APPENDIX G: SECTION 2 DETAILED MCA

Stage 2		Section 2 - Skerrit Roundabout to East of Dublin Road			
Assessment Criteria	Sub-Criteria	Option 1	Option 3	Option 4	Option 9
Economy	Capital Cost	Option 1 & 9 are the least costly options due to lower land take requirements.	Options 2 & 3 have a footpath or cycle track placed offline to the north of the carriageway meaning more land take is required than with Option 1, therefore Options 2 & 3 have higher capital costs.	Options 2 & 3 have a footpath or cycle track placed offline to the north of the carriageway meaning more land take is required than with Option 1, therefore Options 2 & 3 have higher capital costs.	Option 1 & 9 are the least costly options due to lower land take requirements.
	Rank				
	Bus Journey Time and Reliability	Dedicated bus lanes would be provided for the full length of all options. This allows for buses to have a continuous flow, unobstructed by general traffic . The bus route and level of provision is the same for all options, therefore they perform equally for this criterion.	Dedicated bus lanes would be provided for the full length of all options. This allows for buses to have a continuous flow, unobstructed by general traffic . The bus route and level of provision is the same for all options, therefore they perform equally for this criterion.	Dedicated bus lanes would be provided for the full length of all options. This allows for buses to have a continuous flow, unobstructed by general traffic . The bus route and level of provision is the same for all options, therefore they perform equally for this criterion.	Dedicated bus lanes would be provided for the full length of all options. This allows for buses to have a continuous flow, unobstructed by general traffic . The bus route and level of provision is the same for all options, therefore they perform equally for this criterion.
	Rank				
Integration	Land Use Integration	All routes follow the existing road, while they do involve some widening of the road carriageway, no changes in land use of the area is anticipated as a result of any of the route options. For this reason all options score equally for this criterion.	All routes follow the existing road, while they do involve some widening of the road carriageway, no changes in land use of the area is anticipated as a result of any of the route options. For this reason all options score equally for this criterion.	All routes follow the existing road, while they do involve some widening of the road carriageway, no changes in land use of the area is anticipated as a result of any of the route options. For this reason all options score equally for this criterion.	All routes follow the existing road, while they do involve some widening of the road carriageway, no changes in land use of the area is anticipated as a result of any of the route options. For this reason all options score equally for this criterion.
	Rank				
	Transport Integration	Generally the existing traffic network is maintained, except the accesses to Merlin Park hospital is upgraded to signalised junctions. The same route and provision for general traffic is proposed for all 3 options so they all perform equally for this criterion.	Generally the existing traffic network is maintained, except the accesses to Merlin Park hospital is upgraded to signalised junctions. The same route and provision for general traffic is proposed for all 3 options so they all perform equally for this criterion.	Generally the existing traffic network is maintained, except the accesses to Merlin Park hospital is upgraded to signalised junctions. The same route and provision for general traffic is proposed for all 3 options so they all perform equally for this criterion.	Generally the existing traffic network is maintained, except the accesses to Merlin Park hospital is upgraded to signalised junctions. The same route and provision for general traffic is proposed for all 3 options so they all perform equally for this criterion.
	Rank				
	Cyclist Integration	Option 1 provides a continuous segregated online cycle track either side of the road for the entirety of the route. As there is cycle provision on either side of the road this performs better for cyclist integration than Option 3 which has cyclists in both directions on the north side of the road only, and hence may have less direct routes with more road crossings for cyclists travelling inbound.	Option 2 provides a continuous segregated online cycle track either side of the road for the entirety of the route. As there is cycle provision on either side of the road this performs better for cyclist integration than Option 3 which has cyclists in both directions on the north side of the road only, and hence may have less direct routes with more road crossings for cyclists travelling inbound.	Option 3 which has cyclists in both directions on the north side of the road only. This means cyclists travelling inbound may have to cross the road up to 2 extra times to complete their journey. Toucan crossings would be provided to allow them to do this safely, however it would create a longer route and increased journey times. For this reason Option 3 performs worst for this criterion than Options 1 & 2.	Option 9 has 2-way cyclists on the north side of the road between Coast Road and Doughiska Road. This means cyclists travelling inbound may have to cross the road up to 2 extra times to complete their journey. Toucan crossings would be provided to allow them to do this safely, however it would create a longer route and increased journey times. For this reason Option 9 performs worse for cyclist integration than options 1 & 2.
	Rank				
Integration	Pedestrian Integration	In terms of Pedestrian Integration, all options provide footpaths along both sides of the road in both directions for the length of the scheme. Options 1 & 4 have footpaths adjacent to the carriageway so pedestrians would be clearly visible by passing traffic and may have a better perceived safety for users who might feel exposed if out of site of the road for Options 2 & 9. However, as mitigation for Options 2 & 9 it would be possible to provide lighting adjacent to the footpath, and to trim the lower branches of the trees / remove smaller trees to provide visibility between the road and the footpath. For these reasons all options score equally for this criterion.	In terms of Pedestrian Integration, all options provide footpaths along both sides of the road in both directions for the length of the scheme. Options 1 & 4 have footpaths adjacent to the carriageway so pedestrians would be clearly visible by passing traffic and may have a better perceived safety for users who might feel exposed if out of site of the road for Options 2 & 9. However, as mitigation for Options 2 & 9 it would be possible to provide lighting adjacent to the footpath, and to trim the lower branches of the trees / remove smaller trees to provide visibility between the road and the footpath. For these reasons all options score equally for this criterion.	In terms of Pedestrian Integration, all options provide footpaths along both sides of the road in both directions for the length of the scheme. Options 1 & 4 have footpaths adjacent to the carriageway so pedestrians would be clearly visible by passing traffic and may have a better perceived safety for users who might feel exposed if out of site of the road for Options 2 & 9. However, as mitigation for Options 2 & 9 it would be possible to provide lighting adjacent to the footpath, and to trim the lower branches of the trees / remove smaller trees to provide visibility between the road and the footpath. For these reasons all options score equally for this criterion.	In terms of Pedestrian Integration, all options provide footpaths along both sides of the road in both directions for the length of the scheme. Options 1 & 4 have footpaths adjacent to the carriageway so pedestrians would be clearly visible by passing traffic and may have a better perceived safety for users who might feel exposed if out of site of the road for Options 2 & 9. However, as mitigation for Options 2 & 9 it would be possible to provide lighting adjacent to the footpath, and to trim the lower branches of the trees / remove smaller trees to provide visibility between the road and the footpath. For these reasons all options score equally for this criterion.
	Rank				
Accessibility and Social Inclusion	Vulnerable Groups	All options have a similar level of provision for pedestrians so score equally for Vulnerable groups	All options have a similar level of provision for pedestrians so score equally for Vulnerable groups	All options have a similar level of provision for pedestrians so score equally for Vulnerable groups	All options have a similar level of provision for pedestrians so score equally for Vulnerable groups
	Rank				
Safety	Road Safety	All options represent an improvement in road safety by providing segregated cycle facilities and upgraded crossings and pedestrian infrastructure. Options 1 has footpaths and cycle track adjacent to the carriageway so pedestrians and cyclists would be clearly visible by passing traffic and may have a better perceived safety for users who might feel exposed if out of site of the road for Options 3, 4 & 9. However, as mitigation for Options 3 & 9 it would be possible to provide lighting adjacent to the footpath and cycle track, and to trim the lower branches of the trees / remove smaller trees to provide visibility between the road and the footpath.	All options represent an improvement in road safety by providing segregated cycle facilities and upgraded crossings and pedestrian infrastructure. Options 1 has footpaths and cycle track adjacent to the carriageway so pedestrians and cyclists would be clearly visible by passing traffic and may have a better perceived safety for users who might feel exposed if out of site of the road for Options 3, 4 & 9. However, as mitigation for Options 3 & 9 it would be possible to provide lighting adjacent to the footpath and cycle track, and to trim the lower branches of the trees / remove smaller trees to provide visibility between the road and the footpath.	All options represent an improvement in road safety by providing segregated cycle facilities and upgraded crossings and pedestrian infrastructure. Options 1 has footpaths and cycle track adjacent to the carriageway so pedestrians and cyclists would be clearly visible by passing traffic and may have a better perceived safety for users who might feel exposed if out of site of the road for Options 3, 4 & 9. However, as mitigation for Options 3 & 9 it would be possible to provide lighting adjacent to the footpath and cycle track, and to trim the lower branches of the trees / remove smaller trees to provide visibility between the road and the footpath.	All options represent an improvement in road safety by providing segregated cycle facilities and upgraded crossings and pedestrian infrastructure. Options 1 has footpaths and cycle track adjacent to the carriageway so pedestrians and cyclists would be clearly visible by passing traffic and may have a better perceived safety for users who might feel exposed if out of site of the road for Options 3, 4 & 9. However, as mitigation for Options 3 & 9 it would be possible to provide lighting adjacent to the footpath and cycle track, and to trim the lower branches of the trees / remove smaller trees to provide visibility between the road and the footpath.
	Rank				

Stage 2		Section 2 - Skerrit Roundabout to East of Dublin Road			
Assessment Criteria	Sub-Criteria	Option 1	Option 3	Option 4	Option 9
Environment	Archaeological, Architectural and Cultural Heritage	The appraisal of Options 1, 3, 4 & 9 have not identified any predicted impact on recorded cultural heritage, however undisturbed greenfield areas within the former demesne landscape of Merlin Park have the potential to contain hitherto unrecorded archaeological deposits subsurface and these may be impacted by Options 1, 2, 3 & 9. All options are considered comparatively equal in terms of advantage/disadvantage and therefore they all ranked as neutral	The appraisal of Options 1, 3, 4 & 9 have not identified any predicted impact on recorded cultural heritage, however undisturbed greenfield areas within the former demesne landscape of Merlin Park have the potential to contain hitherto unrecorded archaeological deposits subsurface and these may be impacted by Options 1, 2, 3 & 9. All options are considered comparatively equal in terms of advantage/disadvantage and therefore they all ranked as neutral	The appraisal of Options 1, 3, 4 & 9 have not identified any predicted impact on recorded cultural heritage, however undisturbed greenfield areas within the former demesne landscape of Merlin Park have the potential to contain hitherto unrecorded archaeological deposits subsurface and these may be impacted by Options 1, 2, 3 & 9. All options are considered comparatively equal in terms of advantage/disadvantage and therefore they all ranked as neutral	The appraisal of Options 1, 3, 4 & 9 have not identified any predicted impact on recorded cultural heritage, however undisturbed greenfield areas within the former demesne landscape of Merlin Park have the potential to contain hitherto unrecorded archaeological deposits subsurface and these may be impacted by Options 1, 2, 3 & 9. All options are considered comparatively equal in terms of advantage/disadvantage and therefore they all ranked as neutral
	Rank				
	Biodiversity	SAC and SPA boundary within 250m and 350m respectively of the southernmost section of the route. QI/SCI species potentially within disturbance distance. Annex 1 grassland habitat will be removed/ impacted to the north (Merlin Park Meadows). Significant tree removal (with potential roost features (PRFs)) could disturb/impact bat species (roosts) and birds if undertaken during the activity/ breeding seasons. Removal of significant length of existing feeding/ commuting corridor (hedgerow, treeline and scrub) to the north and south. Appropriate mitigation needed. Tree constraints survey would be needed by arb specialist prior to any removal considerations. Non-native invasive flora species present along both north and south treeline/ woodland of the route that may need an appropriate management plan.	As option 1 Greatly reduced tree removal along north. Greater impact to Annex 1 grassland due to offline section cycle track and footpath running through the middle of the field, higher fragmentation of Annex 1 grassland. Lower potential impact on commuting corridors for nocturnal species including bats badger and otter as they would use the existing treeline, hedgerow and scrub, providing appropriate lighting is used facing away from the treeline (e.g., red and/or directional lighting). Treelines within the grassland area (field boundaries) impacted/ removed for the offline section with PRF's could disturb/impact bat species (roosts) and birds if undertaken during the breeding season. These treeline sections show higher value for potential bat roosting features. Appropriate mitigation needed. Although offline route goes through deciduous woodland (The Meadows) in the north, the current composition of the woodland is young and management/ mitigation could improve the ground flora either side of the track/path.	As option 3	Reduced tree removal/ impacts to the north of the route compared to the other options. Treeline to the northeast to be retained. Reduced impact on the Meadows woodland, impacts restricted to the edge of the woodland rather than going through the middle. No impact to higher value trees for bat species intersecting the grassland areas (field boundaries). Potential impact to Annex 1 grassland significantly reduced with no fragmentation of the grassland.
	Rank				
	Soils and Geology	All options require widening of the road cross section and related earthworks. However no significant issues or impacts are anticipated as a result of any of the options. For this reason all options score equally for this criterion.	All options require widening of the road cross section and related earthworks. However no significant issues or impacts are anticipated as a result of any of the options. For this reason all options score equally for this criterion.	All options require widening of the road cross section and related earthworks. However no significant issues or impacts are anticipated as a result of any of the options. For this reason all options score equally for this criterion.	All options require widening of the road cross section and related earthworks. However no significant issues or impacts are anticipated as a result of any of the options. For this reason all options score equally for this criterion.
	Rank				
	Landscape and visual	Extensive and continuous tree felling. Requirement to set back the stone walls and hedgerows along the carriageway.	Extensive and continuous tree felling. Requirement to set back the stone walls and hedgerows along the carriageway. This option is preferred over Option 1 due to the lesser required tree removal and segregation of pedestrians and cyclists from the carriageway.	Extensive and continuous tree felling. Requirement to set back the stone walls and hedgerows along the carriageway. This option performs better than Option 1 due to the lesser required tree removal and segregation of cyclists from the carriageway.	Extensive and continuous tree felling up to Doughiska junction, so less tree removal than Options I, 2 and 3 This option performs better than the other 3 Options due to less tree removal and segregation of cyclists and pedestrians from the carriageway.
	Rank				
	Noise, vibration and air quality	Air Quality: Minimal difference in route options. Noise: Requires widening to north and south to facilitate cross section. Traffic lanes remain at same distance to NSRs however. Short term Construction noise impacts will occur at NSRs along this route.	Air Quality: Minimal difference in route options. Noise: Requires widening to north and south to facilitate cross section. Traffic lanes remain at same distance to NSRs however. Short term Construction noise impacts will occur at NSRs along this route.	Air Quality: Minimal difference in route options. Noise: Requires widening to north and south to facilitate cross section. Traffic lanes remain at same distance to NSRs however. Short term Construction noise impacts will occur at NSRs along this route.	Air Quality: Minimal difference in route options. Noise: Requires widening to north and south to facilitate cross section. Traffic lanes remain at same distance to NSRs however. Short term Construction noise impacts will occur at NSRs along this route.
	Rank				
	Land Use and Built Environment	All options require widening the road cross section particularly to the north into the Merlin Meadows. This has been zoned as a open space/park (G1), where development is aimed to be kept to below 30% of the overall area and aims to maintain the area as undeveloped. And so, Merlin Meadows remains largely undeveloped, bar gravel walking paths, pumping works and a bungalow in ruins (not recorded by NMS). Option 1 proposes to keep the alignment online and widen it, with a small section of land take required in the Merlin Meadows. This is required to accommodate the entire cross section. This option would require removal of existing hedgerows, trees and ditches that are on the boundary between the R338 and the Merlin Meadows. Extensive mitigation planting of semi mature trees would be put in place to reduce the impact on the area. Overall all options require widening into this area and the land use is unlikely to be significantly affected by the proposals as a result of the mitigation planting. For this reason all options score equally for this criterion.	All options require widening the road cross section particularly to the north into the Merlin Meadows. 'Merlin Meadows has been zoned as a open space/park (G1), where development is aimed to be kept to below 30% of the overall area and aims to maintain the area as undeveloped. And so, Merlin Meadows remains largely undeveloped, bar gravel walking paths, pumping works and a bungalow in ruins (not recorded by NMS). Option 2 provides fully dedicated lanes in all directions online on the existing alignment, however the northside cycle and foot ways are provided for offline within the Merlin Meadows. Therefore Option 2 would not require the removal of as much of the natural trees and hedgerows along the boundary between the R338 and the Merlin Meadows. However, if this option is to fulfil requirements of urban transport design documents, street lights will be required along all offline laneways. These will provide an unnatural light source in the Merlin Meadows, which is regarded for its undeveloped green field expanses Overall all options require widening into this area and on balance the land use is unlikely to be significantly affected by the proposals. So all options score equally for this criterion.	All options require widening the road cross section particularly to the north into the Merlin Meadows. 'Merlin Meadows has been zoned as a open space/park (G1), where development is aimed to be kept to below 30% of the overall area and aims to maintain the area as undeveloped. And so, Merlin Meadows remains largely undeveloped, bar gravel walking paths, pumping works and a bungalow in ruins (not recorded by NMS). Option 2 provides fully dedicated lanes in all directions online on the existing alignment, however the northside cycle and foot ways are provided for offline within the Merlin Meadows. Therefore Option 2 would not require the removal of as much of the natural trees and hedgerows along the boundary between the R338 and the Merlin Meadows. However, if this option is to fulfil requirements of urban transport design documents, street lights will be required along all offline laneways. These will provide an unnatural light source in the Merlin Meadows, which is regarded for its undeveloped green field expanses Overall all options require widening into this area and on balance the land use is unlikely to be significantly affected by the proposals. So all options score equally for this criterion.	All options require widening the road cross section particularly to the north into the Merlin Meadows. 'Merlin Meadows has been zoned as a open space/park (G1), where development is aimed to be kept to below 30% of the overall area and aims to maintain the area as undeveloped. And so, Merlin Meadows remains largely undeveloped, bar gravel walking paths, pumping works and a bungalow in ruins (not recorded by NMS). Option 2 provides fully dedicated lanes in all directions online on the existing alignment, however the northside cycle and foot ways are provided for offline within the Merlin Meadows. Therefore Option 2 would not require the removal of as much of the natural trees and hedgerows along the boundary between the R338 and the Merlin Meadows. However, if this option is to fulfil requirements of urban transport design documents, street lights will be required along all offline laneways. These will provide an unnatural light source in the Merlin Meadows, which is regarded for its undeveloped green field expanses Overall all options require widening into this area and on balance the land use is unlikely to be significantly affected by the proposals. So all options score equally for this criterion.
	Rank				
	Climate and Carbon	Minimal difference in route options. Requires the most widening so would have higher embodied carbon emissions.	Minimal difference in route options.	Minimal difference in route options.	Minimal difference in route options.