Ch. A2+750 to Ch. A2+775 (vert) Ch. A2+775 to Ch. A2+820 (vert) Ch. A2+810 to Ch. A2+869 (horiz) Ch. A2+820 to Ch. A2+840 (vert)	Z2-Main-Alignm-0003C to Z2-Main-Alignm-0003D	Ch. 0+240 (Z2-Main-Alignm 0003C) to Ch. 6+725 (Z2-Main-Alignm 0003D)Total Length = 140m (SSD) Ch. 6+729 to Ch. 6+690 (horiz)Ch. 6+744 Ch. 6+719 (vert) Ch. 6+719 to Ch. 6+665 (vert) Ch. 6+679 to Ch. 6+620 (horiz) Ch. 6+665 to Ch. 6+646 (vert)	60 km/h	SSD = 35m(DEP-5.055, > 2 step relax.) Horizontal Curve, R=45m, S=5%(DEP-5.025, > 4 step relax.)No transition curves(DEP-5.026 & DEP-5.027) Sag curve =9K (DEP-5.030, 1 step relax.) R=80m, S=3.5%(DEP-5.024, > 4 step relax.) Crest Curve = 10K(DEP-5.029, 1 step relax.)	DN-GEO-03031Cl 1.8.2.	SSD= 90m R=255m, S=5% Sag Curve = 13k Crest Curve = 17k R=360m, S=3.5% Crest Curve = 17k	Refer to individual geometric departures [DEP-5.024, DEP-5.025, DEP-5.026, DEP-5.027, DEP-5.029, DEP-5.030 & DEP-5.055]

Justification

This is a proposed length of carriageway to facilitate a dedicated bus lane between the N3/M50 Roundabout and Auburn Avenue Junction in the citybound direction. The proposed alignment is required to tie-in with the existing lengths of carriageway along the N3 close to the M50 roundabout and Auburn Avenue junction. Due to the existing overbridge structure carrying the N3/M50 southbound off-slip, Auburn Avenue Junction itself and existing services located in the verge, the alignment is extremely constrained through this area and results in the provision of a sub-standard horizontal and vertical geometry. Multiple relaxations coincide at this location. These consist of the following: Horizontal Curves of R=45m, S-5% and R=80 S=3.5% (DEP-5.025 & DEP-5.024) provided without transitions (DEP-5.026 & DEP-5.027), Sag curve = 9K (DEP-5.030), Sag Curve = 10K (DEP-5.029).

In addition, the SSD is restricted to a minimum of 35m by the provision of a VRS on the off-side verge protecting drivers from the structural abutment. However, between Ch. 0+240 (Z2-Main-Alignm 0003C) and Ch. 0+190 (Z2-Main-Alignm 0003C) a 70m SSD is achieved which represents a one step relaxation. Visibility to the high object height of 1.05m is also restricted by the existing abutment to the overbridge structure and the associated earthwork embankment in the off-side verge (refer to DEP-5.055).

This combination of relaxations is not permitted according to Section 1.8.2 of DN-GEO-03031.

DEPARTURES FROM STANDARD (TII Publications)

Departure Ref.	Design Discipline	Zone	Location: Road Name	Location: Chainage (Global)	Location: Alignment (Geometric)	Location: Chainage (Geometric)	Design Speed	Description of departure	Relevant Design Guideline/Standard	Standard Required	Supporting Information
DEP-5.077	Combination of Departures	3	R147 Navan Parkway Westbound Merge	**Ch. A3+718 to Ch.A3+722** Ch. A3+662+ to Ch. A3+722 (vert) Ch. A3+718+ to Ch. A3+796 (horiz)	Z3-Main-Alignm-0003C	**Ch. 0+070 to 0+198** Ch. 0+138 to 0+198 (vert) Ch. 0+070 to 0+148 (horiz)	60 km/h	Sag Curve = 10k (1 step below min) R=520m (1 step below min) No transition provided	DN-GEO-03031Cl 1.8.2.	Sag Curve = 13k R=720m L = 30m (q=0.3)	Refer to individual geometric departures
	Justification The existing carriageway is retained at this location of the R147 westbound merge at the Navan Parkway Junction to facilitate the provision of a dedicated bus lane. The existing geometry has been retained to minimise impacts of the scheme on the existing road layout and adjacent infrastructure. The bus lane continues onto the main R147 dual carriageway where carriageway widening is undertaken. The existing R=510m curve along the merge lane is replicated without the removal of adverse camber and without the provision of transition curves, this represents a one-step relaxation in horizontal geometry, refer to DEP 5.039 & 5.040. This relaxation in horizontal geometry coincides with a relaxation in vertical geometry. The existing 10k sag curve is replicated which represents a one-step relaxation in vertical geometry and is required to facilitate an appropriate tie-in with the mainline carriageway, refer to DEP 5.041. This combination of relaxations is not permitted according to Section 1.8.2 of DN-GEO-03031.										
DEP-5.078	Alignment - Vertical	3	N3 Westbound Link Road, Auburn Avenue to M50 Junction	Ch. A2+630	Z2-Main-Alignm-0003 Z2-Main-Alignm-0003A	Ch. 6+848 to Ch. 6+877 (westbound) Ch. 6+844 to Ch 6+861 (eastbound)	70 km/h	Longitudinal Gradient = 6.9% (westbound) 7.6% (eastbound)	DN-GEO-03031, Table 4.1	Longitudinal Gradient = 4%	BCIDC-ARP-GEO_HV-0005_XX_00-DR-CR-0018 BCIDC-ARP-GEO_HV-0005_XX_00-DR-CR-0019
	Justification The existing carriageway is retained at this location of the N3 westbound to facilitate the redesignation of an existing traffic lane as a dedicated bus lane. The existing vertical geometry has been retained to minimise impacts of the scheme on the existing infrastructure (gantries) and overbridge structures at this location. The existing vertical alignment (longitudinal gradient = 6.9% in the westbound direction and 7.6% in the eastbound direction) is replicated to minimise any impact of the scheme on the existing road layout and facilitate the adjacent junctions between Auburn Ave and M50 Roundabout.										
DEP-5.079	Cross-section	2/3	N3 Mainline Dual Carriageway (Westbound & Eastbound) including the associated Junction Slip Roads (with the exception of the N3 Westbound merge at the Navan Road /Old Navan Road Junction) and the N3 Link Roads between Navan Road/ Old Navan Road Junction and Auburn Avenue Junction	Ch. L0+040 to Ch. L0+200 Ch. A1+050 to Ch. A2+875	Z1-main-alignm-0003A Z2-Main-Alignm-0004 to Z2-Main-Alignm-0003	Ch. 0+040 to Ch. 0+200 (Z1-main-alignm-0003A) Ch.0+190 (Z2-Main-Alignm-0004) to Ch. 6+610 (Z2-Main-Alignm-0003)	Varies (85km/h, 70km/h, 60km/h)	Bus Lane Width = 3.5m	DN-GEO-03036 Table 4.4	Bus Lane Width = 3.65m	BCIDC-ARP-GEO_HV-0005_XX_00-DR-CR-0002toBCIDC-ARP-GEO_HV-0005_XX_00-DR-CR-0022 *Note: To avoid information clutter, this departure has not been indicated on the layout drawings.*
	Justification In accordance with the 'TII Standards Commission - Bus Lanes on Dual Carriageways and Motorways -Literature and Scheme Review Note – Draft', a bus lane width of 3.5m is provided in both directions along the N3 Dual Carriageway including the associated Junction Slip Roads (with the exception of the N3 westbound merge at the Navan Road/ Old Navan Road junction) and the N3 Link Roads between Navan Road/ Old Navan Road Junction and Auburn Avenue Junction. In addition, a 0.3m separation is provided between the bus lane and adjacent traffic lane. This width of 3.5m is less than the stated lane widths of 3.65m for a Dual 2/Dual 3 Lane Urban All-Purpose Road, DN-GEO-03036 Table 4.4. This reduced lane width, in conjunction with reduced 3.5m traffic lane widths minimises the impact from scheme widening on adjacent land boundaries and the existing structures along the route.										

DEPARTURES FROM STANDARD (TII Publications)

Departure Ref.	Design Discipline	Zone	Location: Road Name	Location: Chainage (Global)	Location: Alignment (Geometric)	Location: Chainage (Geometric)	Design Speed	Description of departure	Relevant Design Guideline/Standard	Standard Required	Supporting Information
DEP-5.080	Cross-section	2	N3 Westbound Merge at Navan Road/ Old Navan Road Junction	Ch. A1+800 to Ch. A1+975	Z2-Main-Alignm-0001-WB Z2-Main-Alignm-0002	Ch. 0+000 to Ch. 0+210 Ch. 0+310 to Ch.8+660	60 km/h	Bus Lane Width = 3.25m	DN-GEO-03036 Table 4.4	Bus Lane Width = 3.65m	BCIDC-ARP-GEO_HV-0005_XX_00-DR-CR-0007 Note: To avoid information clutter, this departure has not been indicated on the layout drawings.
	Justification In accordance with the 'TII Standards Commission - Bus Lanes on Dual Carriageways and Motorways - Literature and Scheme Review Note – Draft', a bus lane width of 3.25m is provided along the N3 westbound merge at the Navan Road/ Old Navan Road junction. It should be noted that this draft document acknowledges that bus lane widths of 3.25m may be provided as an absolute minimum at constrained locations. In addition, a 0.3m separation is provided between the bus lane and adjacent traffic lane. This width of 3.25m is less than the stated lane widths of 3.65m for a Dual 2/Dual 3 Lane Urban All-Purpose Road, DN-GEO-03036 Table 4.4. The reduced lane width is provided through a constrained location where, in conjunction with reduced 3.5m traffic lane widths minimises the impact from scheme widening on adjacent residential properties at Catherine's Well and the existing gantry structure.										
DEP-5.081	Cross-section	2/3	N3 Mainline Dual Carriageway (Westbound & Eastbound) including the associated Junction Slip Roads and the N3 Link Roads between Navan Road/ Old Navan Road Junction and Auburn Avenue Junction	Ch. L0+040 to Ch. L0+200 Ch. A1+025 to Ch. A2+880	Z1-main-alignm-0003A Z2-Main-Alignm-0004 to Z2-Main-Alignm-0003	Ch. 0+040 to Ch. 0+200 Ch. 0+220 (Z2-Main-Alignm-0004) to Ch. 6+610 (Z2-MAIN-ALIGNM-0003)	Varies (85km/h, 70km/h, 60km/h)	Traffic Lane Width = 3.5m	DN-GEO-03036 Table 4.4	Traffic Lane Width = 3.65m	BCIDC-ARP-GEO_HV-0005_XX_00-DR-CR-0002toBCIDC-ARP-GEO_HV-0005_XX_00-DR-CR-0022 Note: To avoid information clutter, this departure has not been indicated on the layout drawings.
	Justification In accordance with the 'TII Standards Commission - Bus Lanes on Dual Carriageways and Motorways -Literature and Scheme Review Note – Draft', traffic lane widths of 3.5m are provided in both directions along the N3 Dual Carriageway including the associated Junction Slip Roads and the N3 Link Roads between Navan Road/ Old Navan Road junction and Auburn Avenue Junction. This width of 3.5m is less than the stated lane widths of 3.65m for a Dual 2/Dual 3 Lane Urban All-Purpose Road, DN-GEO-03036 Table 4.4. This reduced lane width, in conjunction with reduced 3.5m bus lane widths minimises the impact from scheme widening on adjacent land boundaries and the existing structures along the route.										
DEP-5.082	Classification of Fill Material	2	N3 Westbound Diverge at Snugborough Junction; Tolka River Bridge	Ch. A1+110	Z2-Main-Alignm-0004	Ch. 0+130	TBC	Use of light weight fill as a permanent fill material	CC-SPW-00600 – Clause 608.13	Fill material with a stiffness equivalent to 2.0N/mm2 concrete	BCIDC-ARP-STR_GA-0005_BR_01-DR-CB-0003
	Justification It is proposed to place lightweight fill above the existing precast beams of the Tolka River Bridge (FG-N03-008.00). This is required to avoid adding additional load to the existing structure due to the proposed widening works at this location. The fill above the existing bridge deck is approximately 1.7m deep, including pavement construction. It is proposed to replace the lower 1.0m of this fill with a foamed concrete mix. The specification for the foamed concrete requires a density of 600 kg/m3 and a characteristic cube strength of 2.0 N/mm2. This lightweight concrete layer is only required over the extent of the existing precast beams and the proposed widening, which will comprise a 1.0m thick layer approximately 13 m long x 5 m wide. The use of light weight fill in this scenario avoids the need to physically strengthen the existing structure, which would comprise extensive excavations and modifications to the existing structure. These modifications are further complicated by the need to undertake works above the environmentally sensitive Tolka River below. A number of lightweight materials were considered, including expanded clay aggregate and EPS blocks. The use of foamed concrete was selected as it mitigated against the concerns raised by the issues identified in the guidance notes to the specification and provides for a more durable solution in the long term.										

DEPARTURES FROM STANDARD (TII Publications)

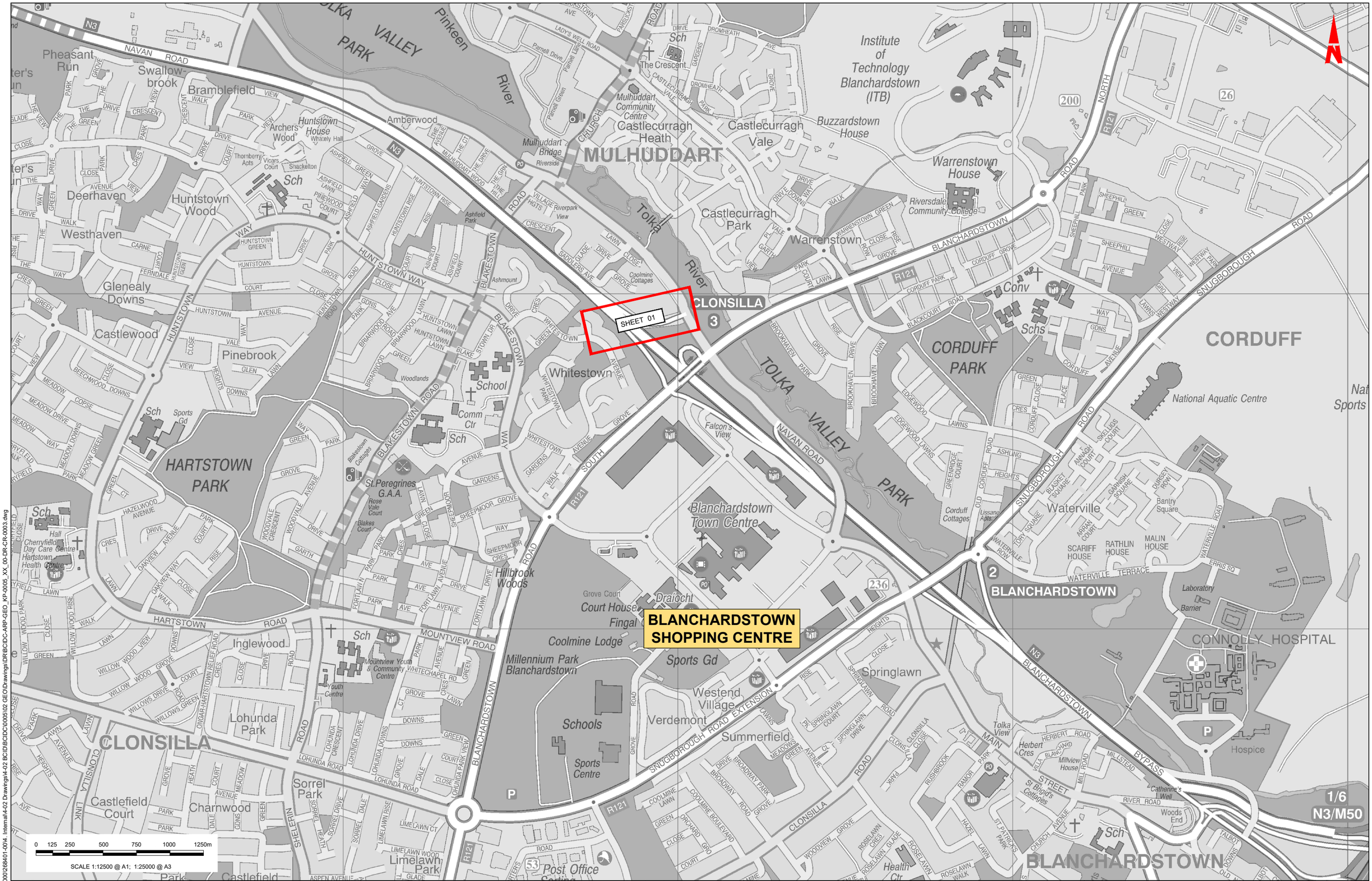
Departure Ref.	Design Discipline	Zone	Location: Road Name	Location: Chainage (Global)	Location: Alignment (Geometric)	Location: Chainage (Geometric)	Design Speed	Description of departure	Relevant Design Guideline/Standard	Standard Required	Supporting Information
DEP-5.083	Siting of Lay-by	2	N3 Mainline Dual Carriageway (Westbound & Eastbound)	Westbound; Ch. A1+700 (MH) Ch. A1+415 (refuge) Ch. A1+250 (MH) Eastbound; Ch. A1+380 (MH) Ch. A1+740 (MH)	Z2-Main-Alignm-0001 WB Z2-Main-Alignm-0001 EB	Westbound; Ch. 0+410 (MH) Ch. 0+690 (refuge) Ch. 0+855 (MH) Eastbound; Ch. 0+350 (MH) Ch. 0+710 (MH)	85 km/h	Siting of Lay-by	DN-GEO-03046 Cl. 4.2	Siting of lay-bys should be avoided near junctions and signage	BCIDC-ARP-GEO_HV-0005_XX_00-DR-CR-0009 BCIDC-ARP-GEO_HV-0005_XX_00-DR-CR-0010 BCIDC-ARP-GEO_HV-0005_XX_00-DR-CR-0012 BCIDC-ARP-GEO_HV-0005_XX_00-DR-CR-0013
	Justification 4 No. maintenance hardstanding's (2No. in the westbound direction at Ch. 0+410 and 0+855; 2No. in the eastbound direction at Ch. 0+350 and 0+710) are provided along the N3 dual carriageway to facilitate maintenance operations associated with the gantry structures and as such are required to be located in close vicinity. Additionally, an emergency refuge lay-by is provided in the westbound direction at Ch. 0+690.The siting of these lay-bys is in contravention of DN-GEO-03046 Clause 4.2 which requires the siting of lay-bys to be avoided at locations near junctions and signage. The lay-bys are considered to be provided near the adjacent grade-separated junctions of Snugborough and River Road, and the associated overhead gantry structures signing for these junctions.Due to the nature of these lay-bys (4 No. for maintenance and 1 No. for emergency purposes) it is anticipated they will be infrequently used. Full stopping sight distance is available along the N3 mainline dual carriageway on approach to these lay-bys and full junction visibility is available to the high object height for vehicles exiting the lay-bys. This section of the N3 dual carriageway is an urban all-purpose dual carriageway through a highly constrained area with adjacent private residential properties and areas of ecological significance.										
DEP-5.084	*Not used*	*Not used*	*Not used*	*Not used*	*Not used*	*Not used*	*Not used*	*Not used*	*Not used*	*Not used*	*Not used*
	Not used										
DEP-5.085	*Not used*	*Not used*	*Not used*	*Not used*	*Not used*	*Not used*	*Not used*	*Not used*	*Not used*	*Not used*	*Not used*
	Not used										
DEP-5.086	*Not used*	*Not used*	*Not used*	*Not used*	*Not used*	*Not used*	*Not used*	*Not used*	*Not used*	*Not used*	*Not used*
	Not used										
DEP-5.087	Junction Visibility	2	N3 Mainline Dual Carriageway (Westbound)	Ch. A1+700	Z2-Main-Alignm-0001 WB	Ch. 0+410	85 km/h	X = 2.4m YRHS = 20m	DN-GEO-03046 Table 4/1	X = 2.4m YRHS = 160m	BCIDC-ARP-GEO_HV-0005_XX_00-DR-CR-0012
	Justification Due to the provision of a vehicle restraint system (VRS) located in the nearside verge of the westbound carriageway surrounding the gantry and boundary features, visibility when exiting this maintenance hardstanding lay-by is reduced to 20m when looking to the low object height. When looking to the high object height of 1.05m, the desirable minimum visibility is achieved by looking above the VRS. Verge widening to set the VRS behind the visibility splay is limited at this location by land-take constraints. Due to the nature of this lay-by (maintenance hardstanding) it is anticipated this will be infrequently used. Full stopping sight distance is available along the N3 mainline dual carriageway on approach.										
DEP-5.088	Junction Visibility	2	N3 Mainline Dual Carriageway (Westbound)	Ch. A1+415	Z2-Main-Alignm-0001 WB	Ch. 0+690	85 km/h	X = 2.4m YRHS = 80m	DN-GEO-03046 Table 4/1	X = 2.4m YRHS = 160m	BCIDC-ARP-GEO_HV-0005_XX_00-DR-CR-0012
	Justification Due to the provision of a vehicle restraint system (VRS) located in the nearside verge of the westbound carriageway surrounding the gantry and retained boundary features, visibility when exiting this emergency refuge lay-by is reduced to 80m when looking to the low object height. When looking to the high object height of 1.05m, the desirable minimum visibility is achieved by looking above the VRS. Verge widening to set the VRS behind the visibility splay is limited at this location by land-take constraints. Due to the nature of this lay-by (emergency refuge) it is anticipated this will be infrequently used. Full stopping sight distance is available along the N3 mainline dual carriageway on approach.										

DEPARTURES FROM STANDARD (TII Publications)

Departure Ref.	Design Discipline	Zone	Location: Road Name	Location: Chainage (Global)	Location: Alignment (Geometric)	Location: Chainage (Geometric)	Design Speed	Description of departure	Relevant Design Guideline/Standard	Standard Required	Supporting Information
DEP-5.089	Junction Visibility	2	N3 Mainline Dual Carriageway (Westbound)	Ch. A1+250	Z2-Main-Alignm-0001 WB	Ch. 0+855	85 km/h	X = 2.4m YRHS = 20m	DN-GEO-03046 Table 4/1	X = 2.4m YRHS = 160m	BCIDC-ARP-GEO_HV-0005_XX_00-DR-CR-0013
	Justification Due to the provision of a vehicle restraint system (VRS) located in the nearside verge of the westbound carriageway surrounding the gantry and boundary features, visibility when exiting this maintenance hardstanding lay-by is reduced to 20m when looking to the low object height.When looking to the high object height of 1.05m, the desirable minimum visibility is achieved by looking above the VRS. Verge widening to set the VRS behind the visibility splay is limited at this location by land-take constraints.Due to the nature of this lay-by (maintenance hardstanding) it is anticipated this will be infrequently used. Full stopping sight distance is available along the N3 mainline dual carriageway on approach.										
DEP-5.090	VRS	2	N3 Mainline Dual Carriageway (Eastbound)	Ch. A1+580	Z2-MAIN-ALIGNM-0001 EB	Ch. 0+550	85 km/h	VRS reduced length of need	DN-REQ-03034, Cl. 3.16	N/A	BCIDC-ARP-GEO_HV-0005_XX_00-DR-CR-0009
	Justification The nearside VRS at this location will be provided with a gap to facilitate pedestrian access between the N3 dual carriageway bus stop area and Mill Road via a set of pedestrian ramps/steps. Due to this requirement for a gap, the provision of VRS throughout the full length of need is not achieved. The nearside VRS is required at this location to protect drivers from the pedestrian ramp/steps structure and the associated drop in height which is located within the clear zone. A VRS is proposed within the physical separation island to the bus stop which will offer restraint to vehicles travelling within the general traffic lanes along the N3 Dual Carriageway. The reduced length of need is considered to offer reduced restraint for vehicles travelling within the bus lane through this bus stop location only. A reduced 60 km/h speed limit is proposed for the bus lane and it is anticipated that the majority of buses will stop in this area to facilitate passenger pick-up/set-down. Hence, vehicle speeds are anticipated to be low.										
DEP-5.091	VRS	2	N3 Mainline Dual Carriageway (Westbound)	Ch. A1+630	Z2-MAIN-ALIGNM-0001 WB	Ch. 0+470	85 km/h	VRS reduced length of need	DN-REQ-03034, Cl. 3.16	N/A	BCIDC-ARP-GEO_HV-0005_XX_00-DR-CR-0012
	Justification The nearside VRS at this location will be provided with a gap to facilitate pedestrian access between the N3 dual carriageway bus stop area and Mill Road via a set of pedestrian ramps/steps. Due to this requirement for a gap, the provision of VRS throughout the full length of need is not achieved. The nearside VRS is required at this location to protect drivers from the pedestrian ramp/steps structure and the associated drop in height which is located within the clear zone. A VRS is proposed within the physical separation island to the bus stop which will offer restraint to vehicles travelling within the general traffic lanes along the N3 Dual Carriageway. The reduced length of need is considered to offer reduced restraint for vehicles travelling within the bus lane through this bus stop location only. A reduced 60 km/h speed limit is proposed for the bus lane and it is anticipated that the majority of buses will stop in this area to facilitate passenger pick-up/set-down. Hence, vehicle speeds are anticipated to be low.										
DEP-5.092	Siting of Lay-by	3	N3 Westbound Link Road, Auburn Avenue to M50 Junction	Ch. A2+580	Z2-Main-Alignm-0003	Ch. 6+910	70 km/h	Siting of Lay-by	DN-GEO-03046 Cl. 4.2	Siting of lay-bys should be avoided near junctions and signage	BCIDC-ARP-GEO_HV-0005_XX_00-DR-CR-0018
	Justification This maintenance lay-by is provided along the N3 westbound Link Road on approach to the M50 Roundabout Junction. This is a relocated lay-by impacted by carriageway widening to facilitate the provision of a bus-lane. This is a lay-by intended for maintenance purposes only associated with power/communications cabinets in the area. The siting of this lay-by is in contravention of DN-GEO-03046 Clause 4.2 which requires the siting of lay-bys to be avoided at locations near junctions and signage. This lay-by is considered to be provided on approach to the M50 roundabout junction. This lay-by is restricted for maintenance purposes only and as such it is anticipated that usage will be infrequent.										

RELAXATIONS FROM STANDARD (TII Publications)

Departure Ref.	Design Discipline	Zone	Location: Road Name	Location: Chainage (Global)	Location: Alignment (Geometric)	Location: Chainage (Geometric)	Design Speed	Description of departure	Relevant Design Guideline/Standard	Standard Required	Supporting Information
RLX-5.001	Alignment - Horizontal	2	N3 Mainline Dual Carriageway (Westbound)	Ch. A 1+825 to Ch. A1+870	Z2-Main-Alignm-0001 WB	Ch. 0+238 to Ch. 0+281	85 km/h	Transition Curve Length L=43m (q=0.6)	DN-GEO-03031, Table 3	L = 87m (q=0.3)	BCIDC-ARP-GEO_HV-0005_XX_00-DR-CR-0011
	Justification The existing carriageway and alignment is retained at this location to minimise impacts of the scheme on the existing road layout through this heavily constrained grade separated junction. The existing L=43m transition curve is replicated as the outbound bus lane is introduced along the River Road merge.										
RLX-5.002	Cross-section	3	R147 Navan Parkway Eastbound Diverge	Ch. A3+630 to Ch. A 3+680	Z3-Main-Alignm-0003B	Ch. 0+185 to Ch. 0+235	60 km/h	Footpath width = 1.8m	DN-PAV-03026	Footpath width = 2.0m	N/A
	Justification A localised reduction in footpath width to 1.8m occurs over a 50m length to mitigate impact on an existing land boundary. It should be noted that DN-PAV-03026 recommends a minimum footway width of 2m however, it permits a reduction to 1.3m.										
RLX-5.003	Cross-section	3	R147 Navan Parkway Overbridge	Ch. A 3+855	Z3-Main-Alignm-0004	Full length	60 km/h	Footpath width = 1.7m	DN-PAV-03026	Footpath width = 2.0m	N/A
	Justification To minimise impact on the existing overbridge structure, the footpath layout has been proposed to match existing across the structure in both directions. It should be noted that DN-PAV-03026 recommends a minimum footway width of 2m however, it permits a reduction to 1.3m.										
RLX-5.004	Cross-section	3	R147 Navan Parkway Overbridge	Ch. A 3+855	Z3-Main-Alignm-0004	Full length	60 km/h	Cycle track width = 1.75m	DN-GEO-03036	Cycle track width = 2.0m	N/A
	Justification To minimise impact on the existing overbridge structure, the cycle track layout will match existing across the structure in both directions. In addition, a separation buffer is not provided to the carriageway to match the existing scenario. It should be noted that DN-GEO-03036 accepts a width of 1.75m as one step below desirable minimum for a one-way cycle facility.										
RLX-5.005	Cross-section	3	R147 Navan Road	Ch. A2+960 to Ch. A3+630	Z3-Main-Alignm-0001	Ch. 5+835 to Ch. 6+490	70 km/h	Footpath width = 1.5m	DN-PAV-03026	Footpath width = 2.0m	N/A
	Justification The footpath width is generally retained as existing in the Eastbound/ Citybound direction. The footpath width is locally reduced over short distances to a minimum width of 1.5m to match the existing situation at the side road junctions of the Travelodge entrance, Morgan Place and the Service Station. It should be noted that DN-PAV-0326 recommends a minimum footway width of 2m however, it permits a reduction to 1.3m.										



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Project Ireland 2040
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Rev	Date	Drn	Chk'd	App'd	Description
M01	28/04/2022	SK	GE	BD	ISSUE FOR PHASE 4: PLANNING

Client: NTA Údarás Náisiúnta Iompair National Transport Authority

Engineering Designer: ARUP

Programme Title: BUSCONNECTS DUBLIN CORE BUS CORRIDORS INFRASTRUCTURE WORKS

Drawing Title: BLANCHARDSTOWN TO CITY CENTRE SCHEME ZONE 1 - DEPARTURES KEY PLAN

Date	Scale	Drawn	Checked	Approved
28/04/2022	1:5000 @ A1 1:10000 @ A3	SK	GE	BD

Project Code	Originator Code	QMS Code	Drawing File Name	Sheet Number	Status	Rev
BCIDC	ARP	268401-00	BCIDC-ARP-GEO_KP-0005_XX_00-DR-CR-0003	01 of 03	A	M01

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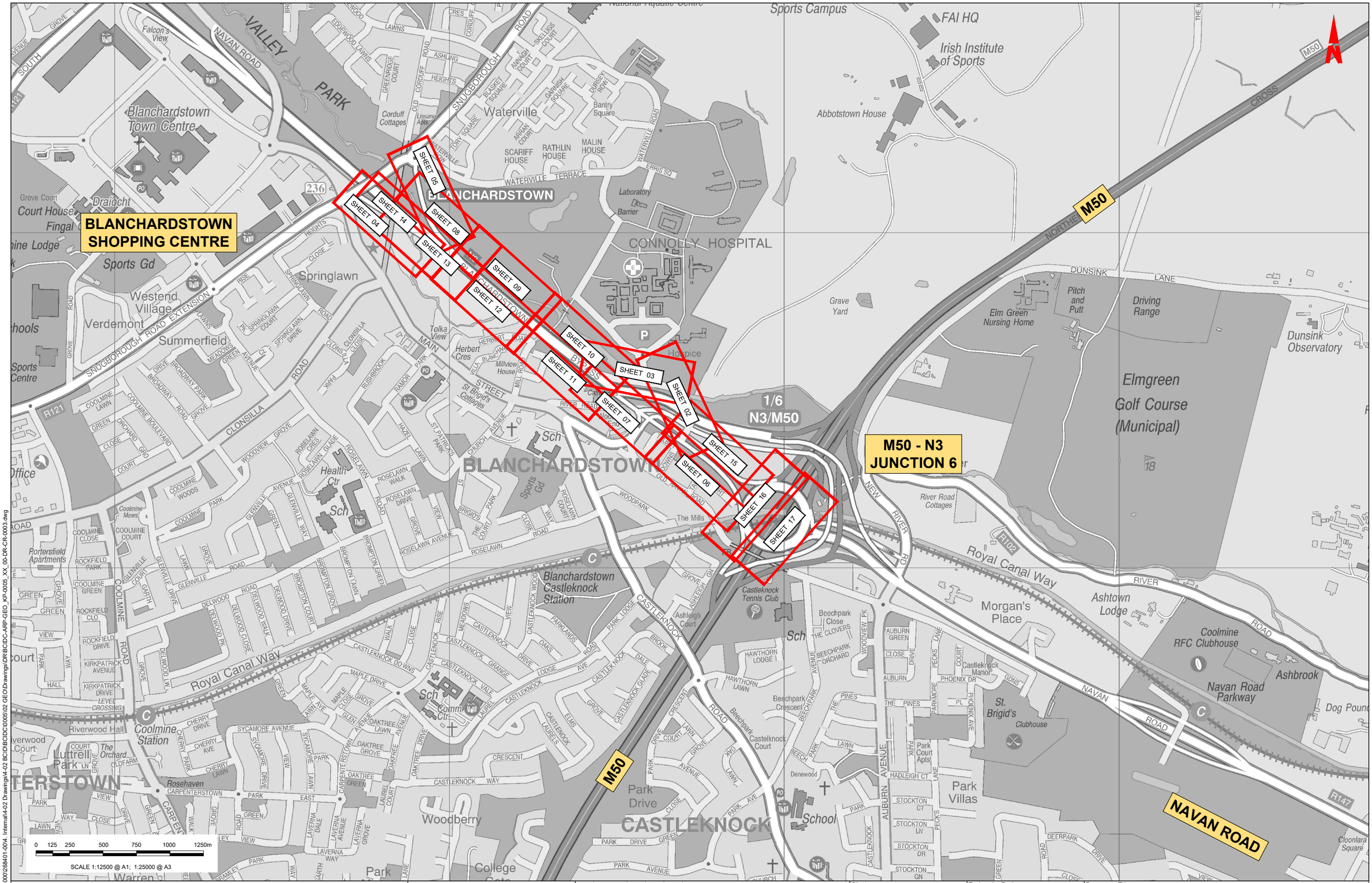

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Project Ireland 2040
Building Ireland's Future

Rev	Date	Drn	Chk'd	App'd	Description
M01	28/04/2022	SK	GE	BD	ISSUE FOR PHASE 4: PLANNING

Client: NTA Údarás Náisiúnta Iompair National Transport Authority

Engineering Designer: ARUP

Programme Title: BUSCONNECTS DUBLIN CORE BUS CORRIDORS INFRASTRUCTURE WORKS

Drawing Title: BLANCHARDSTOWN TO CITY CENTRE SCHEME ZONE 2 - DEPARTURES KEY PLAN

Date	Scale	Drawn	Checked	Approved
28/04/2022	1:5000 @ A1 1:10000 @ A3	SK	GE	BD

Project Code	Originator Code	QMS Code	Drawing File Name	Sheet Number	Status	Rev
BCIDC	ARP	268401-00	BCIDC-ARP-GEO_KP-0005_XX_00-DR-CR-0003	02 of 03	A	M01

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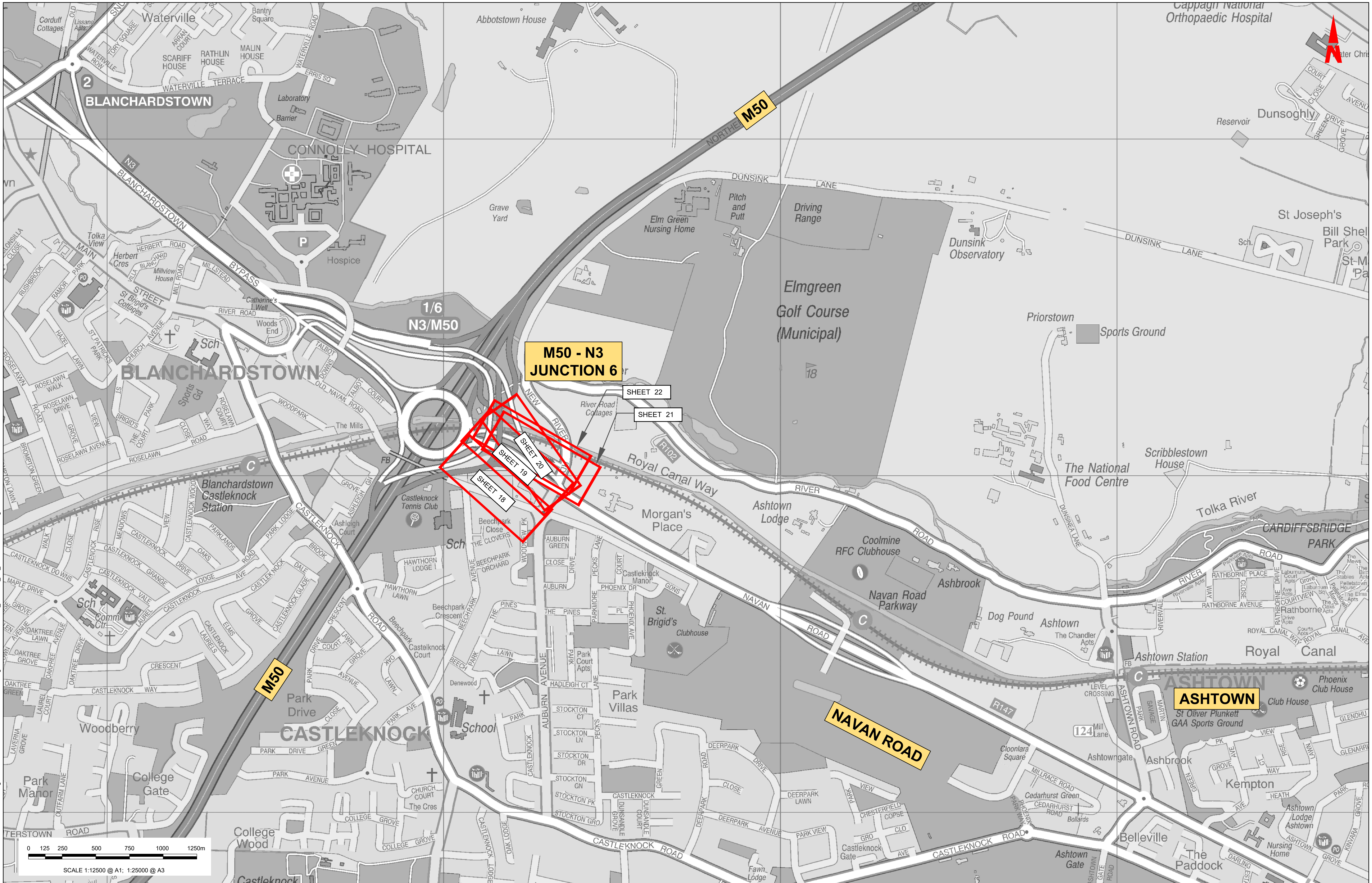

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Rev	Date	Drn	Chk'd	App'd	Description
M01	28/04/2022	SK	GE	BD	ISSUE FOR PHASE 4: PLANNING

Client: NTA – Údarás Náisiúnta Iompair – National Transport Authority

Engineering Designer: ARUP

Programme Title: **BUSCONNECTS DUBLIN**
CORE BUS CORRIDORS INFRASTRUCTURE WORKS

Drawing Title: BLANCHARDSTOWN TO CITY CENTRE SCHEME
ZONE 3 - DEPARTURES
KEY PLAN

Date	Scale	Drawn	Checked	Approved
28/04/2022	1:5000 @ A1 1:10000 @ A3	SK	GE	BD

Project Code	Originator Code	QMS Code	Drawing File Name	Sheet Number	Status	Rev
BCIDC	ARP	268401-00	BCIDC-ARP-GEO_KP-0005_XX_00-DR-CR-0003	03 of 03	A	M01

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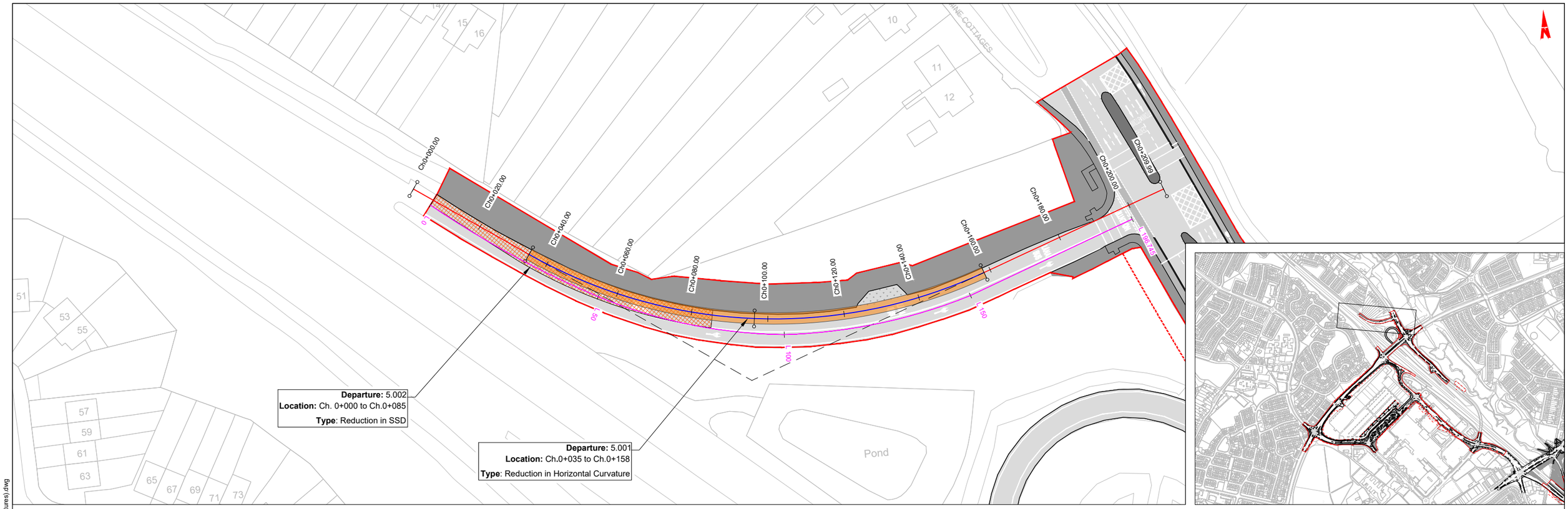


SECTION KEY:

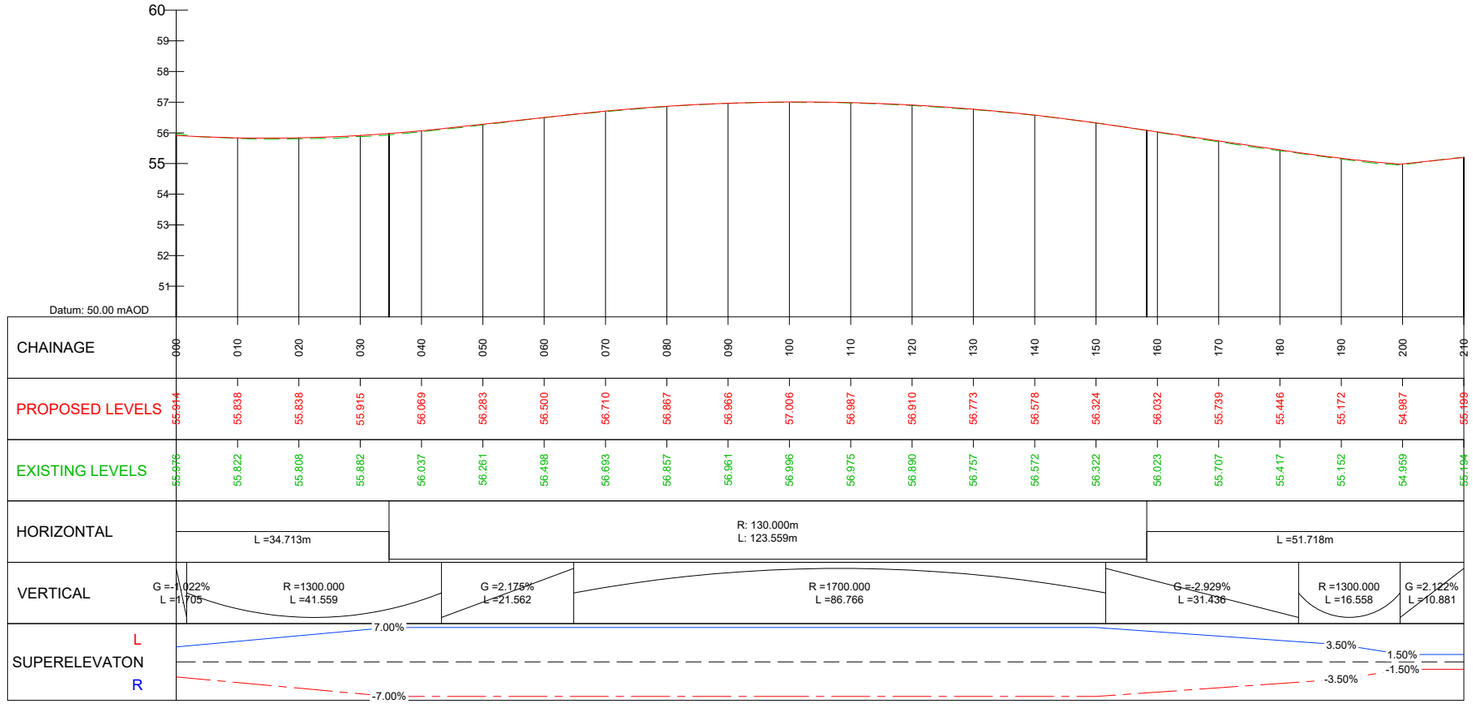
- EXISTING GROUND (PROFILE)
- PROPOSED GROUND (PROFILE)
- SITE BOUNDARY
- DEPARTURE - GEOMETRY
- DEPARTURE - SSD
- DEPARTURE - JUNCTION VISIBILITY
- RELAXATION - GEOMETRY

KEY PLAN:

GEOMETRIC ALIGNMENT CHAINAGE: Ch0+100, Ch0+120, Ch0+140

GLOBAL ALIGNMENT CHAINAGE: A1850, A1900, A1950

NOTE 1: UNLESS OTHERWISE STATED, ALL LOCATIONS REFER TO THE GEOMETRIC ALIGNMENT CHAINAGE.



N3 EASTBOUND DIVERGE AT MULHUDDART JUNCTION (Z1-MAIN-ALIGNM-0003A)
SCALE: H 1:500,V 1:100

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Rev	Date	Drn	Chk'd	App'd	Description
M01	28/04/2022	SK	GE	BD	ISSUE FOR PHASE 4: PLANNING

Client: NTA Údarás Náisiúnta Iompair National Transport Authority

Engineering Designer: ARUP

Programme Title: BUSCONNECTS DUBLIN
CORE BUS CORRIDORS INFRASTRUCTURE WORKS

Drawing Title: DEPARTURE FROM STANDARDS
ZONE 1 - PLAN & PROFILES
N3 EASTBOUND DIVERGE AT MULHUDDART JUNCTION (Z1-MAIN-ALIGNM-0003A)

Date	Scale	Drawn	Checked	Approved
28/04/2022	1:500 @ A1 1:1000 @ A3	SK	GE	BD

Project Code	Originator Code	QMS Code	Drawing File Name	Sheet Number	Status	Rev
BCIDC	ARP	268401-00	BCIDC-ARP-GEO_HV-0005_XX_00-DR-CR-0001	01 of 22	A	M01

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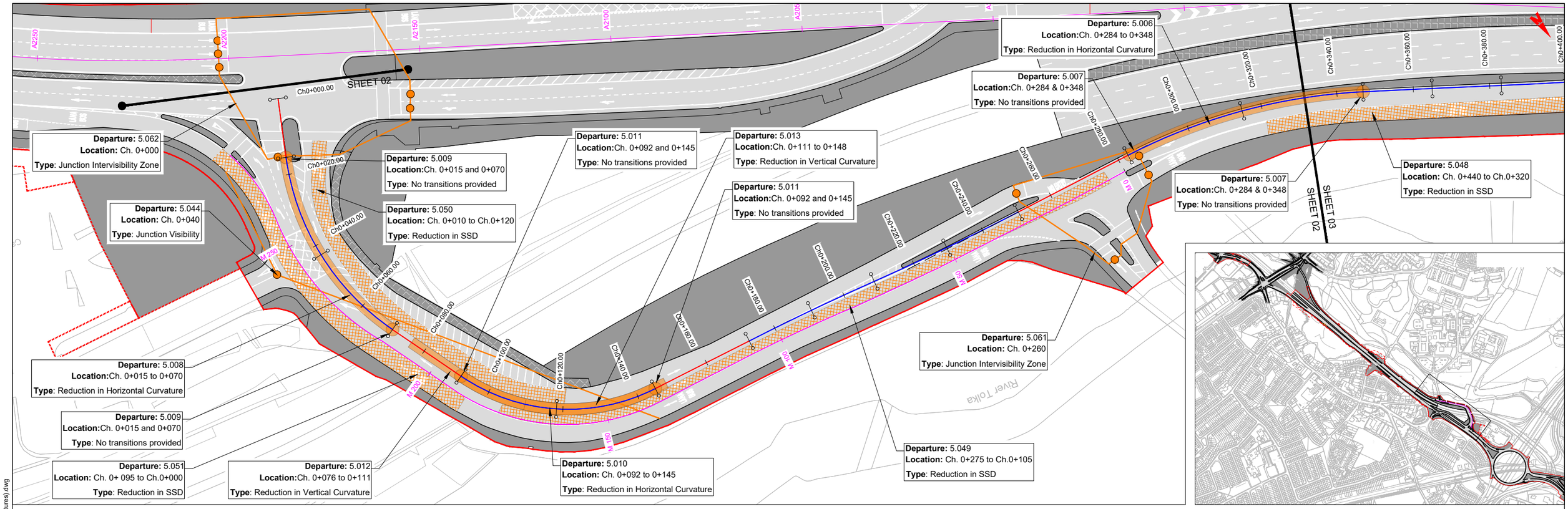


KEY PLAN:

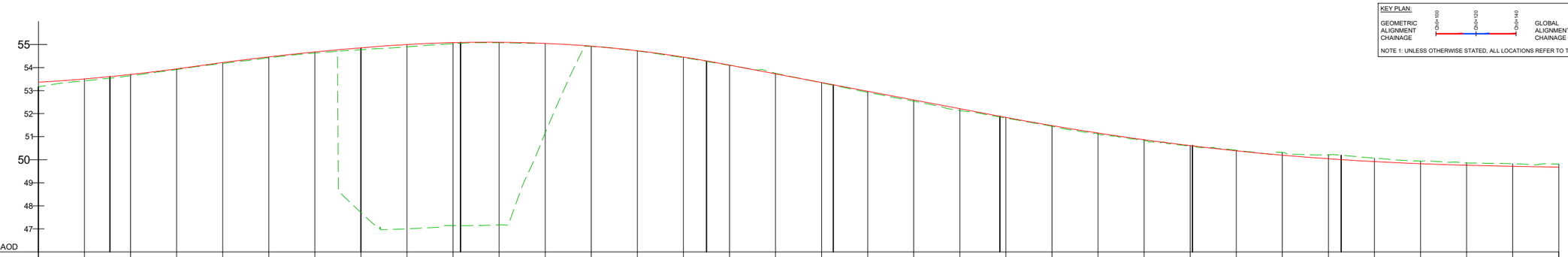
GEOMETRIC ALIGNMENT CHAINAGE — Ch0+100, Ch0+120, Ch0+140

GLOBAL ALIGNMENT CHAINAGE — A1850, A1900, A1950

NOTE 1: UNLESS OTHERWISE STATED, ALL LOCATIONS REFER TO THE GEOMETRIC ALIGNMENT CHAINAGE.

SECTION KEY:

- EXISTING GROUND (PROFILE)
- PROPOSED GROUND (PROFILE)
- SITE BOUNDARY
- DEPARTURE - GEOMETRY
- DEPARTURE - SSD
- DEPARTURE - JUNCTION VISIBILITY
- RELAXATION - GEOMETRY



Datum: 46.00 mAOD

CHAINAGE	PROPOSED LEVELS	EXISTING LEVELS
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010	53.697	53.647
020	53.940	53.911
030	54.215	54.179
040	54.462	54.426
050	54.676	54.628
060	54.856	47.709
070	55.000	47.001
080	55.082	47.141
090	55.098	47.174
100	55.048	51.161
110	54.927	54.914
120	54.729	54.719
130	54.455	54.433
140	54.104	54.097
150	53.726	53.746
160	53.348	53.336
170	52.970	52.922
180	52.592	52.540
190	52.214	52.128
200	51.836	51.807
210	51.480	51.448
220	51.157	51.114
230	50.867	50.833
240	50.610	50.625
250	50.387	50.411
260	50.197	50.318
270	50.041	50.217
280	49.917	50.069
290	49.827	49.939
300	49.760	49.866
310	49.712	49.828
320	49.681	49.842
330		

HORIZONTAL: L =15.513m; R: 65.000m L: 54.485m; L =21.637m; R: 50.000m L: 53.380m; L =27.521m; R: 720.000m L: 36.162m; R: 720.000m L: 41.803m; L =32.273m; R: 150.000m L: 64.093m

VERTICAL: R =2000.000 L =33.452; R =3000.000 L =42.298; R =1500.076 L =35.949; R =1300.000 L =36.738; G =-3.780% L =60.118; R =3000.000 L =89.571; R =5467.822 L =85.285

SUPERELEVATON L: 2.50%; 5.00%; 2.50%; 5.00%

SUPERELEVATON R: -5.00%; -2.50%; -5.00%

ZONE 2 - N3 EASTBOUND DIVERGE AT CONNOLLY HOSPITAL (Z2-MAIN-ALIGNM-0002B)
SCALE: H 1:500,V 1:100

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Building Ireland's Future

Rev	Date	Drn	Chk'd	App'd	Description
M01	28/04/2022	SK	GE	BD	ISSUE FOR PHASE 4: PLANNING

Client: NTA Údarás Náisiúnta Iompair National Transport Authority

Engineering Designer: ARUP

Programme Title: BUSCONNECTS DUBLIN CORE BUS CORRIDORS INFRASTRUCTURE WORKS

Drawing Title: DEPARTURE FROM STANDARDS ZONE 2 - PLAN & PROFILES N3 EASTBOUND DIVERGE AT RIVER ROAD (Z2 MAIN-ALIGNM 0002B)

Date	Scale	Drawn	Checked	Approved
28/04/2022	1:500 @ A1 1:1000 @ A3	SK	GE	BD

Project Code	Originator Code	QMS Code	Drawing File Name	Sheet Number	Status	Rev
BCIDC	ARP	268401-00	BCIDC-ARP-GEO_HV-0005_XX_00-DR-CR-0002	02 of 22	A	M01

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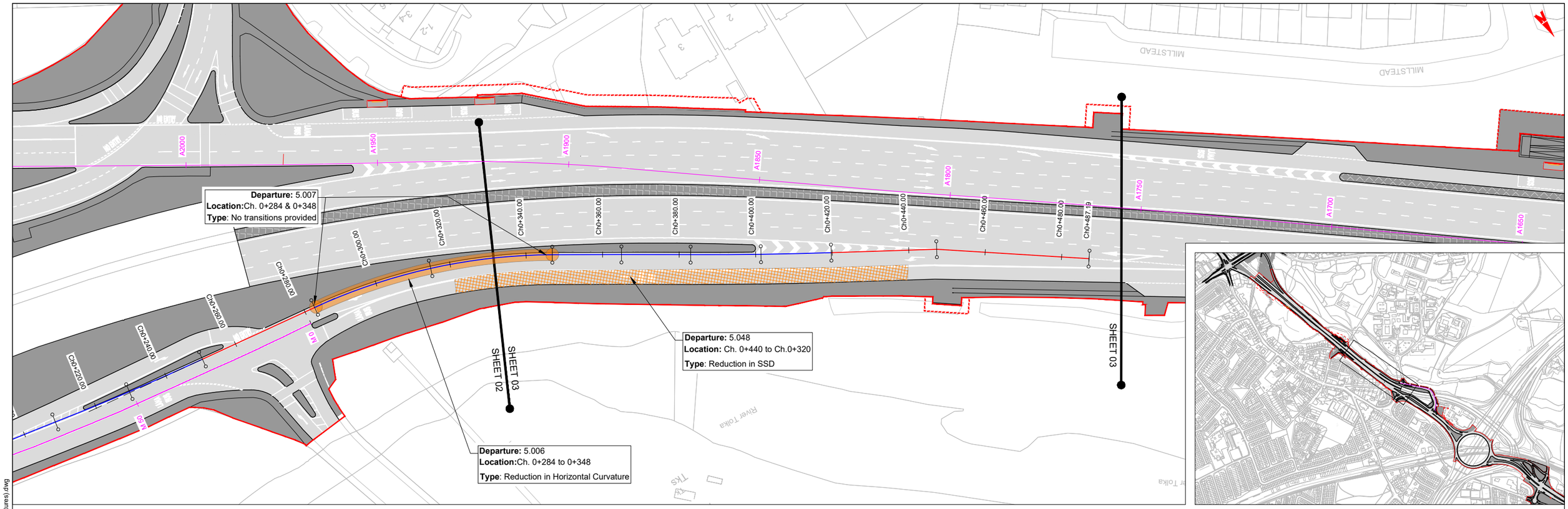


SECTION KEY:

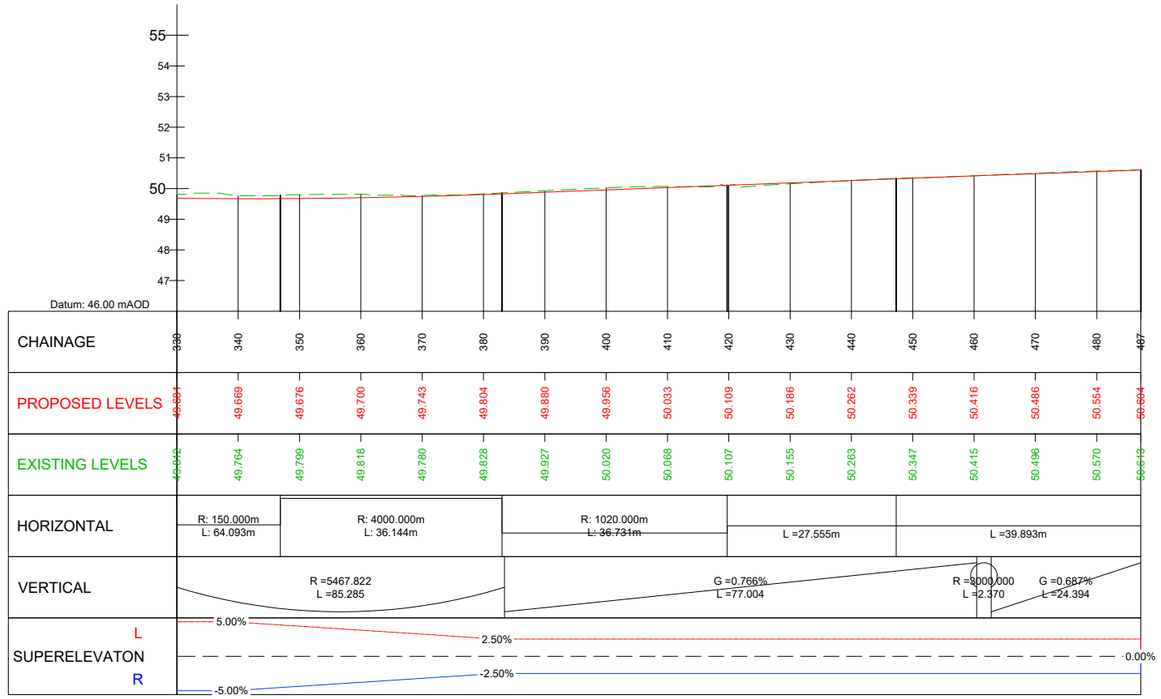
- EXISTING GROUND (PROFILE)
- PROPOSED GROUND (PROFILE)
- SITE BOUNDARY
- DEPARTURE - GEOMETRY
- DEPARTURE - SSD
- DEPARTURE - JUNCTION VISIBILITY
- RELAXATION - GEOMETRY

KEY PLAN:

GEOMETRIC ALIGNMENT CHAINAGE: Ch0+100, Ch0+120, Ch0+140

GLOBAL ALIGNMENT CHAINAGE: A1850, A1900, A1950

NOTE 1: UNLESS OTHERWISE STATED, ALL LOCATIONS REFER TO THE GEOMETRIC ALIGNMENT CHAINAGE.



ZONE 2 - N3 EASTBOUND DIVERGE AT CONNOLLY HOSPITAL (Z2 MAIN-ALIGNM 0002B) - SHEET 2
SCALE: H 1:500,V 1:100

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Rev	Date	Drn	Chk'd	App'd	Description
M01	28/04/2022	SK	GE	BD	ISSUE FOR PHASE 4: PLANNING

Client: NTA Údarás Náisiúnta Iompair National Transport Authority

Engineering Designer: ARUP

Programme Title: BUSCONNECTS DUBLIN
CORE BUS CORRIDORS INFRASTRUCTURE WORKS

Drawing Title: DEPARTURE FROM STANDARDS
ZONE 2 - PLAN & PROFILES
N3 EASTBOUND DIVERGE AT RIVER ROAD (Z2 MAIN-ALIGNM 0002B) - SHEET 2

Date	Scale	Drawn	Checked	Approved
28/04/2022	1:500 @ A1 1:1000 @ A3	SK	GE	BD

Project Code	Originator Code	QMS Code	Drawing File Name	Sheet Number	Status	Rev
BCIDC	ARP	268401-00	BCIDC-ARP-GEO_HV-0005_XX_00-DR-CR-0003	03 of 22	A	M01

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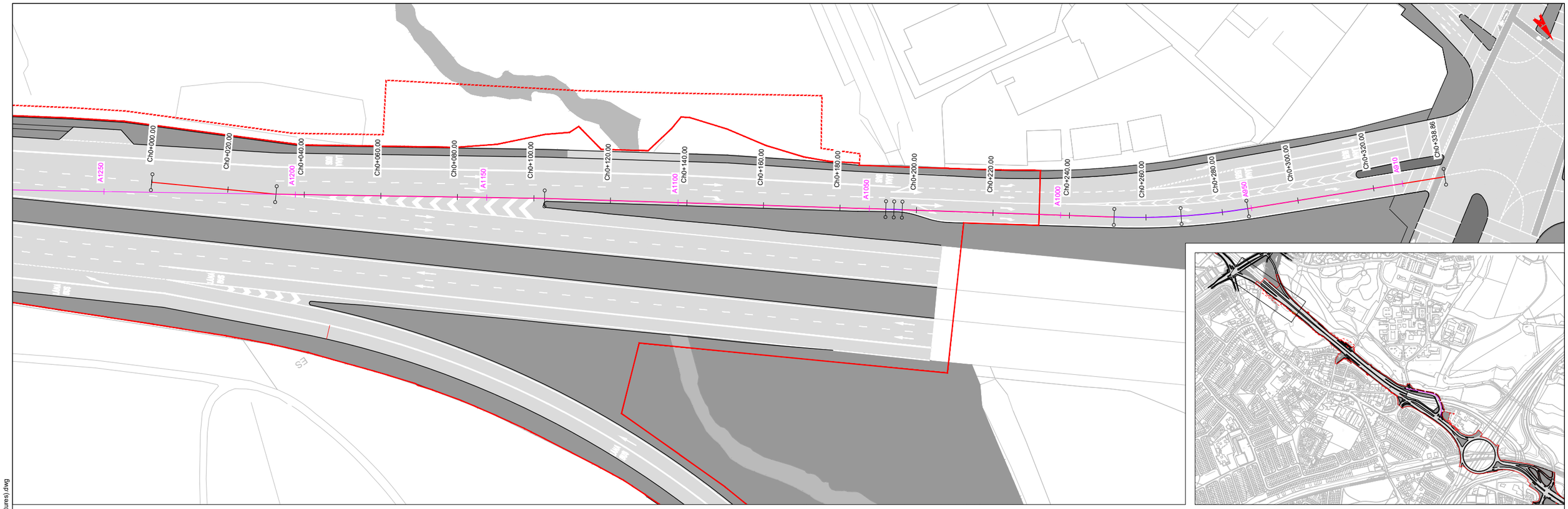


KEY PLAN:

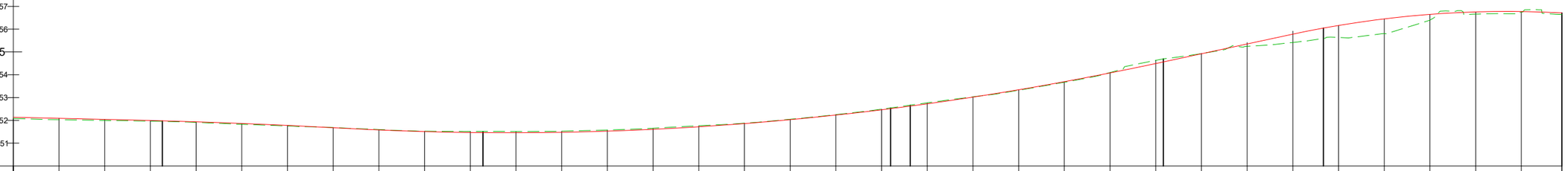
GEOMETRIC ALIGNMENT CHAINAGE — Ch0+100, Ch0+120, Ch0+140

GLOBAL ALIGNMENT CHAINAGE — A1050, A1000, A950

NOTE 1: UNLESS OTHERWISE STATED, ALL LOCATIONS REFER TO THE GEOMETRIC ALIGNMENT CHAINAGE.

SECTION KEY:

- EXISTING GROUND (PROFILE)
- PROPOSED GROUND (PROFILE)
- SITE BOUNDARY
- DEPARTURE - GEOMETRY
- DEPARTURE - SSD
- DEPARTURE - JUNCTION VISIBILITY
- RELAXATION - GEOMETRY



Datum: 50.00 mAOD

CHAINAGE	PROPOSED LEVELS	EXISTING LEVELS
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010	52.088	52.028
020	52.042	51.997
030	51.994	51.967
040	51.936	51.914
050	51.864	51.828
060	51.778	51.755
070	51.679	51.685
080	51.578	51.597
090	51.507	51.525
100	51.467	51.512
110	51.456	51.510
120	51.476	51.527
130	51.526	51.577
140	51.607	51.655
150	51.718	51.764
160	51.859	51.876
170	52.030	52.048
180	52.232	52.252
190	52.464	52.493
200	52.726	52.767
210	53.019	53.031
220	53.342	53.321
230	53.695	53.671
240	54.078	54.096
250	54.492	54.632
260	54.922	54.930
270	55.352	55.249
280	55.782	55.416
290	56.162	55.637
300	56.451	55.803
310	56.649	56.394
320	56.756	56.658
330	56.773	56.745
339		

HORIZONTAL:
- L =32.624m
- L =89.181m
- L =89.181m
- R: 1440.000m, L: 4.295m
- L =55.397m
- R: 180.000m, L: 35.031m
- L =52.169m

VERTICAL:
- G =-0.465%, L =26.391
- R =7290.220, L =45.909
- R =3300.000, L =178.042
- G =4.300%, L =29.150
- R =1100.000, L =59.373

SUPERELEVATON L / R

ZONE 2 - N3 WESTBOUND DIVERGE AT SNUGBOROUGH JUNCTION (Z2-MAIN-ALIGNM-0004)
SCALE: H 1:500,V 1:100

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Project Ireland 2040
Building Ireland's Future

Rev	Date	Drn	Chk'd	App'd	Description
M01	28/04/2022	SK	GE	BD	ISSUE FOR PHASE 4: PLANNING

Client: NTA Údarás Náisiúnta Iompair National Transport Authority

Engineering Designer: ARUP

Date	Scale	Drawn	Checked	Approved
28/04/2022	1:500 @ A1 1:1000 @ A3	SK	GE	BD

Project Code	Originator Code	QMS Code
BCIDC	ARP	268401-00

Programme Title: **BUSCONNECTS DUBLIN CORE BUS CORRIDORS INFRASTRUCTURE WORKS**

Drawing Title: DEPARTURE FROM STANDARDS
ZONE 2 - PLAN & PROFILES
N3 WESTBOUND DIVERGE AT SNUGBOROUGH JUNCTION (Z2-MAIN-ALIGNM-0004)

Drawing File Name	Sheet Number	Status	Rev
BCIDC-ARP-GEO_HV-0005_XX_00-DR-CR-0004	04 of 22	A	M01

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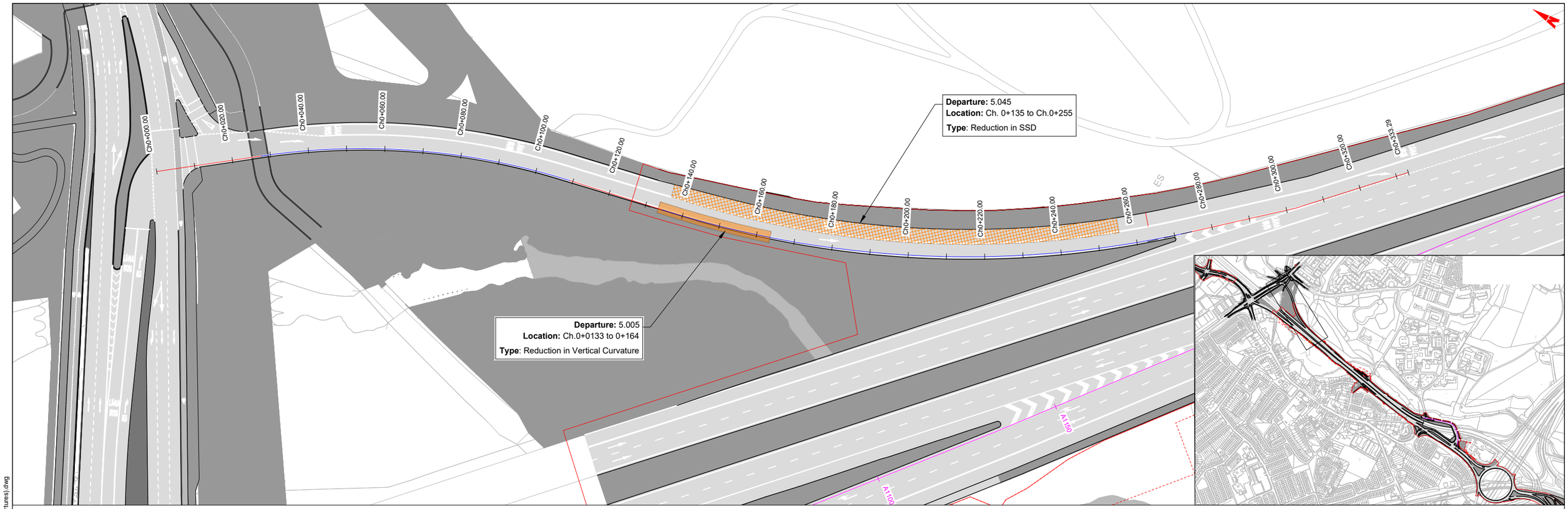

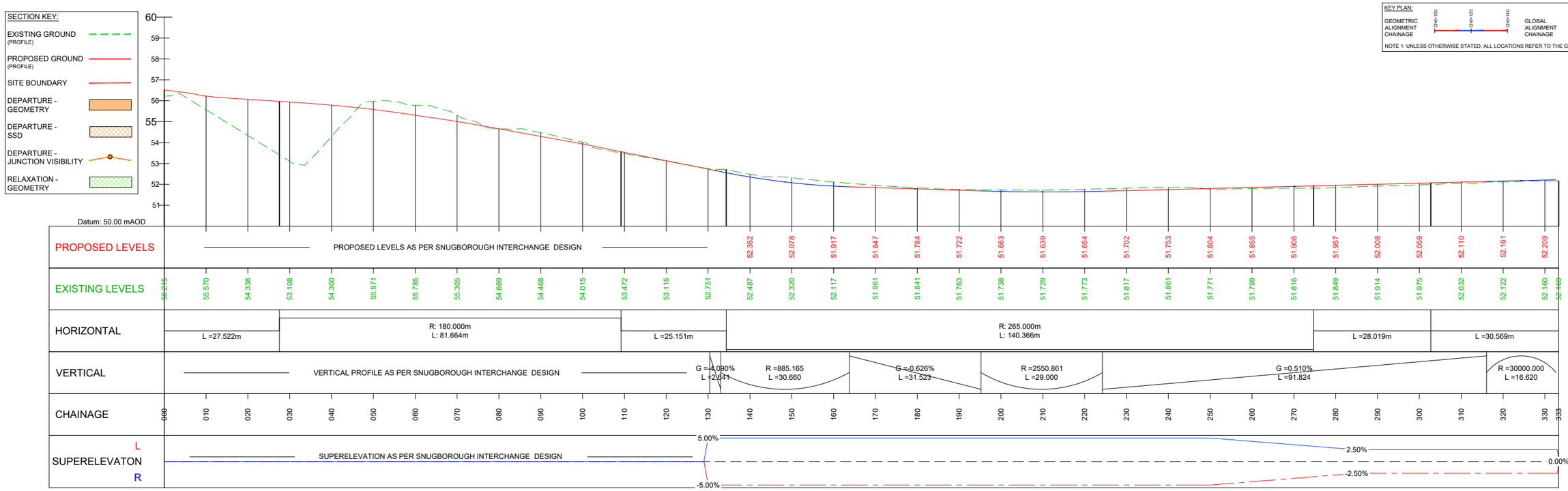

KEY PLAN:

GEOMETRIC ALIGNMENT CHAINAGE — Ch0+100, Ch0+120, Ch0+140

GLOBAL ALIGNMENT CHAINAGE — A1850, A1900, A1950

NOTE 1: UNLESS OTHERWISE STATED, ALL LOCATIONS REFER TO THE GEOMETRIC ALIGNMENT CHAINAGE.

ZONE 2 - N3 EASTBOUND MERGE AT SNUGBOROUGH JUNCTION
SCALE: H 1:500,V 1:100

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Client: NTA Údarás Náisiúnta Iompair National Transport Authority

Engineering Designer: ARUP

Programme Title: BUSCONNECTS DUBLIN CORE BUS CORRIDORS INFRASTRUCTURE WORKS

Drawing Title: DEPARTURE FROM STANDARDS ZONE 2 - PLAN & PROFILES N3 EASTBOUND MERGE AT SNUGBOROUGH JUNCTION (Z2-MAIN-ALIGNM-0004A)

Date	Scale	Drawn	Checked	Approved
28/04/2022	1:500 @ A1 1:1000 @ A3	SK	GE	BD

Project Code	Originator Code	QMS Code	Drawing File Name	Sheet Number	Status	Rev
BCIDC	ARP	268401-00	BCIDC-ARP-GEO_HV-0005_XX_00-DR-CR-0005	05 of 22	A	M01

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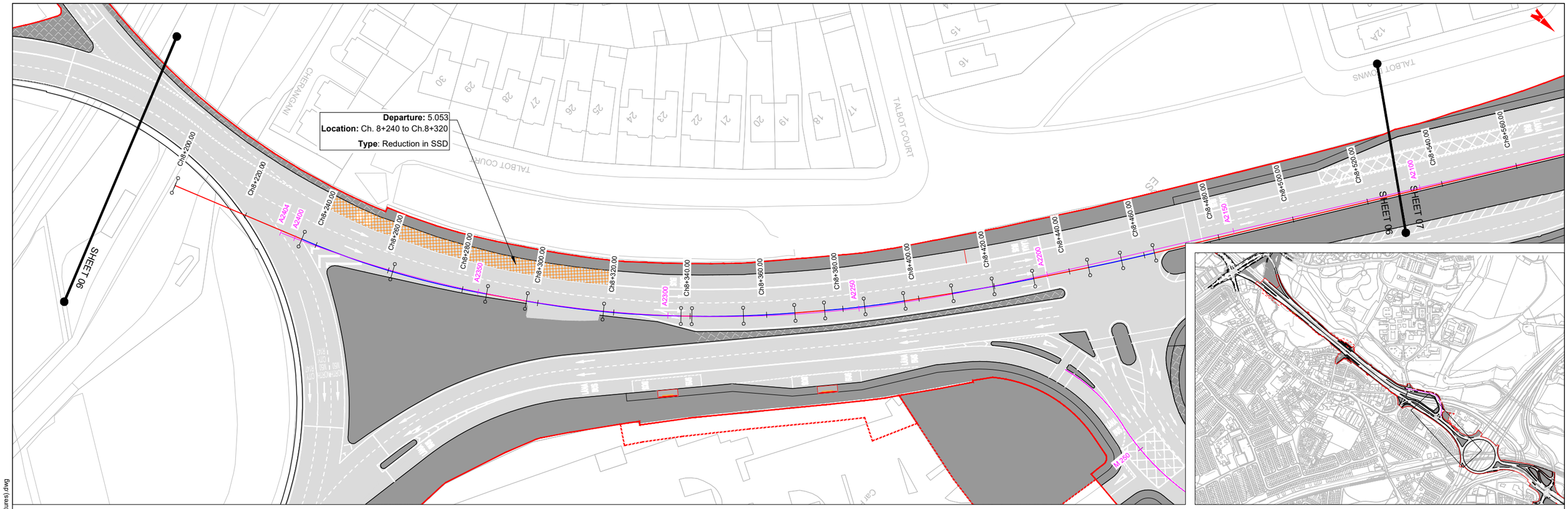


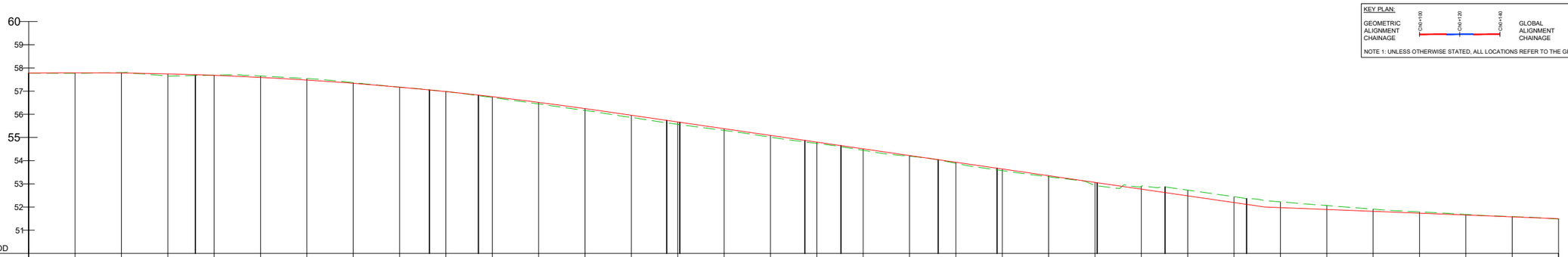
KEY PLAN:

GEOMETRIC ALIGNMENT CHAINAGE — GLOBAL ALIGNMENT CHAINAGE

NOTE 1: UNLESS OTHERWISE STATED, ALL LOCATIONS REFER TO THE GEOMETRIC ALIGNMENT CHAINAGE.

SECTION KEY:

- EXISTING GROUND (PROFILE)
- PROPOSED GROUND (PROFILE)
- SITE BOUNDARY
- DEPARTURE - GEOMETRY
- DEPARTURE - SSD
- DEPARTURE - JUNCTION VISIBILITY
- RELAXATION - GEOMETRY



CHAINAGE	PROPOSED LEVELS	EXISTING LEVELS
8200	57.776	57.776
8210	57.791	57.770
8220	57.760	57.795
8230	57.743	57.646
8240	57.680	57.689
8250	57.592	57.654
8260	57.477	57.542
8270	57.337	57.367
8280	57.170	57.170
8290	56.978	56.982
8300	56.760	56.723
8310	56.516	56.447
8320	56.246	56.168
8330	55.957	55.886
8340	55.667	55.569
8350	55.378	55.304
8360	55.088	55.015
8370	54.799	54.744
8380	54.509	54.448
8390	54.220	54.193
8400	53.930	53.885
8410	53.640	53.571
8420	53.351	53.306
8430	53.061	52.923
8440	52.772	52.898
8450	52.482	52.729
8460	52.193	52.447
8470	51.974	52.223
8480	51.894	52.064
8490	51.815	51.909
8500	51.736	51.790
8510	51.657	51.680
8520	51.578	51.587
8530	51.499	51.479

HORIZONTAL: L =35.952m; R: 225.000m L: 50.482m; L =10.559m; R: 255.000m L: 40.625m; L =2.843m; R: 275.000m L: 26.948m; L =7.797m; R: 275.000m L: 20.981m; L =12.695m; R: 500.000m L: 21.599m; L =14.636m; R: 500.000m L: 17.598m; L =131.505m

VERTICAL: R =3861.634 L =122.574; G =-2.896% L =144.073; G =-0.791% L =118.012

SUPERELEVATON L: 2.00%; 2.50%; 2.64%

SUPERELEVATON R: -2.00%; -2.50%; -2.64%

ZONE 2 - N3 WESTBOUND LINK ROAD - M50 TO N3 WESTBOUND MERGE AT NAVAN ROAD OLD NAVAN ROAD JUNCTION (Z2-MAIN-ALIGNM-0002)
SCALE: H 1:500,V 1:100

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Building Ireland's Future

Rev	Date	Drn	Chk'd	App'd	Description
M01	28/04/2022	SK	GE	BD	ISSUE FOR PHASE 4: PLANNING

Client: NTA Údarás Náisiúnta Iompair National Transport Authority

Engineering Designer: ARUP

Programme Title: BUSCONNECTS DUBLIN CORE BUS CORRIDORS INFRASTRUCTURE WORKS

Drawing Title: DEPARTURE FROM STANDARDS ZONE 2 - PLAN & PROFILES N3 LINK ROAD - M50 TO RIVER ROAD JUNCTION (Z2-MAIN-ALIGNM-0002)

Date	Scale	Drawn	Checked	Approved
28/04/2022	1:500 @ A1 1:1000 @ A3	SK	GE	BD

Project Code	Originator Code	QMS Code	Drawing File Name	Sheet Number	Status	Rev
BCIDC	ARP	268401-00	BCIDC-ARP-GEO_HV-0005_XX_00-DR-CR-0006	06 of 22	A	M01

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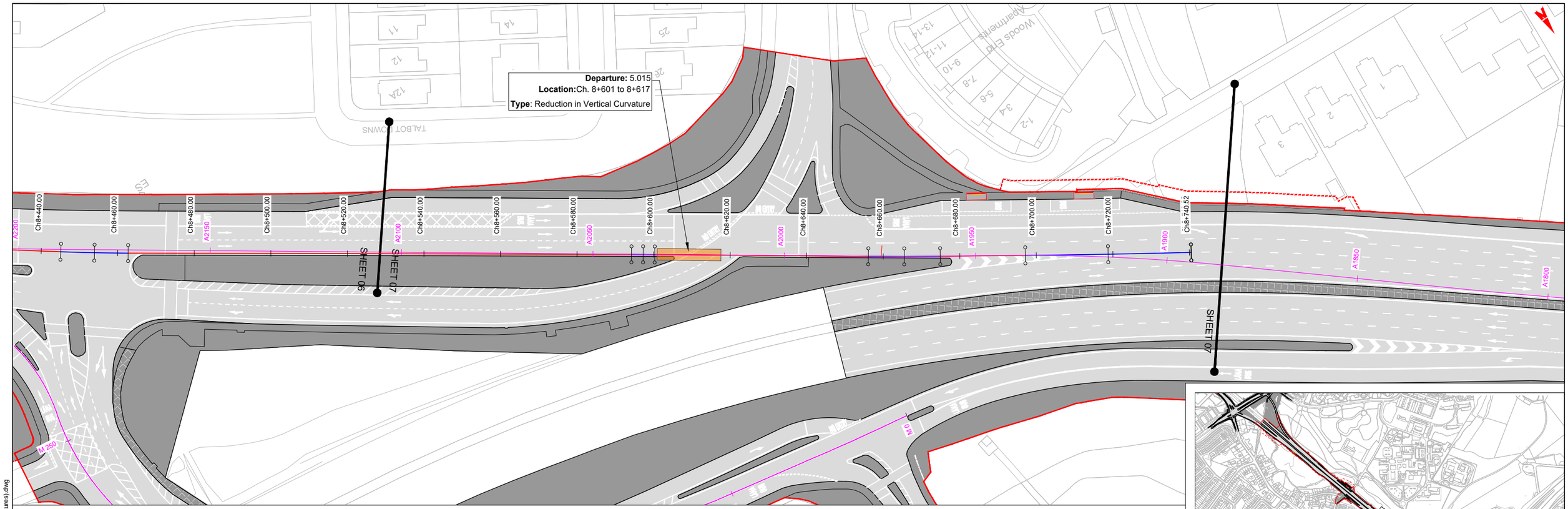
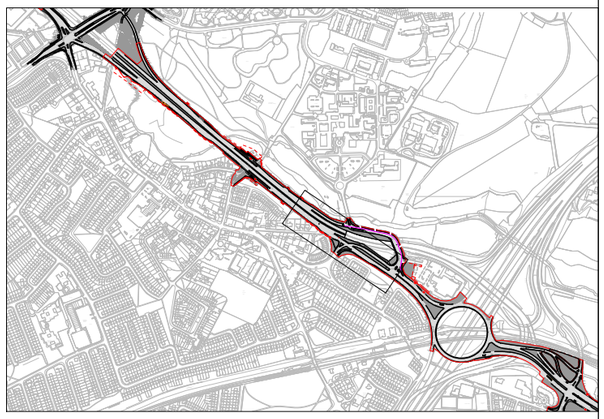
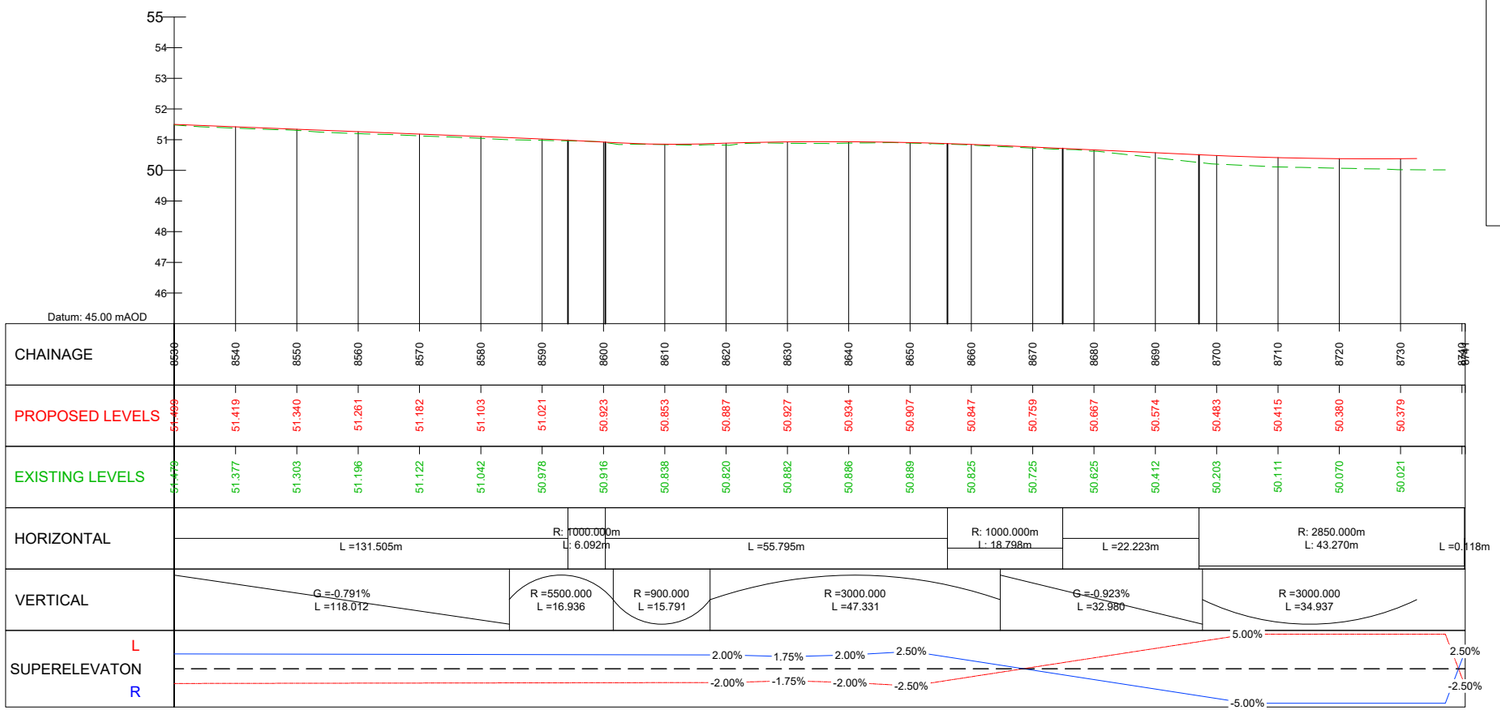




SECTION KEY:

- EXISTING GROUND (PROFILE)
- PROPOSED GROUND (PROFILE)
- SITE BOUNDARY
- DEPARTURE - GEOMETRY
- DEPARTURE - SSD
- DEPARTURE - JUNCTION VISIBILITY
- RELAXATION - GEOMETRY



ZONE 2 - N3 LINK ROAD - M50 TO N3 WESTBOUND MERGE AT NAVAN ROAD OLD NAVAN ROAD JUNCTION (Z2-MAIN-ALIGNM-0002) - SHEET 2
SCALE: H 1:500,V 1:100

KEY PLAN:

GEOMETRIC ALIGNMENT CHAINAGE: CN0+100, CN0+120, CN0+140

GLOBAL ALIGNMENT CHAINAGE: A1850, A1900, A1950

NOTE 1: UNLESS OTHERWISE STATED, ALL LOCATIONS REFER TO THE GEOMETRIC ALIGNMENT CHAINAGE.

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Rev	Date	Drn	Chk'd	App'd	Description
M01	28/04/2022	SK	GE	BD	ISSUE FOR PHASE 4: PLANNING

Client: NTA Údarás Náisiúnta Iompair National Transport Authority

Engineering Designer: ARUP

Programme Title: **BUSCONNECTS DUBLIN CORE BUS CORRIDORS INFRASTRUCTURE WORKS**

Drawing Title: DEPARTURE FROM STANDARDS
ZONE 2 - PLAN & PROFILES
N3 LINK ROAD - M50 TO RIVER ROAD JUNCTION (Z2-MAIN-ALIGNM-0002) - SHEET 2

Date	Scale	Drawn	Checked	Approved
28/04/2022	1:500 @ A1 1:1000 @ A3	SK	GE	BD

Project Code	Originator Code	QMS Code	Drawing File Name	Sheet Number	Status	Rev
BCIDC	ARP	268401-00	BCIDC-ARP-GEO_HV-0005_XX_00-DR-CR-0007	07 of 22	A	M01

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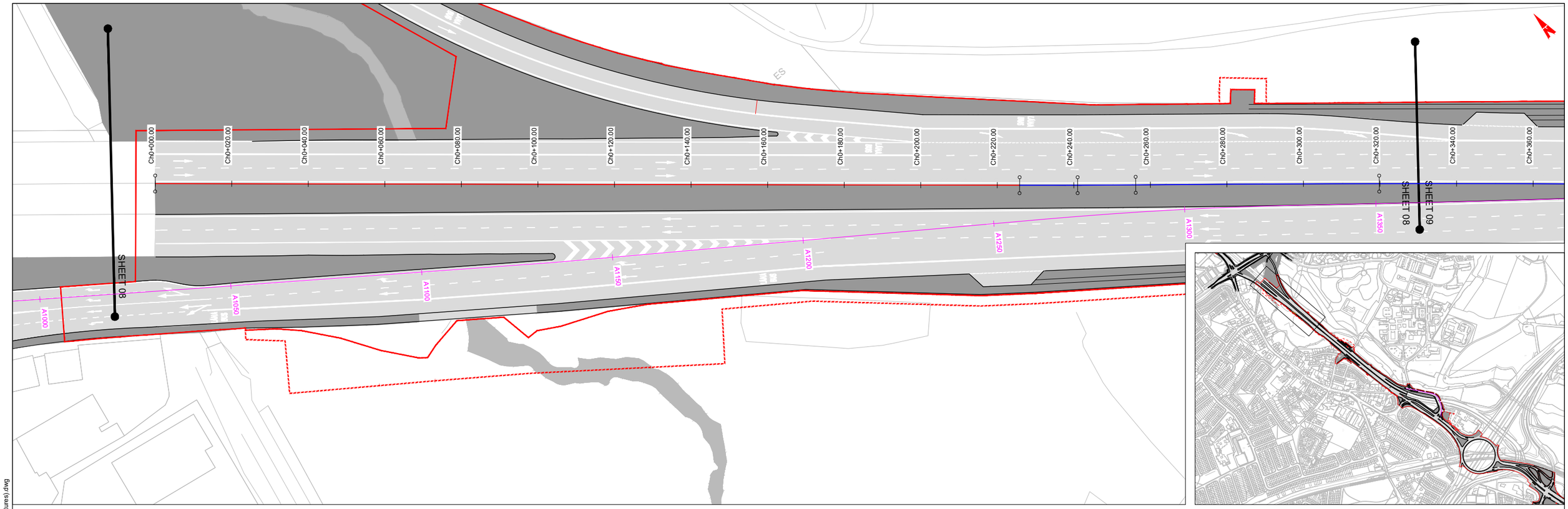


KEY PLAN:

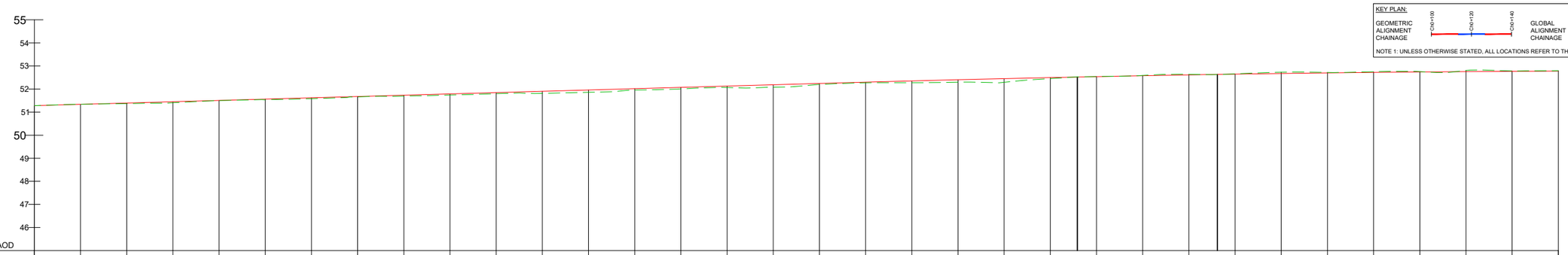
GEOMETRIC ALIGNMENT CHAINAGE — Ch0+100, Ch0+120, Ch0+140

GLOBAL ALIGNMENT CHAINAGE — A1000, A1050, A1100

NOTE 1: UNLESS OTHERWISE STATED, ALL LOCATIONS REFER TO THE GEOMETRIC ALIGNMENT CHAINAGE.

SECTION KEY:

- EXISTING GROUND (PROFILE)
- PROPOSED GROUND (PROFILE)
- SITE BOUNDARY
- DEPARTURE - GEOMETRY
- DEPARTURE - SSD
- DEPARTURE - JUNCTION VISIBILITY
- RELAXATION - GEOMETRY



Datum: 45.00 mAOD

CHAINAGE	PROPOSED LEVELS	EXISTING LEVELS
000	51.284	51.284
010	51.338	51.342
020	51.394	51.369
030	51.451	51.407
040	51.507	51.501
050	51.563	51.537
060	51.620	51.584
070	51.676	51.663
080	51.733	51.695
090	51.789	51.741
100	51.846	51.800
110	51.902	51.813
120	51.958	51.859
130	52.015	51.958
140	52.071	52.007
150	52.128	52.067
160	52.184	52.080
170	52.241	52.202
180	52.297	52.273
190	52.352	52.276
200	52.404	52.296
210	52.453	52.293
220	52.498	52.453
230	52.541	52.543
240	52.579	52.589
250	52.615	52.639
260	52.647	52.657
270	52.675	52.727
280	52.701	52.720
290	52.723	52.750
300	52.742	52.754
310	52.757	52.804
320	52.769	52.784
330	52.778	52.796

HORIZONTAL: L =225.840m; R: 2880.000m L: 30.330m; R: 9032.631m L: 127.252m

VERTICAL: G =0.564% L =181.893; R =30000.000 L =375.242

SUPERELEVATON: L; R -2.50%

ZONE 2 - N3 EASTBOUND MAINLINE DUAL CARRIAGEWAY (Z2-MAIN-ALIGNM-0001 EB)
SCALE: H 1:500,V 1:100

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Client: NTA Údarás Náisiúnta Iompair National Transport Authority

Engineering Designer: ARUP

Programme Title: BUSCONNECTS DUBLIN CORE BUS CORRIDORS INFRASTRUCTURE WORKS

Drawing Title: DEPARTURE FROM STANDARDS ZONE 2 - PLAN & PROFILES N3 EASTBOUND MAINLINE DUAL CARRIAGEWAY (Z2-MAIN-ALIGNM-0001 EB)

Date	Scale	Drawn	Checked	Approved
28/04/2022	1:500 @ A1 1:1000 @ A3	SK	GE	BD

Project Code	Originator Code	QMS Code	Drawing File Name	Sheet Number	Status	Rev
BCIDC	ARP	268401-00	BCIDC-ARP-GEO_HV-0005_XX_00-DR-CR-0008	08 of 22	A	M01

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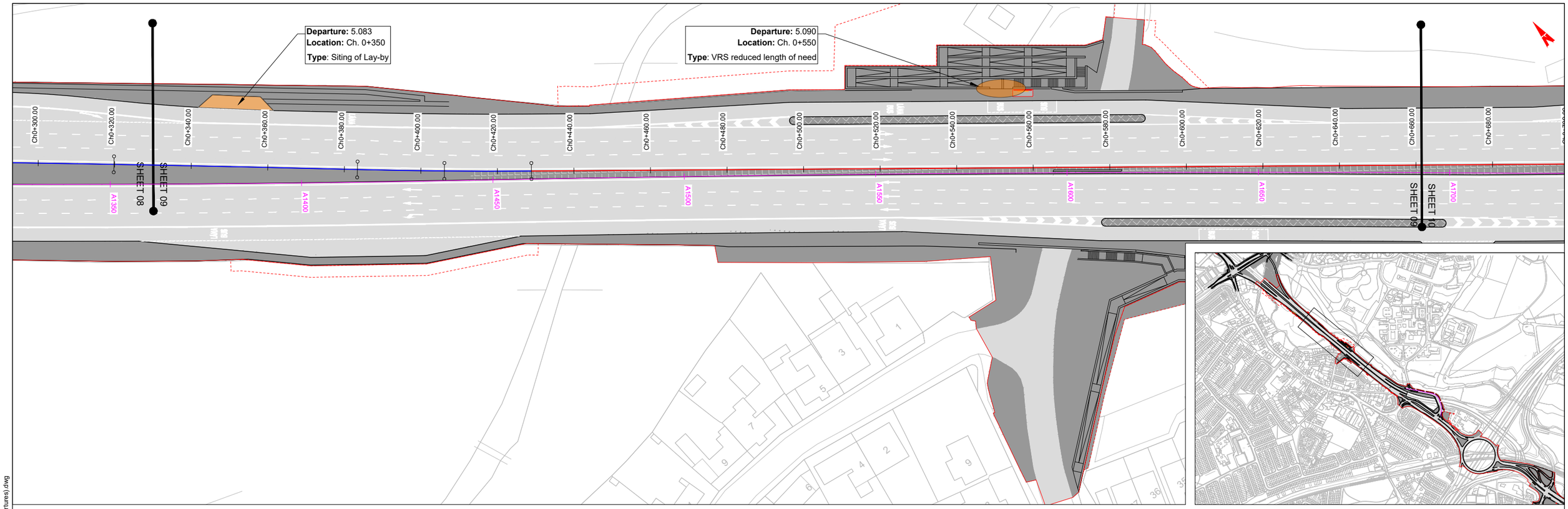


KEY PLAN:

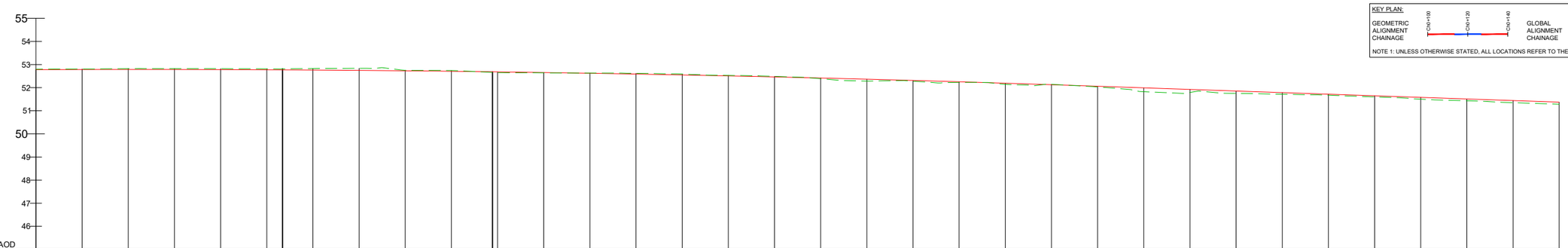
GEOMETRIC ALIGNMENT CHAINAGE — C0+100, C0+120, C0+140

GLOBAL ALIGNMENT CHAINAGE — A1850, A1900, A1950

NOTE 1: UNLESS OTHERWISE STATED, ALL LOCATIONS REFER TO THE GEOMETRIC ALIGNMENT CHAINAGE.

SECTION KEY:

- EXISTING GROUND (PROFILE)
- PROPOSED GROUND (PROFILE)
- SITE BOUNDARY
- DEPARTURE - GEOMETRY
- DEPARTURE - SSD
- DEPARTURE - JUNCTION VISIBILITY
- RELAXATION - GEOMETRY



Datum: 45.00 mAOD

CHAINAGE	PROPOSED LEVELS	EXISTING LEVELS
330	52.778	52.798
340	52.783	52.809
350	52.785	52.820
360	52.784	52.820
370	52.779	52.819
380	52.771	52.812
390	52.760	52.824
400	52.746	52.837
410	52.728	52.751
420	52.706	52.741
430	52.682	52.649
440	52.654	52.639
450	52.623	52.631
460	52.588	52.618
470	52.550	52.587
480	52.509	52.528
490	52.464	52.485
500	52.416	52.387
510	52.365	52.282
520	52.310	52.281
530	52.252	52.227
540	52.191	52.144
550	52.126	52.145
560	52.059	52.029
570	51.990	51.825
580	51.921	51.791
590	51.853	51.753
600	51.784	51.714
610	51.715	51.672
620	51.647	51.598
630	51.578	51.502
640	51.509	51.433
650	51.441	51.349
660	51.372	51.280

HORIZONTAL: R: 9032.631m L: 127.252m; R: 1440.000m L: 45.474m; L =274.953m

VERTICAL: R =30000.000 L =375.242; G =-0.687% L =214.111

SUPERELEVATON: L / R

ZONE 2 - N3 EASTBOUND MAINLINE DUAL CARRIAGEWAY (Z2-MAIN-ALIGNM-0001 EB) - SHEET 2
SCALE: H 1:500,V 1:100

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Project Ireland 2040
Building Ireland's Future

Rev	Date	Drn	Chk'd	App'd	Description
M01	28/04/2022	SK	GE	BD	ISSUE FOR PHASE 4: PLANNING

Client: NTA Údarás Náisiúnta Iompair National Transport Authority

Engineering Designer: ARUP

Programme Title: BUSCONNECTS DUBLIN CORE BUS CORRIDORS INFRASTRUCTURE WORKS

Drawing Title: DEPARTURE FROM STANDARDS ZONE 2 - PLAN & PROFILES N3 EASTBOUND MAINLINE DUAL CARRIAGEWAY (Z2-MAIN-ALIGNM-0001 EB) - SHEET 2

Date	Scale	Drawn	Checked	Approved
28/04/2022	1:500 @ A1 1:1000 @ A3	SK	GE	BD

Project Code	Originator Code	QMS Code	Drawing File Name	Sheet Number	Status	Rev
BCIDC	ARP	268401-00	BCIDC-ARP-GEO_HV-0005_XX_00-DR-CR-0009	09 of 22	A	M01

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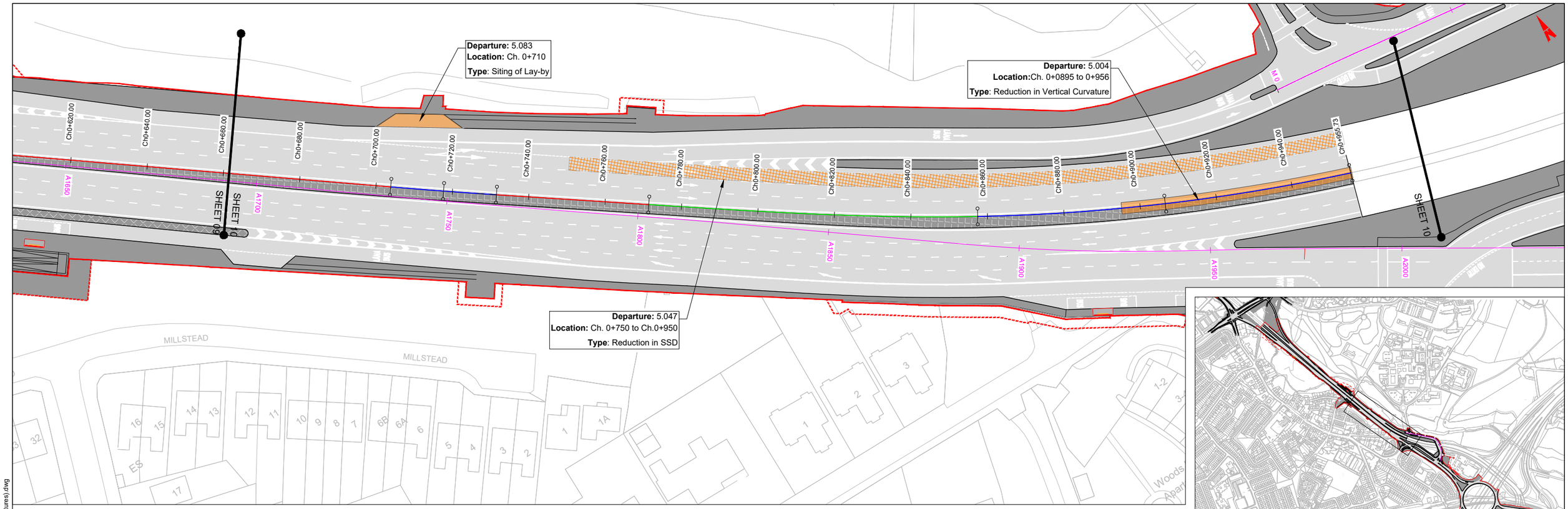
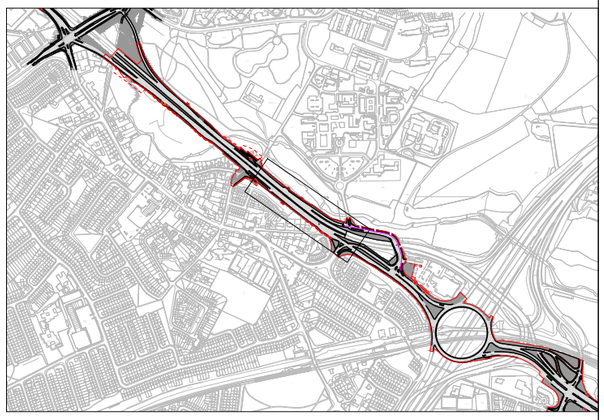




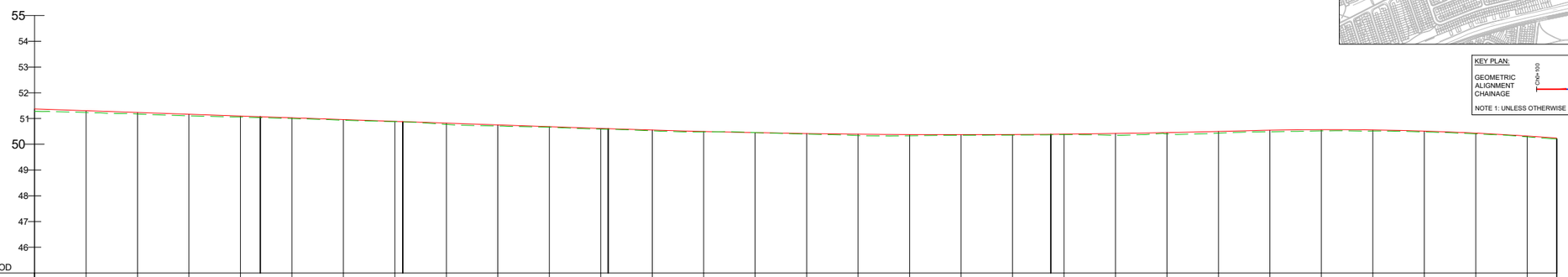
KEY PLAN:

GEOMETRIC ALIGNMENT CHAINAGE — GLOBAL ALIGNMENT CHAINAGE

NOTE 1: UNLESS OTHERWISE STATED, ALL LOCATIONS REFER TO THE GEOMETRIC ALIGNMENT CHAINAGE.

SECTION KEY:

- EXISTING GROUND (PROFILE)
- PROPOSED GROUND (PROFILE)
- SITE BOUNDARY
- DEPARTURE - GEOMETRY
- DEPARTURE - SSD
- DEPARTURE - JUNCTION VISIBILITY
- RELAXATION - GEOMETRY



Datum: 45.00 mAOD

CHAINAGE	PROPOSED LEVELS	EXISTING LEVELS
660	51.372	51.288
670	51.304	51.236
680	51.235	51.176
690	51.166	51.106
700	51.098	51.056
710	51.029	50.999
720	50.960	50.935
730	50.892	50.878
740	50.823	50.773
750	50.754	50.707
760	50.686	50.666
770	50.617	50.589
780	50.552	50.524
790	50.497	50.480
800	50.452	50.452
810	50.418	50.397
820	50.393	50.338
830	50.378	50.331
840	50.373	50.350
850	50.378	50.358
860	50.393	50.373
870	50.418	50.350
880	50.453	50.403
890	50.498	50.432
900	50.548	50.488
910	50.569	50.522
920	50.557	50.516
930	50.511	50.479
940	50.433	50.405
950	50.321	50.288
956		50.294

HORIZONTAL: L =274.953m; R: 1440.000m, L: 27.693m; L =39.893m; A: 209.43, L: 88.000m; R: 510.000m, L: 98.297m

VERTICAL: G =-0.687%, L =214.111; R =10000.000, L =123.633; R =3000.000, L =60.853

SUPERELEVATON: L / R -5.00%

ZONE 2 - N3 EASTBOUND MAINLINE DUAL CARRIAGEWAY (Z2-MAIN-ALIGNM-0001 EB) - SHEET 3
SCALE: H 1:500,V 1:100

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Project Ireland 2040 — Building Ireland's Future

Rev	Date	Drn	Chk'd	App'd	Description
M01	28/04/2022	SK	GE	BD	ISSUE FOR PHASE 4: PLANNING

Client: NTA Údarás Náisiúnta Iompair National Transport Authority

Engineering Designer: ARUP

Programme Title: **BUSCONNECTS DUBLIN CORE BUS CORRIDORS INFRASTRUCTURE WORKS**

Drawing Title: DEPARTURE FROM STANDARDS ZONE 2 - PLAN & PROFILES N3 EASTBOUND MAINLINE DUAL CARRIAGEWAY (Z2-MAIN-ALIGNM-0001 EB) - SHEET 3

Date	Scale	Drawn	Checked	Approved
28/04/2022	1:500 @ A1 1:1000 @ A3	SK	GE	BD

Project Code	Originator Code	QMS Code	Drawing File Name	Sheet Number	Status	Rev
BCIDC	ARP	268401-00	BCIDC-ARP-GEO_HV-0005_XX_00-DR-CR-0010	10 of 22	A	M01

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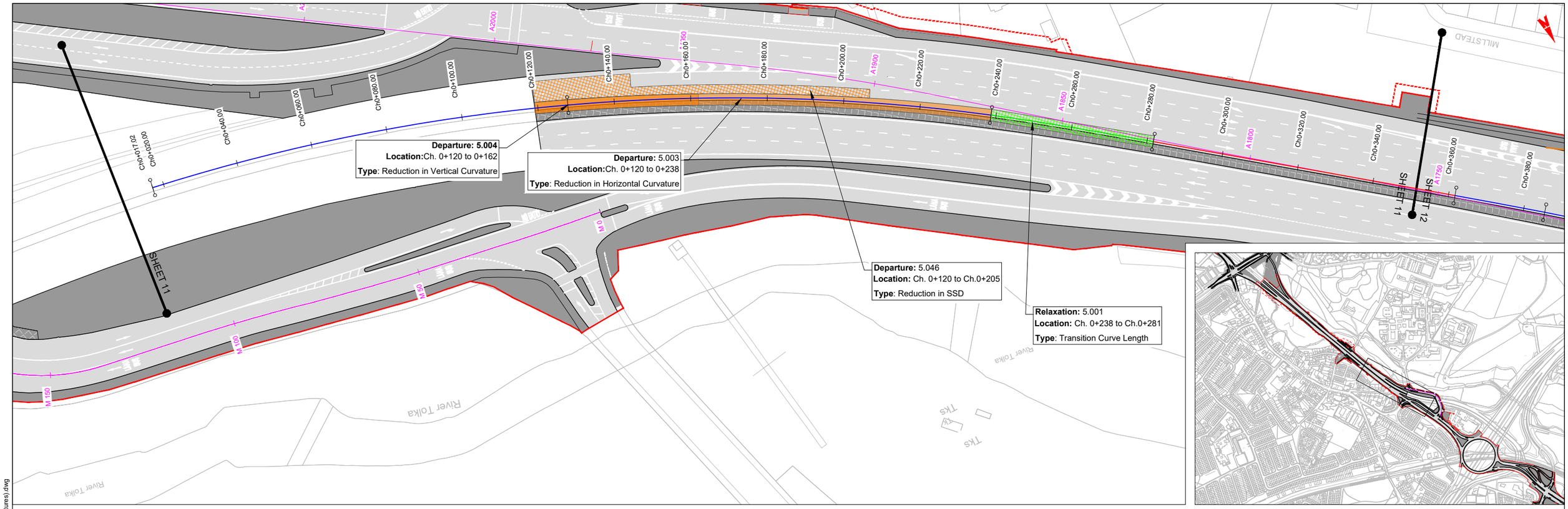

KEY PLAN:

GEOMETRIC ALIGNMENT CHAINAGE — GLOBAL ALIGNMENT CHAINAGE

NOTE 1: UNLESS OTHERWISE STATED, ALL LOCATIONS REFER TO THE GEOMETRIC ALIGNMENT CHAINAGE.

SECTION KEY:

- EXISTING GROUND (PROFILE)
- PROPOSED GROUND (PROFILE)
- SITE BOUNDARY
- DEPARTURE - GEOMETRY
- DEPARTURE - SSD
- DEPARTURE - JUNCTION VISIBILITY
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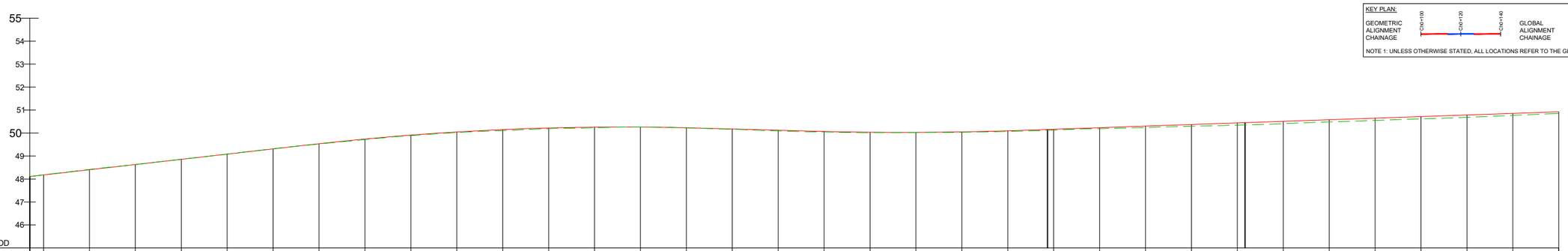

CHAINAGE	PROPOSED LEVELS	EXISTING LEVELS
017	48.118	48.118
020	48.178	48.182
030	48.404	48.418
040	48.631	48.627
050	48.857	48.858
060	49.084	49.084
070	49.311	49.317
080	49.537	49.525
090	49.740	49.717
100	49.910	49.886
110	50.047	50.021
120	50.150	50.109
130	50.221	50.190
140	50.257	50.233
150	50.261	50.266
160	50.231	50.228
170	50.177	50.166
180	50.122	50.092
190	50.068	50.044
200	50.035	50.015
210	50.028	50.020
220	50.049	50.035
230	50.096	50.071
240	50.164	50.130
250	50.233	50.194
260	50.302	50.242
270	50.371	50.297
280	50.439	50.347
290	50.508	50.407
300	50.577	50.486
310	50.646	50.550
320	50.715	50.619
330	50.784	50.684
340	50.853	50.769
350	50.921	50.852

HORIZONTAL: R: 502.875m L: 221.641m; A: 147.05 L: 43.000m; L =80.042m

VERTICAL: G =2.266% L =61.028; R =3000.000 L =84.487; G =-0.550% L =24.510; R =3700.000 L =45.824; G =0.688% L =298.096

SUPERELEVATON: L 4.77% 3.02% 2.50%; R -4.77% -3.02% -2.50%

ZONE 2 - N3 WESTBOUND MAINLINE DUAL CARRIAGEWAY (Z2-MAIN-ALIGNM-0001 WB)
SCALE: H 1:500,V 1:100

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Building Ireland's Future

Rev	Date	Drn	Chk'd	App'd	Description
M01	28/04/2022	SK	GE	BD	ISSUE FOR PHASE 4: PLANNING

Client: NTA Údarás Náisiúnta Iompair National Transport Authority

Engineering Designer: ARUP

Programme Title: BUSCONNECTS DUBLIN CORE BUS CORRIDORS INFRASTRUCTURE WORKS

Drawing Title: DEPARTURE FROM STANDARDS ZONE 2 - PLAN & PROFILES N3 WESTBOUND MAINLINE DUAL CARRIAGEWAY (Z2-MAIN-ALIGNM-0001 WB)

Date	Scale	Drawn	Checked	Approved
28/04/2022	1:500 @ A1 1:1000 @ A3	SK	GE	BD

Project Code	Originator Code	QMS Code	Drawing File Name	Sheet Number	Status	Rev
BCIDC	ARP	268401-00	BCIDC-ARP-GEO_HV-0005_XX_00-DR-CR-0011	11 of 22	A	M01

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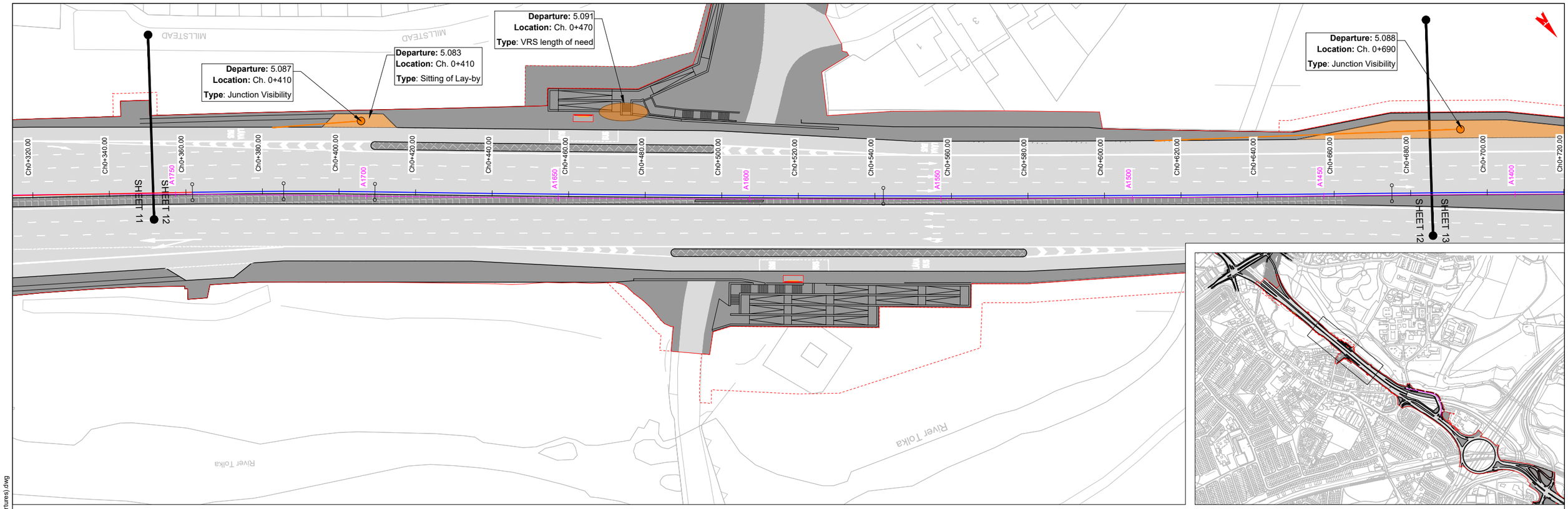

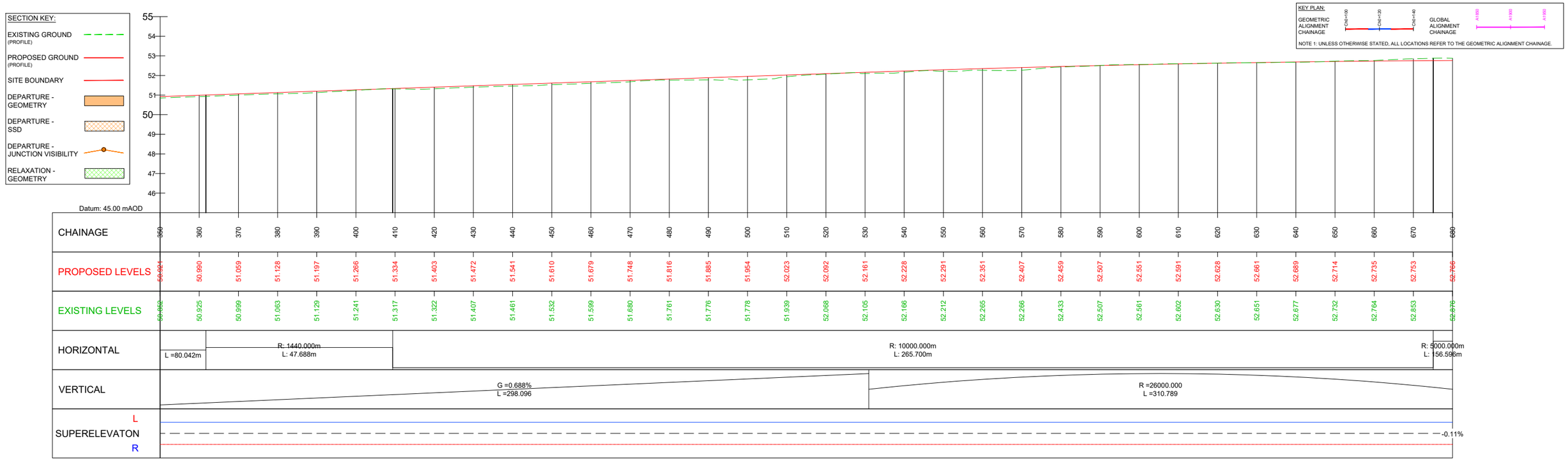

CHAINAGE	PROPOSED LEVELS	EXISTING LEVELS
350	50.931	50.852
360	50.990	50.925
370	51.059	50.999
380	51.128	51.063
390	51.197	51.129
400	51.266	51.241
410	51.334	51.317
420	51.403	51.322
430	51.472	51.407
440	51.541	51.461
450	51.610	51.532
460	51.679	51.599
470	51.748	51.680
480	51.816	51.761
490	51.885	51.776
500	51.954	51.778
510	52.023	51.939
520	52.092	52.068
530	52.161	52.105
540	52.228	52.166
550	52.291	52.212
560	52.351	52.265
570	52.407	52.266
580	52.459	52.433
590	52.507	52.507
600	52.551	52.561
610	52.591	52.602
620	52.628	52.630
630	52.661	52.651
640	52.689	52.677
650	52.714	52.732
660	52.735	52.764
670	52.753	52.853
680	52.766	52.876

KEY PLAN:

GEOMETRIC ALIGNMENT CHAINAGE — C0+100, C0+120, C0+140

GLOBAL ALIGNMENT CHAINAGE — A1850, A1900, A1950

NOTE 1: UNLESS OTHERWISE STATED, ALL LOCATIONS REFER TO THE GEOMETRIC ALIGNMENT CHAINAGE.

ZONE 2 - N3 WESTBOUND MAINLINE DUAL CARRIAGEWAY (Z2-MAIN-ALIGNM-0001 WB) - SHEET 2
SCALE: H 1:500,V 1:100

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Rev	Date	Drn	Chk'd	App'd	Description
M01	28/04/2022	SK	GE	BD	ISSUE FOR PHASE 4: PLANNING

Client: NTA Údarás Náisiúnta Iompair National Transport Authority

Engineering Designer: ARUP

Programme Title: **BUSCONNECTS DUBLIN CORE BUS CORRIDORS INFRASTRUCTURE WORKS**

Drawing Title: DEPARTURE FROM STANDARDS
ZONE 2 - PLAN & PROFILES
N3 WESTBOUND MAINLINE DUAL CARRIAGEWAY (Z2-MAIN-ALIGNM-0001 WB) - SHEET 2

Date	Scale	Drawn	Checked	Approved
28/04/2022	1:500 @ A1 1:1000 @ A3	SK	GE	BD

Project Code	Originator Code	QMS Code	Drawing File Name	Sheet Number	Status	Rev
BCIDC	ARP	268401-00	BCIDC-ARP-GEO_HV-0005_XX_00-DR-CR-0012	12 of 22	A	M01

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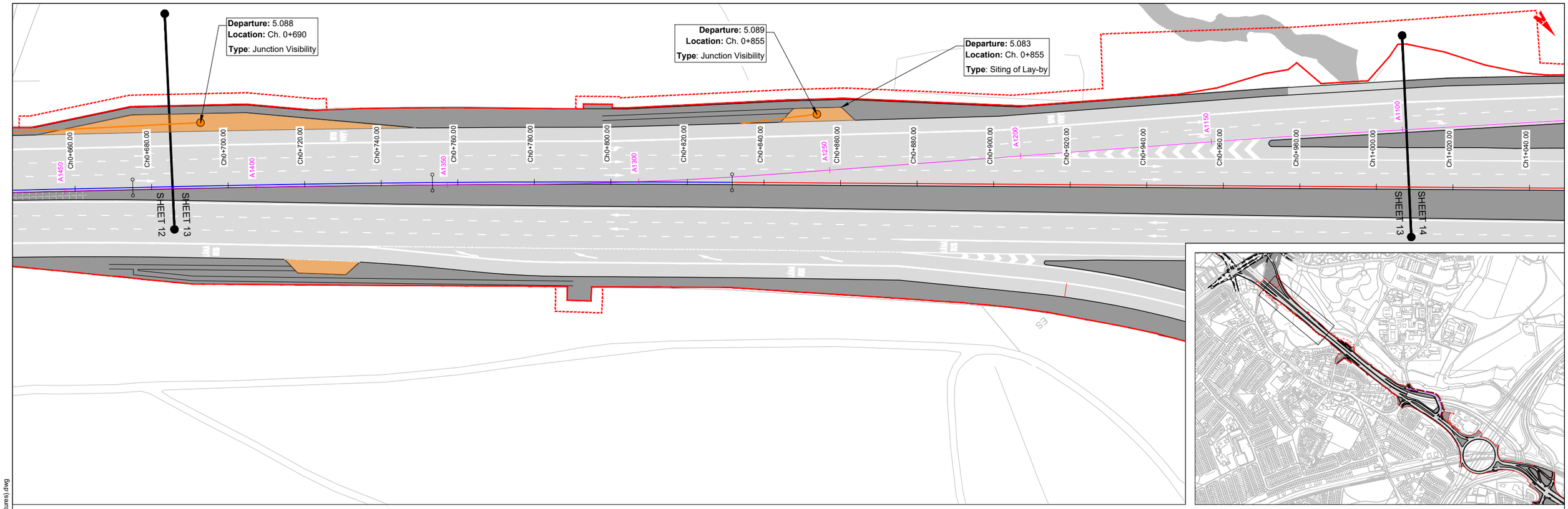

KEY PLAN:

GEOMETRIC ALIGNMENT CHAINAGE — Ch0+100, Ch0+120, Ch0+140

GLOBAL ALIGNMENT CHAINAGE — A1850, A1900, A1950

NOTE 1: UNLESS OTHERWISE STATED, ALL LOCATIONS REFER TO THE GEOMETRIC ALIGNMENT CHAINAGE.

SECTION KEY:

- EXISTING GROUND (PROFILE)
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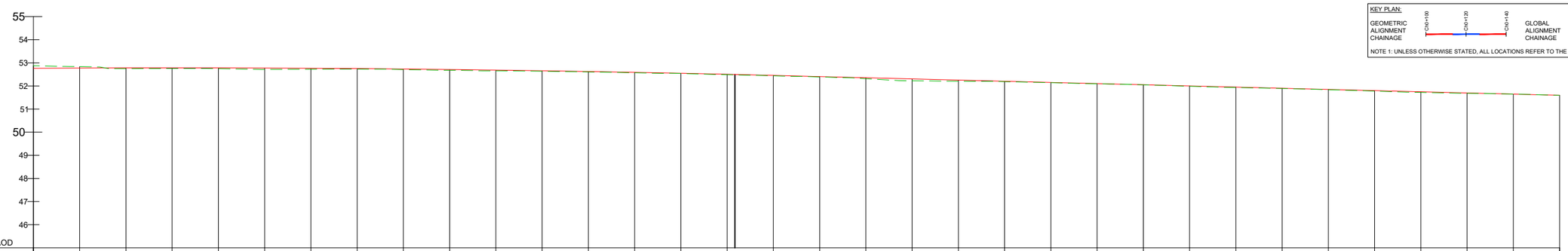

Datum: 45.00 mAOD

CHAINAGE	PROPOSED LEVELS	EXISTING LEVELS
680	52.766	52.876
690	52.776	52.837
700	52.782	52.749
710	52.784	52.756
720	52.782	52.748
730	52.776	52.717
740	52.766	52.726
750	52.753	52.730
760	52.735	52.709
770	52.714	52.682
780	52.689	52.656
790	52.660	52.637
800	52.628	52.608
810	52.591	52.571
820	52.551	52.542
830	52.506	52.487
840	52.458	52.441
850	52.408	52.390
860	52.357	52.317
870	52.306	52.225
880	52.256	52.208
890	52.205	52.189
900	52.154	52.142
910	52.104	52.096
920	52.053	52.051
930	52.002	51.988
940	51.952	51.934
950	51.901	51.890
960	51.850	51.840
970	51.799	51.779
980	51.749	51.721
990	51.698	51.684
1000	51.647	51.648
1010	51.597	51.598

HORIZONTAL: R: 5000.000m, L: 156.596m; L =244.439m

VERTICAL: R =26000.000, L =310.789; G =-0.507%, L =234.371

SUPERELEVATON: L 1.43%; R -1.43%

ZONE 2 - N3 WESTBOUND MAINLINE DUAL CARRIAGEWAY (Z2-MAIN-ALIGNM-0001 WB) - SHEET 3
SCALE: H 1:500,V 1:100

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Engineering Designer: ARUP

Programme Title: BUSCONNECTS DUBLIN CORE BUS CORRIDORS INFRASTRUCTURE WORKS

Drawing Title: DEPARTURE FROM STANDARDS ZONE 2 - PLAN & PROFILES N3 WESTBOUND MAINLINE DUAL CARRIAGEWAY (Z2-MAIN-ALIGNM-0001 WB) - SHEET 3

Date	Scale	Drawn	Checked	Approved
28/04/2022	1:500 @ A1 1:1000 @ A3	SK	GE	BD

Project Code	Originator Code	QMS Code	Drawing File Name	Sheet Number	Status	Rev
BCIDC	ARP	268401-00	BCIDC-ARP-GEO_HV-0005_XX_00-DR-CR-0013	13 of 22	A	M01

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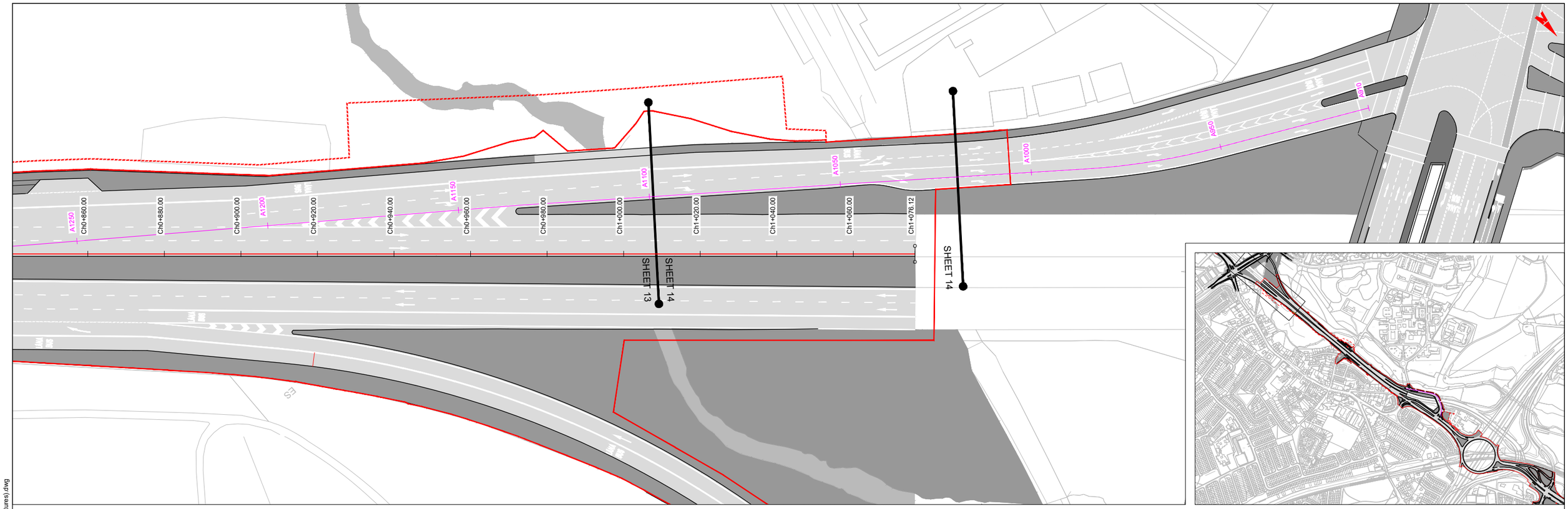


SECTION KEY:

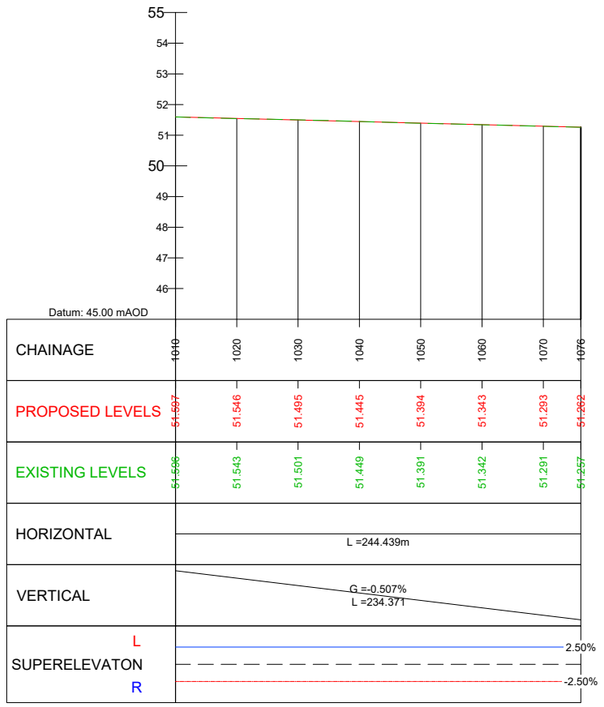
- EXISTING GROUND (PROFILE)
- PROPOSED GROUND (PROFILE)
- SITE BOUNDARY
- DEPARTURE - GEOMETRY
- DEPARTURE - SSD
- DEPARTURE - JUNCTION VISIBILITY
- RELAXATION - GEOMETRY

KEY PLAN:

GEOMETRIC ALIGNMENT CHAINAGE: Ch0+100, Ch0+120, Ch0+140

GLOBAL ALIGNMENT CHAINAGE: A1050, A1100, A1150

NOTE 1: UNLESS OTHERWISE STATED, ALL LOCATIONS REFER TO THE GEOMETRIC ALIGNMENT CHAINAGE.



ZONE 2 - N3 WESTBOUND MAINLINE DUAL CARRIAGEWAY (Z2-MAIN-ALIGNM-0001 WB) - SHEET 4
SCALE: H 1:500,V 1:100

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Project Ireland 2040
Building Ireland's Future

Rev	Date	Drn	Chk'd	App'd	Description
M01	28/04/2022	SK	GE	BD	ISSUE FOR PHASE 4: PLANNING

Client: NTA Údarás Náisiúnta Iompair National Transport Authority

Engineering Designer: ARUP

Programme Title: **BUSCONNECTS DUBLIN**
CORE BUS CORRIDORS INFRASTRUCTURE WORKS

Drawing Title: DEPARTURE FROM STANDARDS
ZONE 2 - PLAN & PROFILES
N3 WESTBOUND MAINLINE DUAL CARRIAGEWAY (Z2-MAIN-ALIGNM-0001 WB) - SHEET 4

Date	Scale	Drawn	Checked	Approved
28/04/2022	1:500 @ A1 1:1000 @ A3	SK	GE	BD

Project Code	Originator Code	QMS Code	Drawing File Name	Sheet Number	Status	Rev
BCIDC	ARP	268401-00	BCIDC-ARP-GEO_HV-0005_XX_00-DR-CR-0014	14 of 22	A	M01

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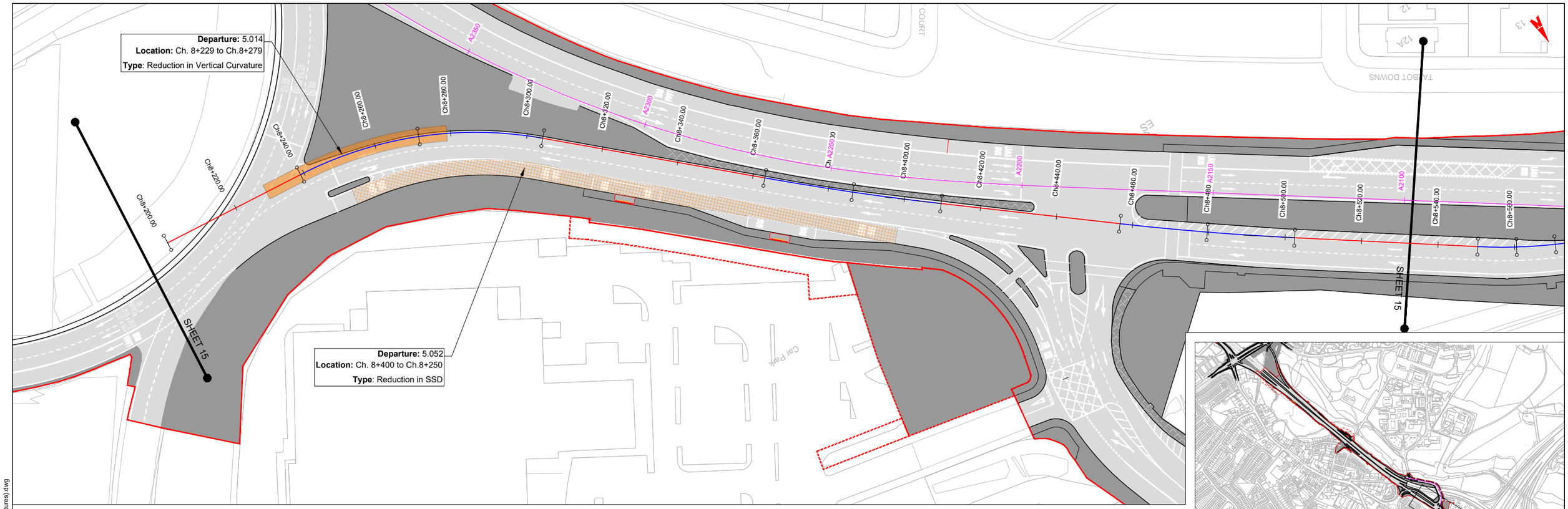
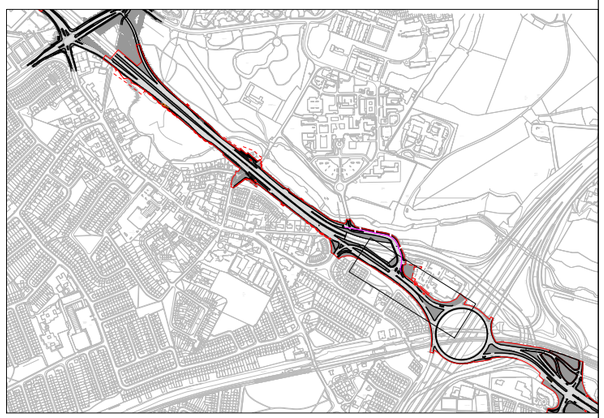




KEY PLAN:

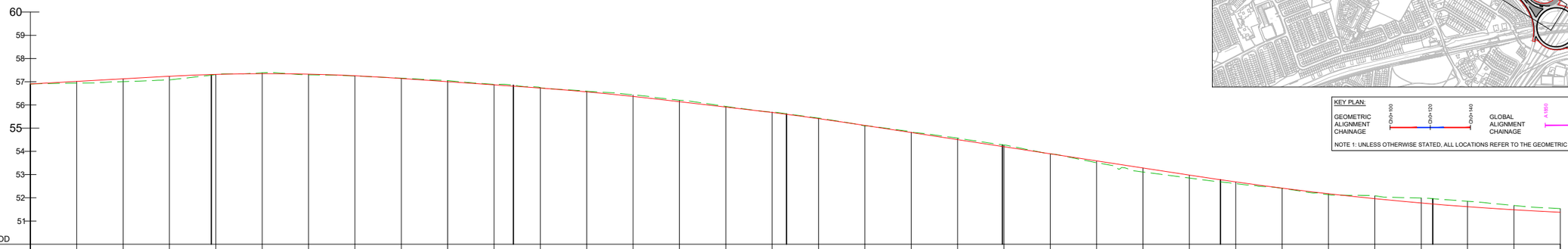
GEOMETRIC ALIGNMENT CHAINAGE — Ch0+100, Ch0+120, Ch0+140

GLOBAL ALIGNMENT CHAINAGE — A1850, A1900, A1950

NOTE 1: UNLESS OTHERWISE STATED, ALL LOCATIONS REFER TO THE GEOMETRIC ALIGNMENT CHAINAGE.

SECTION KEY:

- EXISTING GROUND (PROFILE)
- PROPOSED GROUND (PROFILE)
- SITE BOUNDARY
- DEPARTURE - GEOMETRY
- DEPARTURE - SSD
- DEPARTURE - JUNCTION VISIBILITY
- RELAXATION - GEOMETRY



CHAINAGE	PROPOSED LEVELS	EXISTING LEVELS
8200	56.985	56.985
8210	57.015	56.941
8220	57.126	57.004
8230	57.236	57.082
8240	57.316	57.305
8250	57.346	57.384
8260	57.326	57.297
8270	57.256	57.245
8280	57.137	57.153
8290	57.001	57.047
8300	56.864	56.887
8310	56.726	56.746
8320	56.563	56.592
8330	56.367	56.434
8340	56.141	56.204
8350	55.909	55.937
8360	55.674	55.695
8370	55.411	55.434
8380	55.115	55.097
8390	54.810	54.827
8400	54.504	54.570
8410	54.199	54.271
8420	53.894	53.891
8430	53.588	53.509
8440	53.283	53.110
8450	52.978	52.850
8460	52.683	52.611
8470	52.415	52.407
8480	52.175	52.131
8490	51.961	52.087
8500	51.775	51.987
8510	51.615	51.849
8520	51.482	51.669
8530	51.377	51.531

HORIZONTAL:
- L =39.021m
- R: 100.000m, L: 65.165m
- L =58.918m
- R: 720.000m, L: 46.573m
- L =47.026m
- R: 720.000m, L: 45.795m
- L =47.885m

VERTICAL:
- G =1.105%, L =28.936
- R =2000.000, L =49.440
- G =-1.367%, L =28.802
- R =3000.000, L =28.385
- G =-2.313%, L =19.750
- R =3000.000, L =22.191
- G =-3.053%, L =73.577
- R =3700.000, L =85.934

SUPERELEVATON:
- L: 2.50% / -2.50%
- R: -2.50% / 2.50%

ZONE 2 - N3 EASTBOUND LINK ROAD - NAVAN ROAD N3 EASTBOUND DIVERGE JUNCTION TO M50 ROUNDABOUT (Z2-MAIN-ALIGNM-0002A)
SCALE: H 1:500,V 1:100

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Project Ireland 2040 — Building Ireland's Future

Rev	Date	Drn	Chk'd	App'd	Description
M01	28/04/2022	SK	GE	BD	ISSUE FOR PHASE 4: PLANNING

Client: NTA Údarás Náisiúnta Iompair National Transport Authority

Engineering Designer: ARUP

Programme Title: BUSCONNECTS DUBLIN CORE BUS CORRIDORS INFRASTRUCTURE WORKS

Drawing Title: DEPARTURE FROM STANDARDS ZONE 2 - PLAN & PROFILES N3 EASTBOUND LINK ROAD - RIVER ROAD TO M50 ROUNDABOUT (Z2-MAIN-ALIGNM-0002A)

Date	Scale	Drawn	Checked	Approved
28/04/2022	1:500 @ A1 1:1000 @ A3	SK	GE	BD

Project Code	Originator Code	QMS Code	Drawing File Name	Sheet Number	Status	Rev
BCIDC	ARP	268401-00	BCIDC-ARP-GEO_HV-0005_XX_00-DR-CR-0015	15 of 22	A	M01

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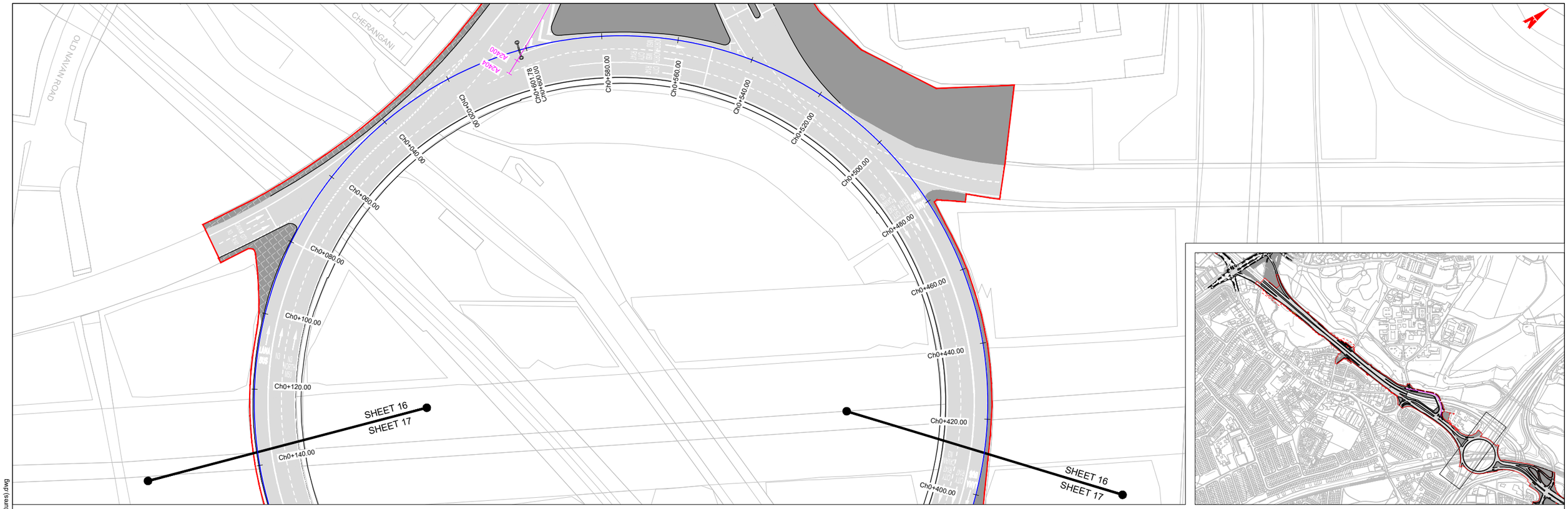


KEY PLAN:

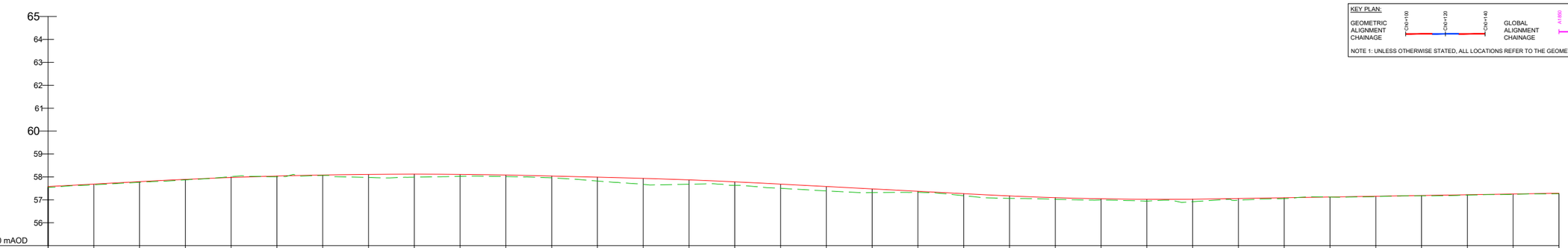
GEOMETRIC ALIGNMENT CHAINAGE — Ch0+100, Ch0+120, Ch0+140

GLOBAL ALIGNMENT CHAINAGE — A1800, A1900, A1950

NOTE 1: UNLESS OTHERWISE STATED, ALL LOCATIONS REFER TO THE GEOMETRIC ALIGNMENT CHAINAGE.

SECTION KEY:

- EXISTING GROUND (PROFILE)
- PROPOSED GROUND (PROFILE)
- SITE BOUNDARY
- DEPARTURE - GEOMETRY
- DEPARTURE - SSD
- DEPARTURE - JUNCTION VISIBILITY
- RELAXATION - GEOMETRY



Datum: 55.00 mAOD

CHAINAGE	PROPOSED LEVELS	EXISTING LEVELS
000	57.580	57.547
010	57.687	57.656
020	57.793	57.765
030	57.893	57.872
040	57.975	58.013
050	58.038	58.010
060	58.084	58.064
070	58.111	57.976
080	58.120	57.988
090	58.111	58.027
100	58.084	58.015
110	58.039	57.961
120	57.990	57.820
130	57.939	57.674
140	57.872	57.682
150	57.787	57.635
160	57.685	57.503
170	57.581	57.390
180	57.478	57.318
190	57.374	57.328
200	57.270	57.180
210	57.170	57.064
220	57.094	57.025
230	57.045	56.992
240	57.023	56.944
250	57.028	56.919
260	57.057	56.980
270	57.090	57.057
280	57.123	57.122
290	57.156	57.141
300	57.189	57.173
310	57.222	57.209
320	57.255	57.238
330	57.280	57.268

HORIZONTAL: L =601.778m

VERTICAL:
- G =1.066% L =21.339
- R =5500.000 L =85.504
- G =-0.488% L =18.052
- R =5500.000 L =30.220
- G =-1.038% L =49.596
- R =3700.000 L =50.579
- G =0.329% L =137.930

SUPERELEVATON: L / R

ZONE 2 - M50 ROUNDABOUT (Z2-MAIN-ALIGNM-0000)
SCALE: H 1:500,V 1:100

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Building Ireland's Future

Rev	Date	Drn	Chk'd	App'd	Description
M01	28/04/2022	SK	GE	BD	ISSUE FOR PHASE 4: PLANNING

Client: NTA Údarás Náisiúnta Iompair National Transport Authority

Engineering Designer: ARUP

Programme Title: BUSCONNECTS DUBLIN CORE BUS CORRIDORS INFRASTRUCTURE WORKS

Drawing Title: DEPARTURE FROM STANDARDS ZONE 2 - PLAN & PROFILES M50 ROUNDABOUT (Z2-MAIN-ALIGNM-0000)

Date	Scale	Drawn	Checked	Approved
28/04/2022	1:500 @ A1 1:1000 @ A3	SK	GE	BD

Project Code	Originator Code	QMS Code	Drawing File Name	Sheet Number	Status	Rev
BCIDC	ARP	268401-00	BCIDC-ARP-GEO_HV-0005_XX_00-DR-CR-0016	16 of 22	A	M01

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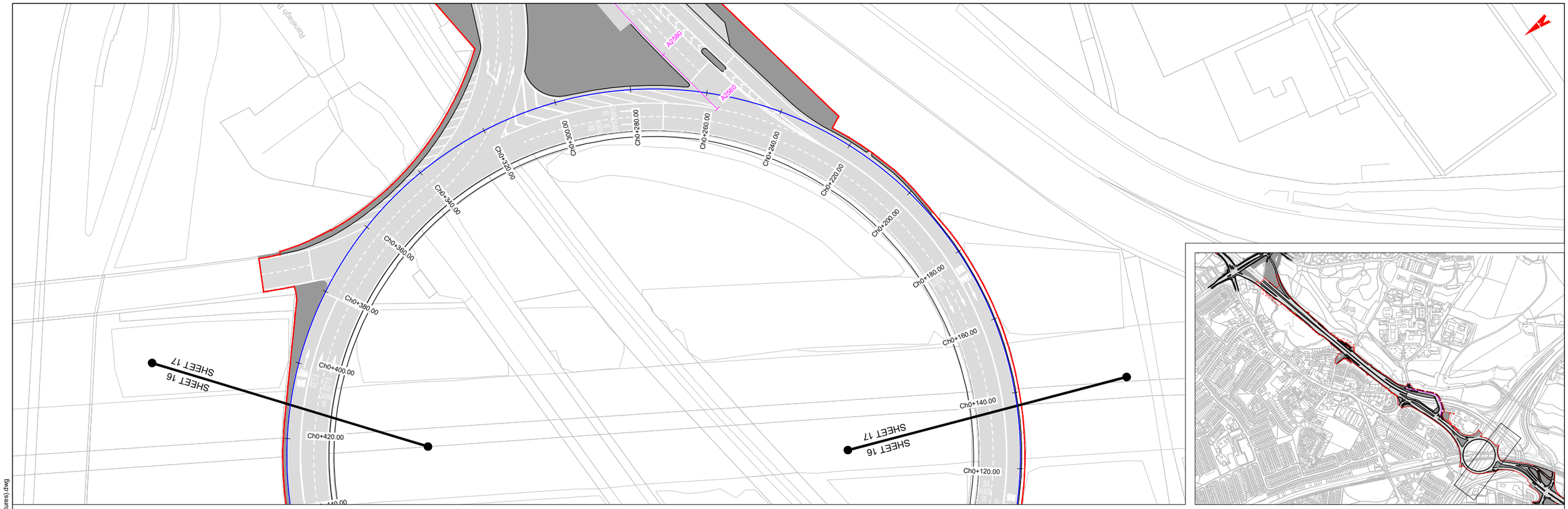


KEY PLAN:

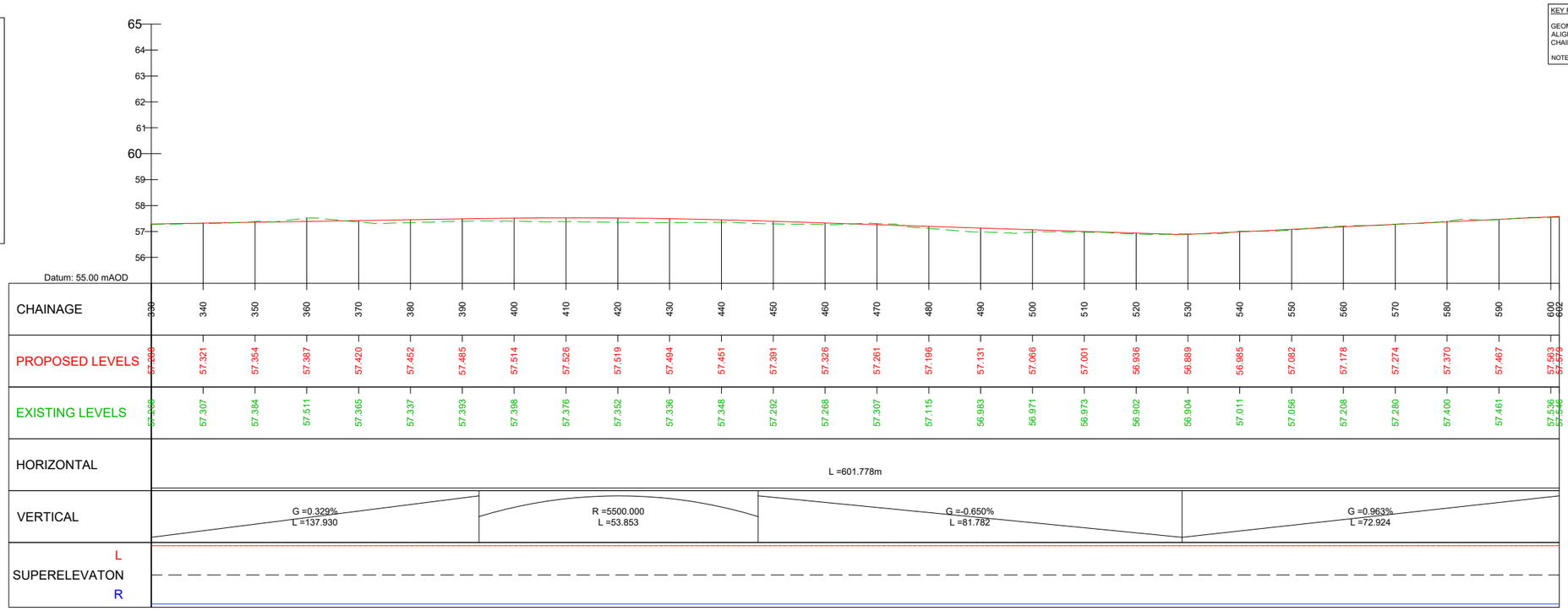
GEOMETRIC ALIGNMENT CHAINAGE — CH0+100, CH0+120, CH0+140

GLOBAL ALIGNMENT CHAINAGE — A1850, A1900, A1950

NOTE 1: UNLESS OTHERWISE STATED, ALL LOCATIONS REFER TO THE GEOMETRIC ALIGNMENT CHAINAGE.

SECTION KEY:

- EXISTING GROUND (PROFILE)
- PROPOSED GROUND (PROFILE)
- SITE BOUNDARY
- DEPARTURE - GEOMETRY
- DEPARTURE - SSD
- DEPARTURE - JUNCTION VISIBILITY
- RELAXATION - GEOMETRY



CHAINAGE	PROPOSED LEVELS	EXISTING LEVELS
330	57.288	57.260
340	57.321	57.307
350	57.354	57.384
360	57.387	57.511
370	57.420	57.365
380	57.452	57.337
390	57.485	57.393
400	57.514	57.398
410	57.526	57.376
420	57.519	57.352
430	57.494	57.336
440	57.451	57.348
450	57.391	57.292
460	57.326	57.268
470	57.261	57.307
480	57.196	57.115
490	57.131	56.983
500	57.066	56.971
510	57.001	56.973
520	56.936	56.902
530	56.889	56.904
540	56.985	57.011
550	57.082	57.056
560	57.178	57.208
570	57.274	57.280
580	57.370	57.400
590	57.467	57.461
600	57.563	57.538
602	57.579	57.540

ZONE 2 - M50 ROUNDABOUT (Z2-MAIN-ALIGNM-0000) - SHEET 2
SCALE: H 1:500,V 1:100

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Project Ireland 2040
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Rev	Date	Drn	Chk'd	App'd	Description
M01	28/04/2022	SK	GE	BD	ISSUE FOR PHASE 4: PLANNING

Client: NTA Údarás Náisiúnta Iompair National Transport Authority

Engineering Designer: ARUP

Programme Title: BUSCONNECTS DUBLIN
CORE BUS CORRIDORS INFRASTRUCTURE WORKS

Drawing Title: DEPARTURE FROM STANDARDS
ZONE 2 - PLAN & PROFILES
M50 ROUNDABOUT (Z2-MAIN-ALIGNM-0000) - SHEET 2

Date	Scale	Drawn	Checked	Approved
28/04/2022	1:500 @ A1 1:1000 @ A3	SK	GE	BD

Project Code	Originator Code	QMS Code	Drawing File Name	Sheet Number	Status	Rev
BCIDC	ARP	268401-00	BCIDC-ARP-GEO_HV-0005_XX_00-DR-CR-0017	17 of 22	A	M01

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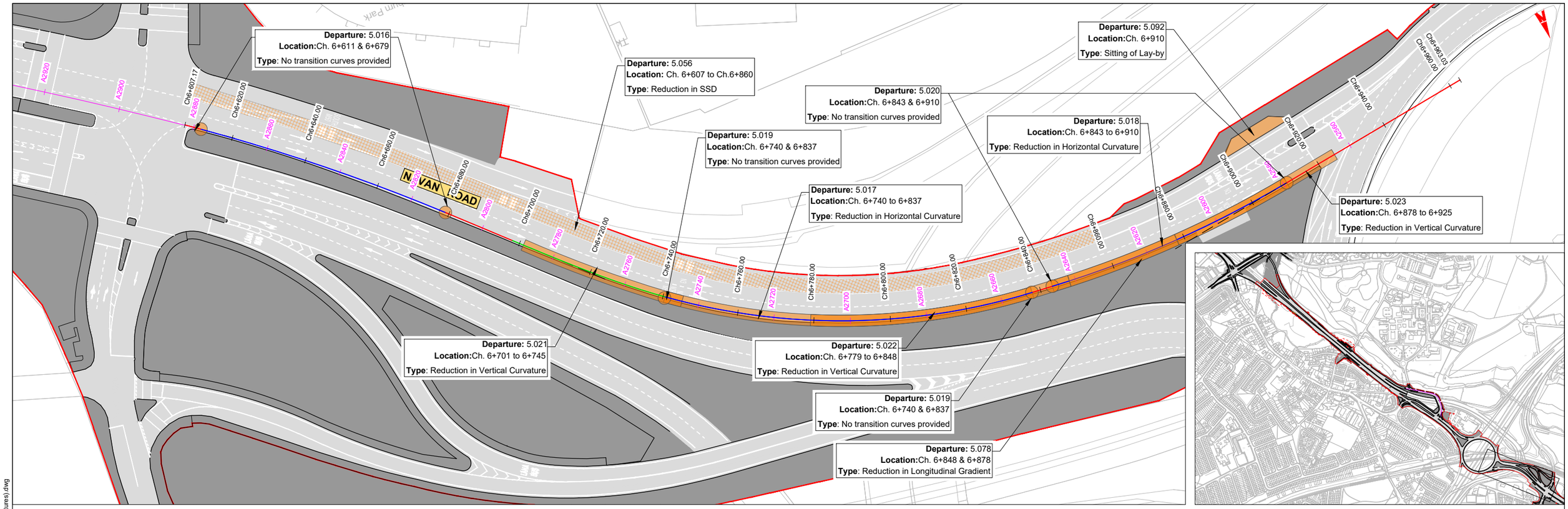


KEY PLAN:

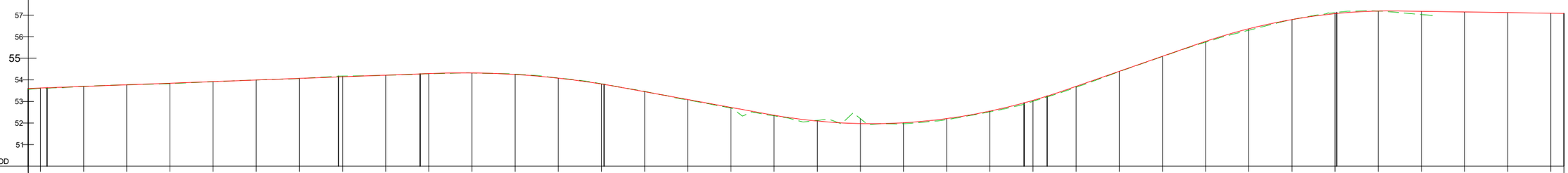
GEOMETRIC ALIGNMENT CHAINAGE — CH0+100, CH0+120, CH0+140

GLOBAL ALIGNMENT CHAINAGE — A1800, A1900, A1950

NOTE 1: UNLESS OTHERWISE STATED, ALL LOCATIONS REFER TO THE GEOMETRIC ALIGNMENT CHAINAGE.

SECTION KEY:

- EXISTING GROUND (PROFILE)
- PROPOSED GROUND (PROFILE)
- SITE BOUNDARY
- DEPARTURE - GEOMETRY
- DEPARTURE - SSD
- DEPARTURE - JUNCTION VISIBILITY
- RELAXATION - GEOMETRY



Datum: 50.00 mAOD

CHAINAGE	PROPOSED LEVELS	EXISTING LEVELS
6607	53.669	53.563
6610	53.623	53.608
6620	53.697	53.702
6630	53.771	53.774
6640	53.846	53.824
6650	53.920	53.915
6660	53.994	53.996
6670	54.068	54.058
6680	54.142	54.173
6690	54.217	54.212
6700	54.291	54.282
6710	54.320	54.318
6720	54.249	54.265
6730	54.078	54.085
6740	53.808	53.818
6750	53.452	53.466
6760	53.087	53.065
6770	52.722	52.692
6780	52.359	52.332
6790	52.089	52.120
6800	51.974	52.200
6810	52.012	51.968
6820	52.204	52.156
6830	52.550	52.518
6840	53.050	53.005
6850	53.700	53.658
6860	54.397	54.384
6870	55.094	55.085
6880	55.787	55.747
6890	56.369	56.303
6900	56.796	56.794
6910	57.071	57.117
6920	57.191	57.187
6930	57.178	57.029
6940	57.149	
6950	57.119	
6960	57.089	
6963		

HORIZONTAL: L =4.369m; R: 510.000m L: 67.515m; L =18.932m; A: 85.52 L: 42.626m; R: 171.560m L: 97.314m; L =5.361m; R: 280.000m L: 67.092m; L =52.646m

VERTICAL: G =0.742% L =93.330; R =1000.000 L =43.916; G =-3.650% L =34.373; R =650.000 L =69.049; G =6.973% L =29.644; R =650.000 L =47.253; G =-0.296% L =38.288

SUPERELEVATON (L / R): 1.50%; 3.50%; -3.50%; 5.00%; -5.00%; 2.00%; -2.00%

ZONE 2 - N3 LINK ROAD - AUBURN AVENUE TO M50 JUNCTION (Z2-MAIN-ALIGNM-0003)
SCALE: H 1:500,V 1:100

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Project Ireland 2040 — Building Ireland's Future

Rev	Date	Drn	Chk'd	App'd	Description
M01	28/04/2022	SK	GE	BD	ISSUE FOR PHASE 4: PLANNING

Client: NTA Údarás Náisiúnta Iompair National Transport Authority

Engineering Designer: ARUP

Programme Title: BUSCONNECTS DUBLIN CORE BUS CORRIDORS INFRASTRUCTURE WORKS

Drawing Title: DEPARTURE FROM STANDARDS ZONE 2 - PLAN & PROFILES N3 LINK ROAD - AUBURN AVENUE TO M50 JUNCTION (Z2-MAIN-ALIGNM-0003)

Date	Scale	Drawn	Checked	Approved
28/04/2022	1:500 @ A1 1:1000 @ A3	SK	GE	BD

Project Code	Originator Code	QMS Code	Drawing File Name	Sheet Number	Status	Rev
BCIDC	ARP	268401-00	BCIDC-ARP-GEO_HV-0005_XX_00-DR-CR-0018	18 of 22	A	M01

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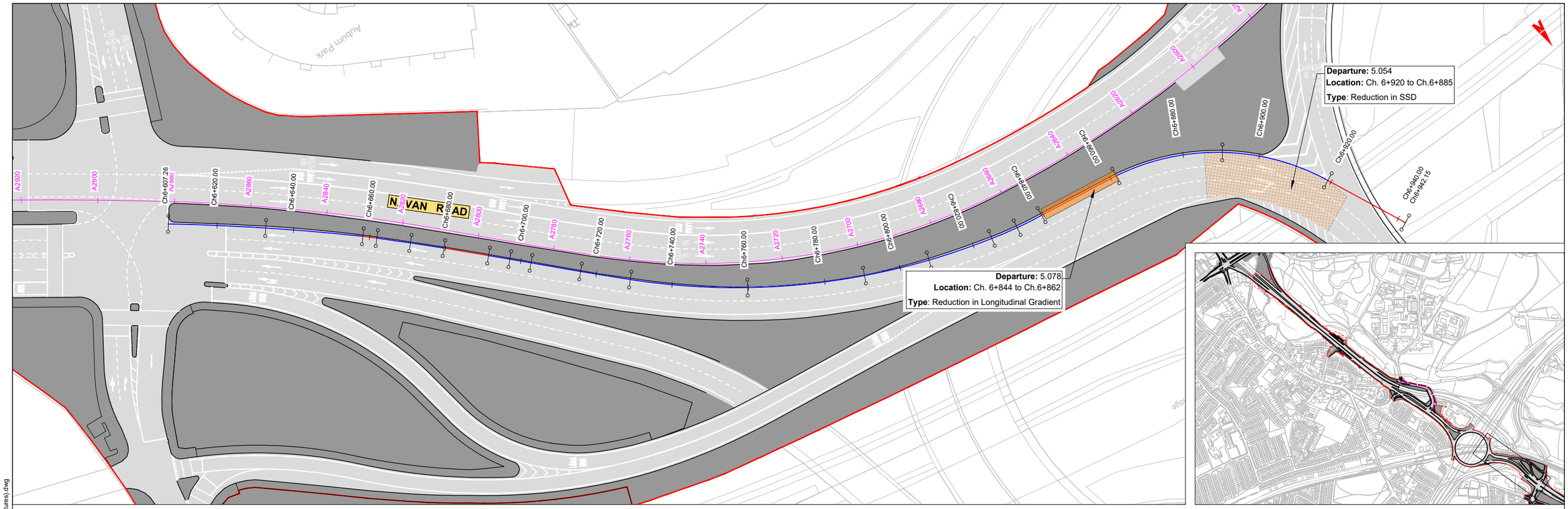


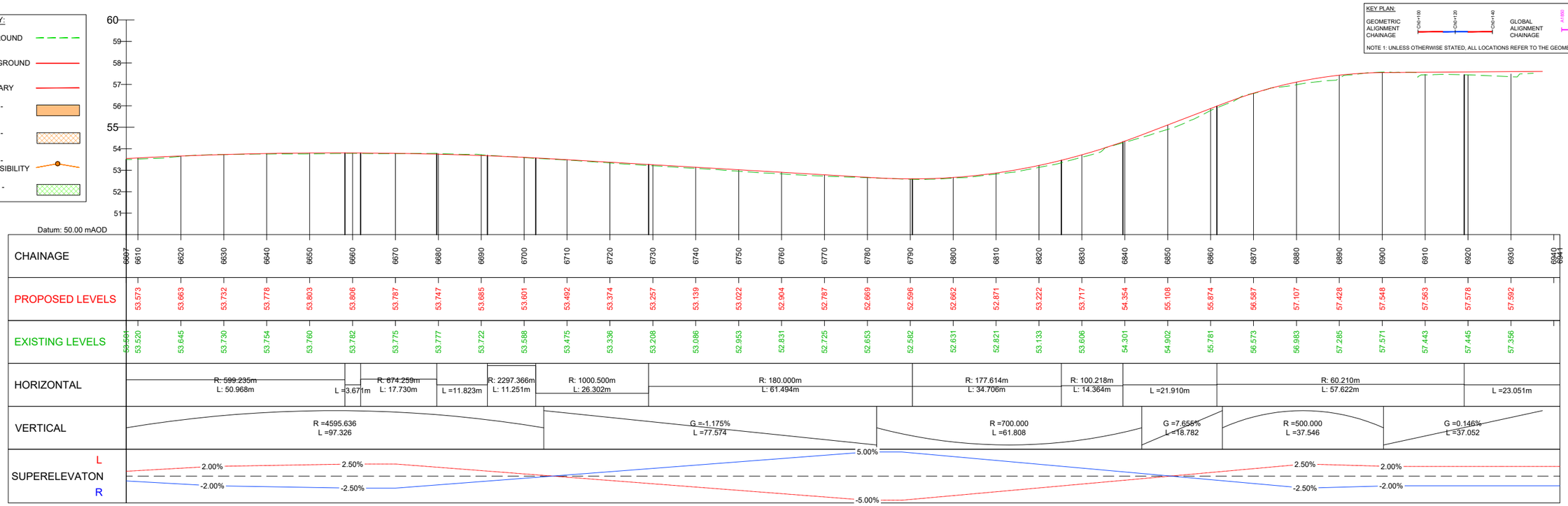
SECTION KEY:

- EXISTING GROUND (PROFILE)
- PROPOSED GROUND (PROFILE)
- SITE BOUNDARY
- DEPARTURE - GEOMETRY
- DEPARTURE - SSD
- DEPARTURE - JUNCTION VISIBILITY
- RELAXATION - GEOMETRY

KEY PLAN:

GEOMETRIC ALIGNMENT CHAINAGE (Ch0+100, Ch0+120, Ch0+140) — GLOBAL ALIGNMENT CHAINAGE (A1850, A1900, A1950)

NOTE 1: UNLESS OTHERWISE STATED, ALL LOCATIONS REFER TO THE GEOMETRIC ALIGNMENT CHAINAGE.



ZONE 2 - N3 EASTBOUND LINK ROAD M50 JUNCTION TO AUBURN AVENUE (Z2-MAIN-ALIGNM-0003A)
SCALE: H 1:500,V 1:100

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Project Ireland 2040
Building Ireland's Future

Rev	Date	Drn	Chk'd	App'd	Description
M01	28/04/2022	SK	GE	BD	ISSUE FOR PHASE 4: PLANNING

Client: NTA Údarás Náisiúnta Iompair National Transport Authority

Engineering Designer: ARUP

Programme Title: BUSCONNECTS DUBLIN CORE BUS CORRIDORS INFRASTRUCTURE WORKS

Drawing Title: DEPARTURE FROM STANDARDS ZONE 2 - PLAN & PROFILES N3 EASTBOUND LINK ROAD M50 JUNCTION TO AUBURN AVENUE (Z2-MAIN-ALIGNM-0003A)

Date	Scale	Drawn	Checked	Approved
28/04/2022	1:500 @ A1 1:1000 @ A3	SK	GE	BD

Project Code	Originator Code	QMS Code	Drawing File Name	Sheet Number	Status	Rev
BCIDC	ARP	268401-00	BCIDC-ARP-GEO_HV-0005_XX_00-DR-CR-0019	19 of 22	A	M01

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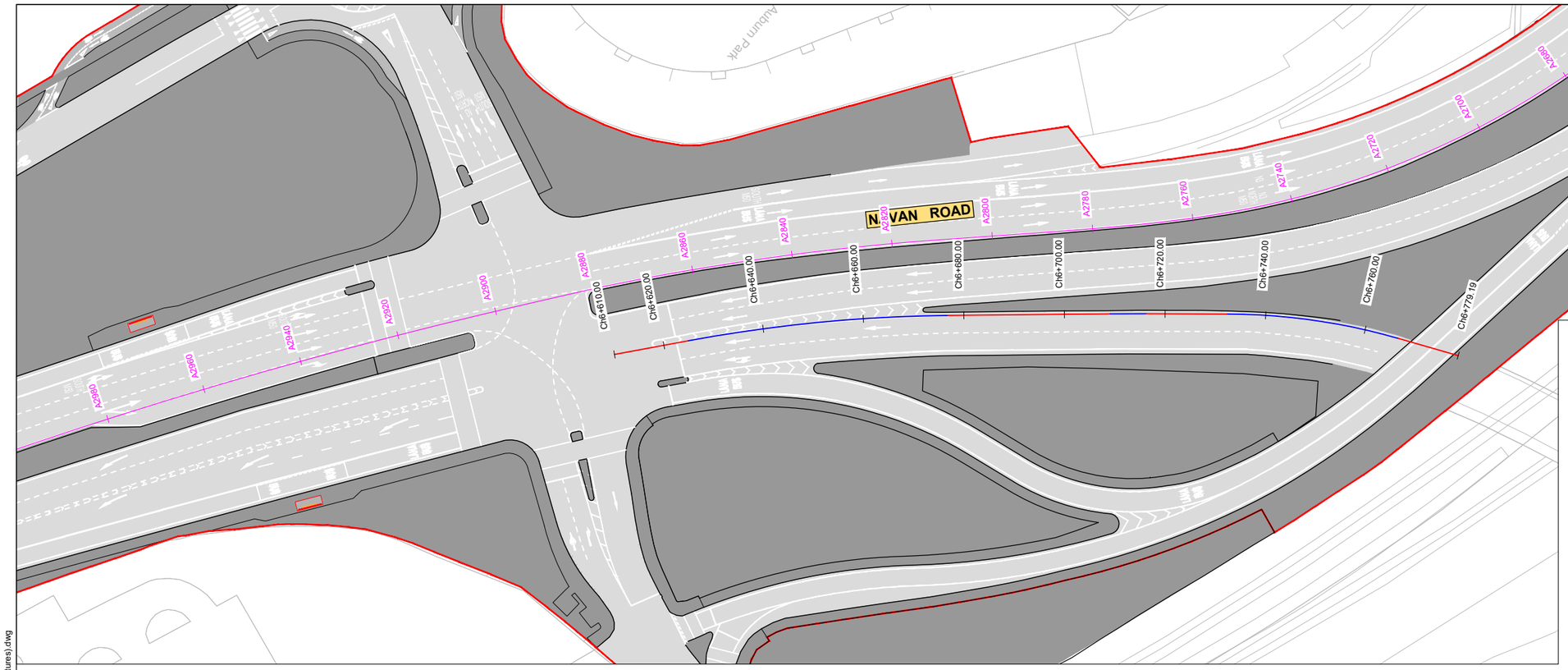
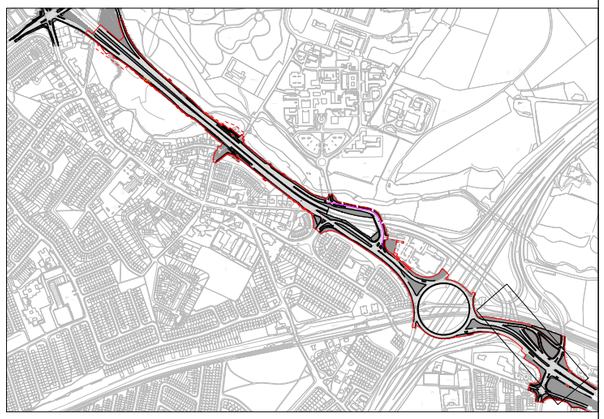




SECTION KEY:

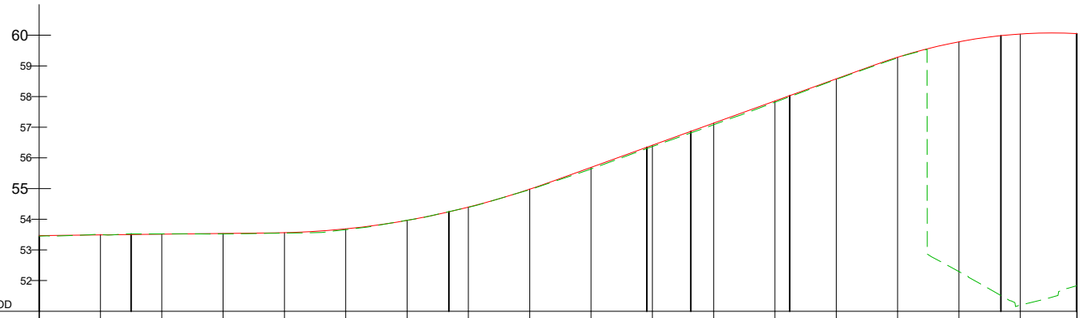
- EXISTING GROUND (PROFILE)
- PROPOSED GROUND (PROFILE)
- SITE BOUNDARY
- DEPARTURE - GEOMETRY
- DEPARTURE - SSD
- DEPARTURE - JUNCTION VISIBILITY
- RELAXATION - GEOMETRY

KEY PLAN:

GEOMETRIC ALIGNMENT CHAINAGE: CN0+100, CN0+120, CN0+140

GLOBAL ALIGNMENT CHAINAGE: A1850, A1900, A1950

NOTE 1: UNLESS OTHERWISE STATED, ALL LOCATIONS REFER TO THE GEOMETRIC ALIGNMENT CHAINAGE.



CHAINAGE	PROPOSED LEVELS	EXISTING LEVELS
6610	53.466	53.466
6620	53.489	53.489
6630	53.512	53.512
6640	53.535	53.535
6650	53.560	53.560
6660	53.685	53.685
6670	53.963	53.963
6680	54.395	54.395
6690	54.981	54.981
6700	55.691	55.691
6710	56.413	56.413
6720	57.134	57.134
6730	57.856	57.856
6740	58.577	58.577
6750	59.282	59.282
6760	59.785	59.785
6770	60.039	60.039
6779	60.051	60.051

HORIZONTAL: L =15.007m; R: 300.000m L: 51.821m; L =32.274m; R: 500.000m L: 7.173m; L =16.129m; R: 125.000m L: 34.429m; L =12.357m

VERTICAL: G =0.230% L =38.414; R =650.000 L =45.405; G =7.216% L =52.464; R =400.000 L =33.041

SUPERELEVATON: L 5.00%; 0.00; R -5.00%

ZONE 2 - N3 EASTBOUND LINK ROAD M50 JUNCTION TO AUBURN AVENUE (Z2-MAIN-ALIGNM-0003B)
SCALE: H 1:500,V 1:100

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Building Ireland's Future

Rev	Date	Drn	Chk'd	App'd	Description
M01	28/04/2022	SK	GE	BD	ISSUE FOR PHASE 4: PLANNING

Client: NTA Údarás Náisiúnta Iompair National Transport Authority

Engineering Designer: ARUP

Programme Title: BUSCONNECTS DUBLIN CORE BUS CORRIDORS INFRASTRUCTURE WORKS

Drawing Title: DEPARTURE FROM STANDARDS ZONE 2 - PLAN & PROFILES N3 EASTBOUND LINK ROAD M50 JUNCTION TO AUBURN AVENUE (Z2-MAIN-ALIGNM-0003B)

Date	Scale	Drawn	Checked	Approved
28/04/2022	1:500 @ A1 1:1000 @ A3	SK	GE	BD

Project Code	Originator Code	QMS Code	Drawing File Name	Sheet Number	Status	Rev
BCIDC	ARP	268401-00	BCIDC-ARP-GEO_HV-0005_XX_00-DR-CR-0020	20 of 22	A	M01

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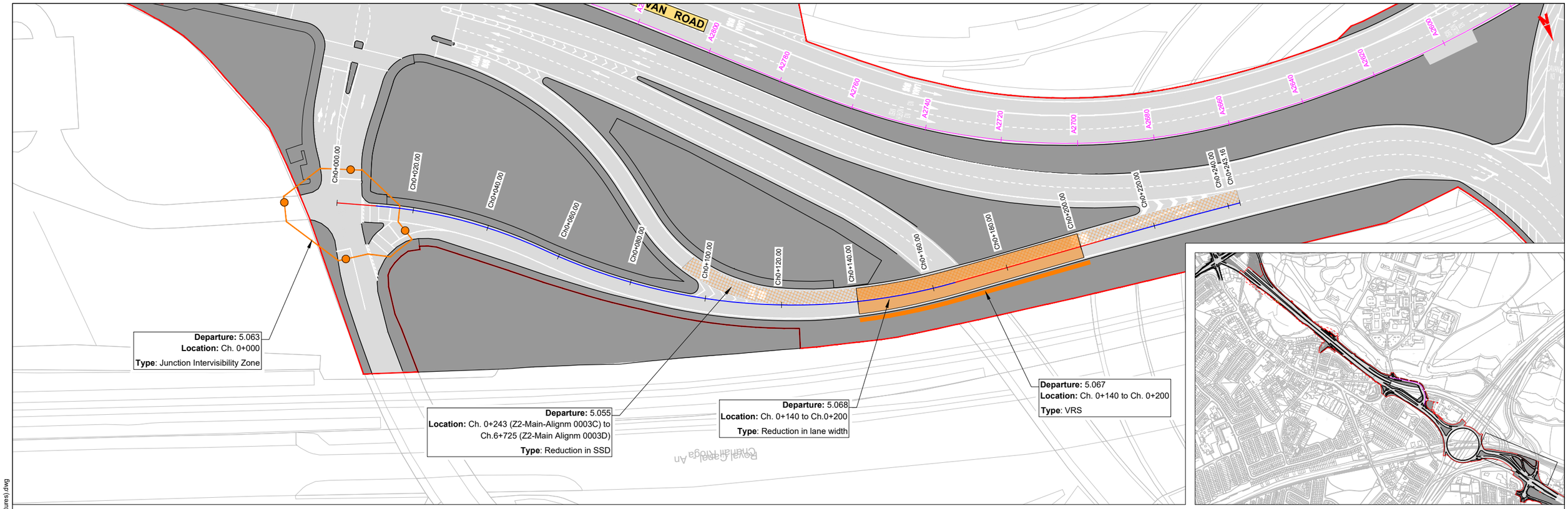


SECTION KEY:

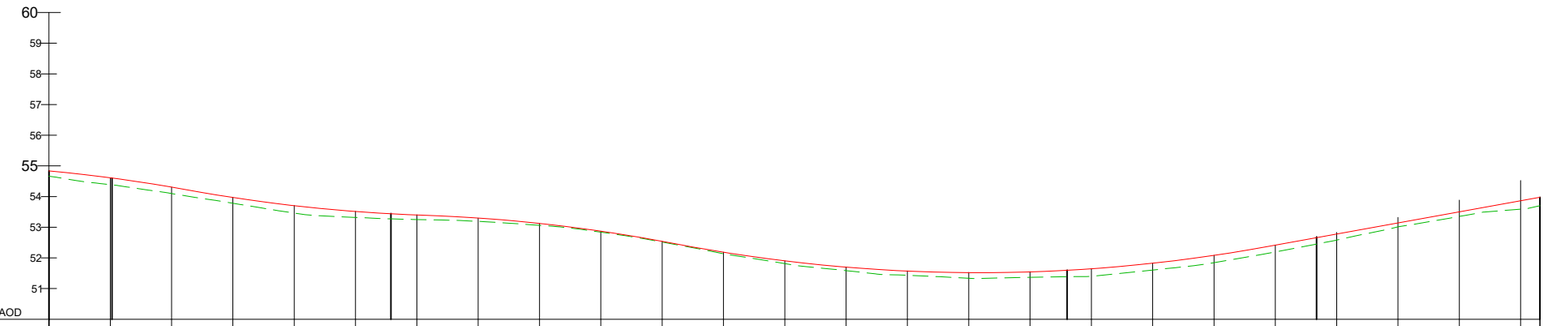
- EXISTING GROUND (PROFILE)
- PROPOSED GROUND (PROFILE)
- SITE BOUNDARY
- DEPARTURE - GEOMETRY
- DEPARTURE - SSD
- DEPARTURE - JUNCTION VISIBILITY
- RELAXATION - GEOMETRY

KEY PLAN:

GEOMETRIC ALIGNMENT CHAINAGE: CH0+100, CH0+120, CH0+140

GLOBAL ALIGNMENT CHAINAGE: A1850, A1900, A1950

NOTE 1: UNLESS OTHERWISE STATED, ALL LOCATIONS REFER TO THE GEOMETRIC ALIGNMENT CHAINAGE.



CHAINAGE	PROPOSED LEVELS	EXISTING LEVELS
000	54.838	54.663
010	54.612	54.387
020	54.309	54.100
030	53.970	53.781
040	53.703	53.461
050	53.512	53.320
060	53.399	53.251
070	53.300	53.191
080	53.124	53.063
090	52.871	52.840
100	52.542	52.517
110	52.186	52.136
120	51.903	51.814
130	51.698	51.584
140	51.570	51.433
150	51.518	51.337
160	51.544	51.367
170	51.646	51.398
180	51.826	51.604
190	52.082	51.846
200	52.415	52.192
210	52.776	52.582
220	53.138	53.013
230	53.500	53.352
240	53.861	53.588
243	53.975	53.701

HORIZONTAL: L =10.281m; R: 127.000m L: 45.481m; R: 154.391m L: 110.287m; L =40.685m; R: 1440.000m L: 36.427m

VERTICAL: R =1300.000 L =24.547; R =1300.000 L =38.296; R =1300.000 L =40.976; R =1300.000 L =96.772; G =3.616% L =48.164

SUPERELEVATON: L 2.50% 5.00% 2.50%; R -2.50% -5.00% -2.50%

ZONE 2 - N3 EASTBOUND LINK ROAD M50 JUNCTION TO AUBURN AVENUE JUNCTION (Z2-MAIN-ALIGNM-0003C)
SCALE: H 1:500,V 1:100

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Rev	Date	Drn	Chk'd	App'd	Description
M01	28/04/2022	SK	GE	BD	ISSUE FOR PHASE 4: PLANNING

Client: NTA Údarás Náisiúnta Iompair National Transport Authority

Engineering Designer: ARUP

Programme Title: BUSCONNECTS DUBLIN CORE BUS CORRIDORS INFRASTRUCTURE WORKS

Drawing Title: DEPARTURE FROM STANDARDS ZONE 2 - PLAN & PROFILES N3 EASTBOUND LINK ROAD M50 JUNCTION TO AUBURN AVENUE (Z2-MAIN-ALIGNM-0003C)

Date	Scale	Drawn	Checked	Approved
28/04/2022	1:500 @ A1 1:1000 @ A3	SK	GE	BD

Project Code	Originator Code	QMS Code	Drawing File Name	Sheet Number	Status	Rev
BCIDC	ARP	268401-00	BCIDC-ARP-GEO_HV-0005_XX_00-DR-CR-0021	21 of 22	A	M01

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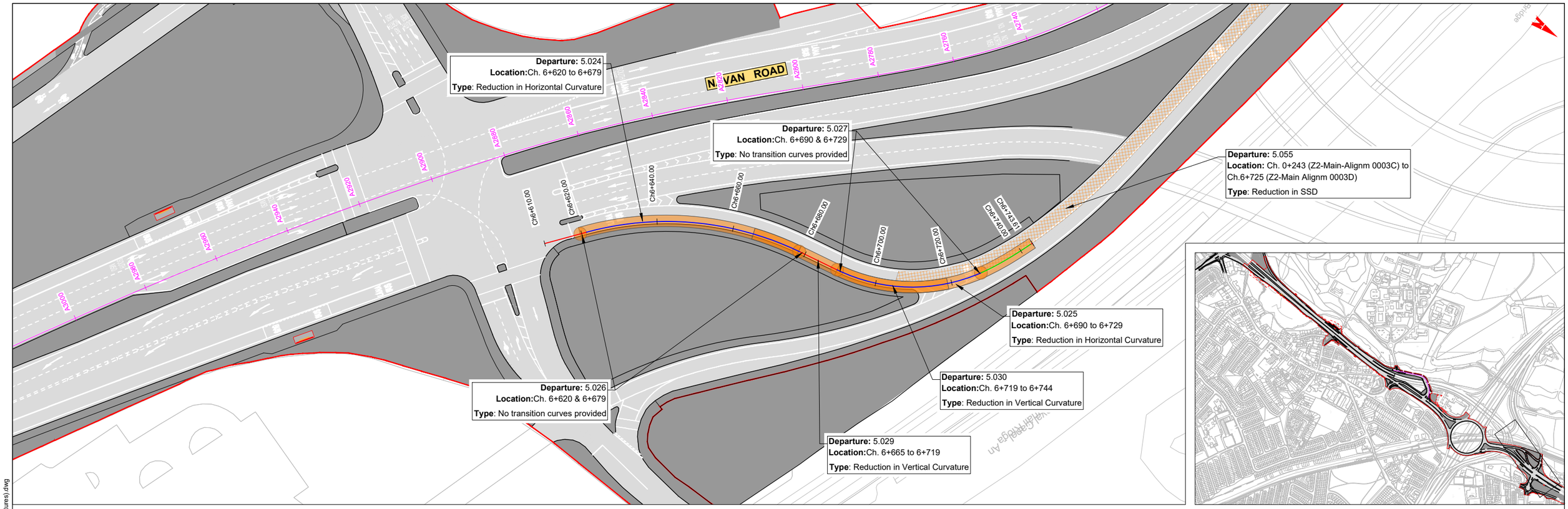


KEY PLAN:

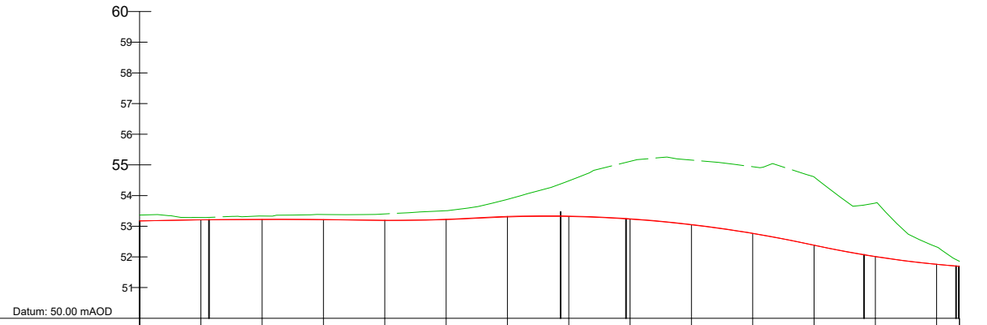
GEOMETRIC ALIGNMENT CHAINAGE — CN0+100, CN0+120, CN0+140

GLOBAL ALIGNMENT CHAINAGE — A1850, A1900, A1950

NOTE 1: UNLESS OTHERWISE STATED, ALL LOCATIONS REFER TO THE GEOMETRIC ALIGNMENT CHAINAGE.

SECTION KEY:

- EXISTING GROUND (PROFILE)
- PROPOSED GROUND (PROFILE)
- SITE BOUNDARY
- DEPARTURE - GEOMETRY
- DEPARTURE - SSD
- DEPARTURE - JUNCTION VISIBILITY
- RELAXATION - GEOMETRY



CHAINAGE	6610	6620	6630	6640	6650	6660	6670	6680	6690	6700	6710	6720	6730	6740	6744
PROPOSED LEVELS	53.172	53.207	53.222	53.216	53.192	53.216	53.302	53.317	53.232	53.047	52.763	52.378	52.006	51.756	
EXISTING LEVELS	53.172	53.207	53.222	53.216	53.192	53.216	53.302	53.317	53.232	53.047	52.763	52.378	52.006	51.756	

HORIZONTAL: L =11.334m; R: 80.000m, L: 57.342m; L =10.654m; R: 45.000m, L: 38.833m; A: 25.98, L: 15.000m; L =0.451m

VERTICAL: R =4902.703, L =37.679; R =1300.000, L =18.102; R =1000.000, L =53.554; R =825.877, L =24.279

SUPERELEVATON: L 5.00% -5.00%; 0.00%; R -5.00% -5.00%

ZONE 2 - N3 LINK ROAD M50 ROUNDABOUT TO AUBURN AVENUE JUNCTION (Z2-MAIN-ALIGNM-0003D)
SCALE: H 1:500,V 1:100

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Rev	Date	Drn	Chk'd	App'd	Description
M01	28/04/2022	SK	GE	BD	ISSUE FOR PHASE 4: PLANNING

Client: NTA Údarás Náisiúnta Iompair National Transport Authority

Engineering Designer: ARUP

Programme Title: BUSCONNECTS DUBLIN CORE BUS CORRIDORS INFRASTRUCTURE WORKS

Drawing Title: DEPARTURE FROM STANDARDS ZONE 2 - PLAN & PROFILES N3 LINK ROAD M50 ROUNDABOUT TO AUBURN AVENUE JUNCTION (Z2-MAIN-ALIGNM-0003D)

Date	Scale	Drawn	Checked	Approved
28/04/2022	1:500 @ A1 1:1000 @ A3	SK	GE	BD

Project Code	Originator Code	QMS Code	Drawing File Name	Sheet Number	Status	Rev
BCIDC	ARP	268401-00	BCIDC-ARP-GEO_HV-0005_XX_00-DR-CR-0022	22 of 22	A	M01

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