

Wicklow County Council

**N11/M11 Junction 4 to Junction 14
Improvement Scheme**

Option Selection Report
Appendix C8 – Human beings

265455-ARP-EGN-SWI-RP-LX-0004

C01 | 6 December 2021

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1 Human beings

1.1 Introduction

This report details the environmental assessment of the Stage 1 Preliminary Options Assessment for the N11/M11 Scheme with respect to the Human beings constraints identified in **Section 4** (Human beings) of **Volume B**.

For the corridor assessment, the overall scheme has been split into two sections, i.e. the Northern Section and the Southern Section and the corridor options assessed are those discussed in **Section 6.1** of the **Volume A**.

There are two zones associated with each corridor option referred to in this assessment:

- The potential road “footprint” which is the potential landtake required to construct or improve the road; and
- The road “corridor” which is a 200m wide corridor centred around the alignment centre line for all off-line corridors. For the on-line Corridor Options 1 (North), 1 (South) and 5 (South), the width is variable, but is typically narrower than the width of the off-line corridors. The “footprint” sits inside the “corridor” boundary.

Section 1.2 outlines the methodology that was used to carry out the assessment, and **Section 1.3** outlines the assessment criteria which were used. The Stage 1 assessment and summary are presented in **Section 1.4** and **Section 1.5**, respectively and references are shown in **Section 1.6**.

1.2 Methodology

1.2.1 Guidelines

Guidelines reviewed were as listed in **Section 4.2** of **Section 4** (Human beings) of **Volume B** with the addition of the TII Project Appraisal Guidelines for National Roads (PAG) Unit 7.0 – Multi-Criteria Analysis¹ (hereafter referred to as the TII PAG).

The TII PAG¹ seven point scale scoring procedure that was used in this assessment is summarised below:

- 7 – Major or highly positive;
- 6 – Moderately positive;
- 5 – Minor or slightly positive;
- 4 – Not significant or neutral;
- 3 – Minor or slightly negative;

¹Transport Infrastructure Ireland (TII) Project Appraisal Guidelines for National Roads Unit 7.0 - Multi-Criteria Analysis, 2016. Available from: <https://www.tiipublications.ie/library/PE-PAG-02031-01.pdf>

- 2 – Moderately negative; or
- 1 – Major or highly negative.

Impacts can result from direct, indirect, secondary and cumulative effects on environmental conditions. These impacts can be positive, neutral or negative. The assessment tables have scored each of the above criteria on a seven-point scale¹ as described above. For the corridor options assessment, this score is a function of:

- the location and character of the local environment;
- the sensitivity of the local population and its capacity to absorb change;
- the nature of the environmental impact;
- the scale or extent of the impact in terms of area or population affected;
- the duration and frequency of an impact; and
- the probability of an impact's occurrence.

1.2.2 Data sources

A socio-economic assessment requires that an understanding of the community is built up through background research, site visits, and conversations with local people and community representatives. At this stage, for the corridor options assessment, data that was collected for **Section 4** (Human beings) of **Volume B** was reviewed in addition to the following data sources:

- Observation of local settlement and travel patterns and identification of community facilities, and
- Feedback from public consultations undertaken.

1.2.3 Assumptions

The assumptions for access and junction arrangements included herein are based on the preliminary designs included in **Figures A6.3.2 to A6.10.4**.

It is assumed that direct access to all on-line sections of corridor options will be removed. The potential safety benefits of this assumption are inherent in all options, and therefore do not feature in the comparative assessment. It is also assumed that cycling facilities will be provided on all corridor options such that they will not be a differentiating factor in this comparative assessment.

Between nodes A and B, Corridor Option 1 (North) is the same on-line red corridor for all four options, and therefore does not feature in the comparative assessment.

1.3 Assessment criteria

The purpose of the population assessment is to identify the likely significant impacts as they might affect local people and users of the proposed road development.

1.3.12 Construction impacts

Impacts during the construction period can be assessed at a general level for each corridor option at this stage of the options assessment but will be assessed in greater detail in the following stages of assessment. Therefore, some limited assessment is made on the basis of the proximity of properties or community facilities.

1.3.1 Operational impacts

The assessment of corridor options with regard to the operational stage relates to the following five principal criteria:

- **Journey characteristics:** an assessment of potential impacts on local journey time and travel patterns including connectivity;
- **Journey amenity:** addresses the journey amenity of all road users (e.g. safety of crossings, proximity to traffic, etc), safety (e.g. of direct accesses and side roads), journey convenience and accessibility;
- **Community severance:** an assessment of potential impacts with regard to any separation from community facilities, particularly where these would be used by older people, children or other sensitive or vulnerable groups. The category includes both *new severance* and *relief from existing severance*. Severance can be physical, but also psychological or social where community identity is affected, or community interaction is reduced by the presence of a road (even if crossing facilities or over/underbridges are provided);
- **General amenity/community:** Potential impacts on community facilities or on locations that people value for social purposes, amenity or recreation, and which can also be relevant to local communities' well-being, sense of place or for tourism;
- **Economic impacts:** an evaluation of potential impacts on local businesses. In the corridor options assessment, for comparison with other impacts, these have been scored principally with regard to potential impacts at a community level, i.e. employment and local economic development.

Impacts on single properties and property boundaries are assessed by Material Assets assessments, refer to **Appendix C10** (Material assets – agriculture) of **Volume C** and **Appendix C11** (Material assets – non-agriculture) of **Volume C**. Impacts enter into this assessment in instances where a high proportion of local or neighbouring properties are likely to be demolished such as to have an impact on community interaction or identity. In these situations, the impact is addressed under general amenity/community.

1.4 Stage 1 corridor options assessment

1.4.1 Northern section

1.4.1.1 Corridor Option 1 (North)

Between nodes A and B, Corridor Option 1 (North) is the same on-line red corridor for all four options. The corridor extends close to the St. Joseph's Centre care facility (specifically, the Callan Institute for people with intellectual disability) and the entrance to Bray Emmet GAA Club on Old Connaught Avenue. In the vicinity of Junction 6 (Bray/Fassaroe), the corridor comes very close to the La Vallee commercial centre including Little Harvard Creche and so may require reconfiguration of access at Junction 6 (Bray/Fassaroe).

Between nodes B and D, the inclusion of a parallel service road would collect all local traffic, including cyclists between Junctions 6 (Bray/Fassaroe) and 7 (Bray South). The service road will also provide improved accessibility to the Silverbridge Halting Site between Junctions 6 (Bray/Fassaroe) and 6a (Enniskerry), but with an impact on the spatial extent of the site. At present the site is located beside a southbound bus stop but is poorly connected to Junction 6 (Bray/Fassaroe) by a rough footpath with unsatisfactory access from the N11.

Corridor Option 1 (North) would also reconfigure the unsatisfactory access to a cul-de-sac on the southbound side at Kilbride (Dargle Lane) serving three residential properties, a hire and lawnmower shop, and a car dealership. The cul-de-sac would instead be connected to the parallel service road. The service road would also serve the adjacent Kilbride Church and Herbert Road. A similar parallel service road on the opposite (west) side of the corridor would serve Junction 6a (Enniskerry). While the improved journey amenity (safety) is a major positive impact, there is an economic impact on the hire and lawnmower shop and on the car dealership which would be visible from the corridor option, but for which there would be a loss of direct access from Corridor Option 1 (North). There would also be a continued impact on the amenity of Kilbride Church (refer to **Appendix C7** (Noise and vibration) of **Volume C**).

South of node D, Corridor Option 1 (North) includes an improved Junction 7 (Bray South) with reconfigured access to L001 Kilcrouney Lane. This will facilitate traffic movement during busier periods but does add an extra arm to the roundabout with the R768 Southern Cross road. There could be a slight impact on the boundary of Brennanstown Riding School located here which is considered both an economic impact, and a general amenity impact due to business aspect of the establishment and to the use of the facility by the community.

South of node E, Corridor Option 1 (North) follows the line of the existing N11 through Kilmacanoge. The main difference is that a parallel service road is introduced to both sides of the road between the existing Junction 7 (Bray South) and the existing Junction 8 (Kilmacanoge / Roundwood) at Kilmacanoge.

On the southbound side, this connects a lavender field supplying Fragrances of Ireland, three businesses, residential properties and a service station in a manner that is safer than the current arrangement. On the northbound side of the road, another parallel service road replaces the current two-way lane to a service station and the one-way parallel service road section accessing Avoca, Fragrances of Ireland, business estates and the Holyglen Local Road. There are existing access and safety issues in this location as the two-way section, the merge onto the N11, and almost immediate diverge to the parallel service road, do not represent an intuitively safe road layout. The proposed parallel service road significantly improves safety and therefore journey amenity, but at the loss of two residential properties on the northbound side, and two residential properties on the southbound side that are within the corridor, as well as a continued high level of community severance of Kilmacanoge Village.

As Corridor Option 1 (North) is on-line and so beside existing entrances/exits with local roads and close to existing properties, construction would involve more visible or disruptive works than Corridor Options 2 (North) or 3 (North).

1.4.1.2 Corridor Option 2 (North)

Corridor Option 2 (North) shares the same corridor with Corridor Option 1 (North) from nodes A to B. The off-line section of this corridor option, the Yellow Corridor, commences at node B and continues to nodes C and E, where it re-joins to share the same corridor with Corridor Option 1 (North) from nodes E to G. The off-line segment of this corridor option veers off the existing N11 to the west before Junction 6a (Enniskerry), but a new grade separated junction retains the connectivity of the R117, Herbert Road and the cul-de-sac at Kilbride (Dargle Lane) to Corridor Option 2 (North). This option would remove the high level of hazard created by the cul-de-sac access, the R117 and the Herbert Road left in-left out junctions. While the improved journey amenity (safety) is a major positive impact, there is an economic impact on the hire and lawnmower shop and on the car dealership which would be less visible from the corridor option, although there would be nearby access from the new grade separated junction. Access to the church would be similarly indirect, but with a reduced environmental impact on the amenity of the facility (refer to **Appendix C7** (Noise and vibration) of **Volume C**). The existing N11 at this point to the south would be declassified and repurposed (downgraded) to serve a local need.

South of node C the corridor passes beside Dargle Valley Nursing Home on Kilbride Lane where there would be an impact on the amenity of this facility from noise. Corridor Option 2 (North) also runs close to the Dargle River which is of amenity value. It would impact on the grounds of both the Dublin Oak Academy and of the Woodlands Academy. This impact is realised at an economic level as the schools are private, but there is also a community dimension given their use by students. In addition, this corridor would have a direct impact on at least eight private properties, three of which are in close vicinity to one another and therefore represent a community impact. Negative impacts would also occur here at the construction stage. South of node E, Corridor Option 2 (North) returns to share the same corridor as Corridor Option 1 (North) which is discussed above.

A connection to Corridor Option 2 (North) is provided for local traffic by a new junction to the north of Kilmacanoge. However, no parallel service roads are provided at this location and all traffic must pass through Kilmacanoge with a continued impact on local severance and amenity.

1.4.1.3 Corridor Option 3 (North)

Corridor Option 3 shares the same corridor with Corridor Option 1 (North) from nodes A to B. The blue off-line segment of Corridor Option 3 (North) commences at node B. The existing N11 would now be declassified and repurposed (downgraded) to serve a local need providing safer access to the cul-de-sac (Dargle Lane) at Kilbride. Without an adjacent junction at this location, the existing N11 itself terminates north of this point requiring a southbound detour of more than 1km for traffic seeking to travel north on the N11 from here (including traffic from Herbert Road). While the improved journey amenity between nodes B and C (safety) is a major positive impact, there is also an economic impact on the hire and lawnmower shop and on the car dealership on the N11 which would be both less visible from the corridor option and lose direct access. The same access arrangements would apply to Kilbride Church, although the facility will experience improved general amenity due to reduced noise because of the transfer of most traffic to Corridor Option 3 (North).

Additionally, the R117 Enniskerry traffic will require diversions to a point south of the existing Junction 7 (Bray South) for northbound journeys or would otherwise need to divert to alternative existing roads via Old Conna. Local access into Bray is still possible via Herbert Road, but this design arrangement does mean that much traffic from this part of Bray is transferred to the then declassified existing N11 and must travel south to join Corridor Option 3 (North) from Junction 7 (Bray South) for northbound journeys.

South of node C, access to the southern side of Bray is provided by a new grade separated junction to the south of the existing Junction 7 (Bray South). Only local access would make continued use of the existing Junction 7 (Bray South). For traffic joining from the south of Bray, for example the R768, and which is heading northwards, the new junction would require a short detour to the south. However, use of the declassified existing N11 for local traffic north of Junction 7 (Bray South) does permit the separation of strategic and local traffic.

There would be a significant impact on both the grounds and buildings of the Dublin Oak Academy and the Woodlands Academy. This impact is realised at an economic level as the schools are private, but both would have a community dimension given their use by students. Fewer private properties are impacted than by Corridor Option 2 (North). Negative impacts would also occur here at the construction stage.

Between nodes F and H, the blue corridor off-line segment passes to the east of the existing N11 in Kilmacanoge, this option removes the existing significant traffic hazard due to local access and use of the R755 as well as the existing high level of community severance. However, the corridor does leave properties on the east side of Kilmacanoge between traffic using this new corridor and traffic on the

residual N11, albeit that the latter would become a local distributor road and carry significantly less traffic.

There would be access to Kilmacanoge from junctions to the north and south, but also an economic impact on passing trade for businesses accessible from the northbound lane of the current N11 and the two existing service stations. The off-line segment would also be closer to the Little Sugarloaf amenity and would result in a negative impact on the amenity views from this point (refer to **Appendix C5** (Landscape and visual) of **Volume C**).

1.4.1.4 Corridor Option 4 (North)

Corridor Option 4 shares the same corridor with Corridor Option 1 (North) from nodes A to D which is discussed above. The green off-line segment of Corridor Option 4 (North) begins at node D. This off-line segment replaces the existing Junction 7 (Bray South) but retains much of the same functionality. Parallel service roads to the north would serve the cul-de-sac (Dargle Lane), Herbert Road and the R117 as for Corridor Option 1 (North), there would be a direct impact on Brennanstown Riding School, which is both an economic impact, and an impact on general amenity due to the business aspect of the establishment and to the use of the facility by the community, respectively.

Corridor Option 4 (North) shares the same corridor with Corridor Option 3 (North) from nodes F to G. Corridor Option 4 (North) is off-line to the east of the existing N11 in Kilmacanoge and this removes the existing significant traffic hazard due to local access and use of the R755 as well as the existing high level of community severance. However, the corridor does leave properties on the east side of Kilmacanoge between traffic using this new corridor and traffic on the residual N11, albeit that the latter would become a local distributor road and carry significantly less traffic. There would be an economic impact on passing trade for businesses accessible from the northbound lane of the current N11 and the two existing service stations. The off-line segment would also be closer to the Little Sugarloaf amenity and would result in a negative impact on the amenity views from this point (refer to **Appendix C5** (Landscape and visual) of **Volume C**).

As Corridor Option 4 (North) is on-line and so beside existing entrances/exits with local roads and close to existing properties, construction would involve more visible or disruptive works than Corridor Options 2 (North) or 3 (North).

Table 1.1: Detailed assessment table Northern Section

Assessment criteria	Corridor Option 1 (North)	Corridor Option 2 (North)	Corridor Option 3 (North)	Corridor Option 4 (North)
Nodes	Red A-B	Red A-B	Red A-B	Red A-B
General amenity/ community	Proximity to St. Joseph's Centre. Bray Emmet GAA including entrance	Proximity to St. Joseph's Centre Bray Emmet GAA including entrance	Proximity to St. Joseph's Centre Bray Emmet GAA including entrance	Proximity to St. Joseph's Centre Bray Emmet GAA including entrance
Qualitative Assessment	Minor or slightly negative	Minor or slightly negative	Minor or slightly negative	Minor or slightly negative

Assessment criteria	Corridor Option 1 (North)	Corridor Option 2 (North)	Corridor Option 3 (North)	Corridor Option 4 (North)
Qualitative Assessment Score	3	3	3	3
Nodes	Red B-D	Yellow B-C	Blue B-C	Red B-D
Journey characteristics	Local Bray and regional traffic retained in same corridor, except for service lane between Junction 6 (Bray/Fassaroe) - Junction 7 (Bray South). Some disruptive works during construction	Separation of local Bray and regional traffic with former on downgraded N11 to junctions north and south.	Separation of local Bray and regional traffic. Diversion of local and R117 traffic south on downgraded N11 to new junction south of existing Junction 7 (Bray South). These diversions are negative for journey characteristics.	Local Bray and regional traffic retained on same option, but for section along service lane. Some disruptive works during construction
Journey amenity	Safer indirect access to Herbert Road, Junction 6a (Enniskerry) and Dargle Lane including the three properties, hire/ lawnmower shop, car dealers. Kilbride Church connected by parallel service lane.	Safer indirect access to Dargle Lane including the three properties, hire/ lawnmower shop, car dealers. Safer access to Kilbride Church due to use of existing N11 and transfer of regional traffic.	Safer access to Dargle Lane including the three properties, hire/ lawnmower shop, car dealers. Safer access to Kilbride Church due to use of existing N11 and transfer of regional traffic,	Safer indirect access to Dargle Lane including the three properties, hire/ lawnmower shop, car dealers. Safer access to Kilbride Church connected by parallel service lane.
General amenity/ community	Continued amenity impact on Kilbride Church. Some disruption to local residents during construction.	Improved amenity of Church due to transfer of traffic noise. Physical proximity to nursing home (noise).	Improved amenity of Church due to transfer of traffic and noise.	Continued amenity impact on Kilbride Church. Some disruption to local residents during construction.
Economic	Loss of direct access from option to businesses on Dargle Lane - car dealers & hire and lawnmower shop.	Loss of visibility of businesses on Dargle Lane - car dealers & hire and lawnmower shop from Option, but service road access.	Loss of visibility of businesses on Dargle Lane - car dealers & hire and lawnmower shop + loss of direct access.	Loss of direct access from Option businesses on Dargle Lane - to car dealers hire and lawnmower shop.
Qualitative	Moderately positive	Moderately positive	Moderately negative	Moderately positive
Score	6	6	2	6
Nodes	Red D-E	Yellow C-E	Blue C-F	Green D-F

Assessment criteria	Corridor Option 1 (North)	Corridor Option 2 (North)	Corridor Option 3 (North)	Corridor Option 4 (North)
Journey characteristics	Parallel service road to Junction 7 (Bray South).	Use of existing N11 and improved junctions to north and south. Overbridge for Kilcrone Lane.	Use of existing N11, but local traffic must travel south to access new junction.	Parallel service road to improved Junction 7 (Bray South). No real change in functionality of junction.
Journey amenity	Safer local access provided by parallel service roads. As for Journey characteristics above.	Safer access provided by use of existing N11. As for Journey characteristics above.	Safer local access provided by existing N11. As for Journey characteristics above.	Safer local access provided by parallel service roads. As for Journey characteristics above.
General Amenity/Community	Possible impact on community use of Brennanstown Riding School.	Proximity to Dargle River. Impact of students of Dublin Oak Academy. Potential impact on residential community from high level of demolitions.	Impact on students of Dublin Oak Academy. Impact on neighbouring private properties.	Definite impact on users of Brennanstown Riding School.
Economic	Boundary of Brennanstown Riding School.	Impact on grounds of Dublin Oak Academy and Woodlands Academy. Slight impact on B&B.	Impact on grounds of Dublin Oak Academy and Woodlands Academy. Slight impact on B&B. Loss of some passing trade at Kilcrone Furniture.	Full impact on Brennanstown Riding School.
Qualitative	Minor or slightly positive	Minor or slightly negative	Moderately negative	Not significant or neutral
Score	5	3	2	4
Nodes	Red E-G	Red E-G	Blue F-H	Blue F-H
Journey characteristics	Prolonged parallel service road connection to Junction 8 (Kilmacanoge / Roundwood)	Prolonged parallel service road connection to Junction 8 (Kilmacanoge / Roundwood)	Bypasses congestion in Kilmacanoge	Bypasses congestion in Kilmacanoge.
Journey amenity	Safer parallel service road access in Kilmacanoge.	Safer parallel service road access in Kilmacanoge.	Significantly safer local access at Kilmacanoge via junctions to north and south).	Significantly safer local access Kilmacanoge (junction before & to south).
Severance	Continued significant severance at Kilmacanoge.	Continued significant severance at Kilmacanoge,	Relief from severance at Kilmacanoge.	Relief from severance at Kilmacanoge.

Assessment criteria	Corridor Option 1 (North)	Corridor Option 2 (North)	Corridor Option 3 (North)	Corridor Option 4 (North)
General Amenity	Continued poor amenity for Kilmacanoge.	Continued poor amenity for Kilmacanoge.	Higher volume of traffic transferred to behind properties east of Kilmacanoge. Greater proximity to Little Sugarloaf	Higher volume of traffic transferred to behind properties east of Kilmacanoge. Greater proximity to Little Sugarloaf.
Economic	Reduced passing trade for some businesses.	Reduced passing trade for some businesses.	Loss of passing trade to local businesses and two service stations.	Loss of passing trade to local businesses and two service stations.
Qualitative	Not significant or neutral	Not significant or neutral	Minor or slightly positive	Minor or slightly positive
Score	4	4	5	5

Table 1.2 provides a quantitative scoring of the five assessment criteria of journey characteristics, journey amenity, community severance, general amenity, and economic effects for each nodal zone along with an average of the summary scores for each zone (to the nearest integer).

Table 1.2: Summary assessment table Northern Section

	Corridor Option 1 (North)	Corridor Option 2 (North)	Corridor Option 3 (North)	Corridor Option 4 (North)
Journey characteristics	4	5	2	5
Journey amenity	6	6	6	7
Severance	2	2	6	7
Amenity	3	2	2	1
Economic	3	3	2	3
Qualitative	Not significant or neutral	Minor or slightly negative	Not significant or neutral	Minor or slightly positive
Score	4	3	4	5
Preference	Intermediate	Least Preferred	Intermediate	Preferred

1.4.2 Southern Section

1.4.2.1 Corridor Option 1 (South)

Starting at node G, Corridor Option 1 (South) follows the on-line Red Corridor. It provides safer access to Quill Lane from the northbound carriageway, although several private properties are included within the corridor. The rather unsafe left in-left out junction accessing Quill Road from the northbound carriageway is removed and the access reconfigured to be accessed via Donnelly's Lane from

Junction 9 (Glenview). There are a small number of properties on Donnelly's Lane, but traffic volumes will remain light.

South of node H, the existing arrangement is maintained at Junction 9 (Glenview), although the two properties that lie between the dual-carriageway and the southbound exit lane are now within the corridor. Corridor Option 1 (South) continues to follow the existing line through Glen of the Downs (although it is assumed that the currently unsafe access to the car park will be rationalised).

Similar accessibility remains as at present at Junction 10 (Delgany/ Drummin), but for a new overbridge connecting the R762 to the existing northbound merge from Old Downs, which reduces severance between Old Downs and Delgany.

On the Northbound carriageway, this also facilitates the prospective closure of the unsafe diverge slip lane to Drummin Lane and of the merge junction to the south providing access from Old Downs. A new junction configuration at this location would improve safety on both sides but would incur diversions. It is assumed, however, that access will still be possible for all traffic albeit with these diversions.

At Kilpedder there is no change in access arrangements to the R774 at Junction 11 (Greystones/Kilpedder/Kilcoole), but there is improved access from the northbound carriageway to Kilpedder Grove (west) adjacent to node I.

South of node I at Garden Village, the southbound diverge is proposed to be reconfigured to improve safety and to connect to the junction's eastern roundabout which will continue to provide access to the R772 Ballyronan Road and Garden Village Court. Access to and from the northbound lane is proposed to remain as at present with slight improvement to the diverge for safety. The functionality of Junction 12 (Newtownmountkennedy/Roundwood) remains largely unchanged. Moving southwards through node J and terminating at node K, there are no other significant design changes affecting Human beings attributes on Corridor Option 1 (South).

1.4.2.2 Corridor Option 2 (South)

This corridor option commences at the Cyan Corridor off-line segment by veering west from the existing N11 dual-carriageway at node G before Junction 9 (Glenview). A new junction is proposed beside Donnelly's Lane. The existing entrance to Quill Lane from the N11 would be rationalised with traffic from Quill Lane and Donnelly's lane (short section north of proposed junction) needing to travel north, presenting an especially long diversion (on the narrow Quill Road) for southbound traffic. Severance would also occur between this location (Quill Road/short section of Donnelly's Lane) and Ballydonagh Road, but principally in the form of access generally given the absence of community facilities within a short distance.

There may be potential to avoid this long diversion if a short link road is provided to connect Quill Road to the western roundabout of the proposed dumbbell junction, Junction 9 (Glenview), but for the purposes of this assessment, this has not been assumed.

The corridor then enters a deep cut to the west. During both the construction and operational stages, this would present an impact on a landscape which is of amenity value, although the deep cutting would impact on fewer households than other Corridor Options 3 (South) or 4 (South). The corridor would though leave a much lower level of residual local traffic on the existing N11 through Glen of the Downs. The corridor option potentially reduces the residual local traffic on the existing N11 through the Glen of the Downs greatly, as traffic from Kilpedder can be transferred to this corridor option.

The corridor passes to the west of Old Downs and severance with Delgany to the east is reduced only by virtue of the transfer of traffic to the proposed off-line segment of the corridor option. There is light amenity use of forest tracks on Downs Hill commencing off Old Downs Road or at the summit of the L1236 which may be impacted by this option.

Relief from severance also applies at Kilpedder, although here the significance is greater due to the higher level of existing severance. The corridor then passes to the west of Newtownmountkennedy, which would itself be served by the existing N11 dual-carriageway, before returning to the same corridor as Corridor Option 1 (South) on the existing line of the N11 at node J and terminating at node K. This section from node J to K is discussed above.

There would be a loss of passing trade/familiarity with the car dealership at Kilpedder, and reduced visibility, but reasonable access to the garden centre and car dealership at Junction 9 (Glenview). There would also be a loss of visibility of Glenview Hotel, but much reduced severance of the hotel from the Glen of the Downs.

1.4.2.3 Corridor Option 3 (South)

At node G, this corridor option commences at the orange corridor off-line segment by branching east from the existing N11 dual-carriageway. A new junction is proposed at this location to connect with the existing N11. The corridor quickly enters an area of deep cut. During both the construction and operational stages, this would present impacts on a landscape of amenity value that is visible from a wide area to the north, including the summit of the Little Sugarloaf. Rationalisation of the three minor roads connecting to Junction 9 (Glenview), i.e. Foxborough Lane, Ballydonagh Road and Ballydonagh Lane, is assumed so they adjoin to traverse one overbridge crossing of the deep cut with short diversions necessary for two of the roads. The overbridge crossing would maintain connectivity, but the corridor removes the eastern access to the Glen of the Downs from Ballydonagh Lane (east) making a circular approach necessary from the vicinity of the existing Junction 9 (Glenview) and N11.

The corridor option then passes east of the Glen of the Downs woodland (further away from the woodland than the Corridor Option 4 (South) through Bellevue Demesne). The corridor option potentially leaves almost no residual local traffic on the existing N11 through the Glen of the Downs as traffic from Kilpedder and Newtownmountkennedy can be transferred to this corridor option.

The course and clubhouse at Delgany Golf Club would be directly impacted by this corridor option, presenting primarily an amenity impact, but also an economic one for the club as a business. There is slight relief from severance at Old Downs due to the transfer of most traffic from the existing N11, but new significant social severance is created in Delgany at both the R762 and Blackberry Lane. Several properties would be demolished at this location with a corresponding level of community impact. There would also be considerable construction impact on the local community. A new junction is proposed to connect the orange off-line segment with the existing N11 and onwards to Greystones via Junction 11 (Greystones / Kilpedder / Kilcoole). At node I, the corridor returns to the same corridor as Corridor Option 1 (South) staying on the existing N11 and Red Corridor through node J to terminate at node K. The section of on-line corridor from nodes I to K is discussed above.

There would be a loss of passing trade, but reasonable access to the garden centre and car dealership at Junction 9 (Glenview).

There would also be a loss of visibility of Glenview Hotel, but much reduced severance of the hotel from the Glen of the Downs.

1.4.2.4 Corridor Option 4 (South)

Corridor Option 4 (South) commences at the pink corridor off-line section at node G by branching east from the existing N11 dual-carriageway. A new junction is proposed at this location to connect with the existing N11. Similar to the off-line segment of Corridor Option 3 (South), it enters an area of deep cut. During both the construction and operational stages, this would present impacts on a landscape of amenity value that, like Corridor Option 3 (South), is visible from a wide area to the north, including the summit of the Little Sugarloaf. Rationalisation of the minor roads connecting to Junction 9 (Glenview) occurs in much the same manner as for Corridor Option 3 (South). This would remove the eastern access to Glen of the Downs making a circular approach necessary from the existing N11 and Junction 9 (Glenview). The corridor then passes east of the Glen of the Downs woodlands, but closer to the woodland than for the orange corridor segment with a correspondingly greater potential noise impact despite the depth of the cut. The corridor does though potentially leave almost no residual local traffic on the existing N11 through Glen of the Downs as traffic from Kilpedder and Newtownmountkennedy can be transferred to this corridor option. This would improve the amenity of the carpark providing a safer access.

The course at Delgany Golf Club would be directly impacted, presenting primarily an amenity impact, but also an economic one for the club as a business. There is slight relief from severance at Old Downs due to the transference of most traffic from the existing N11, but new significant social severance is created in Delgany at both the R762 and Blackberry Lane as for Corridor Option 3 (South). Slightly fewer properties would be demolished at this location, but enough to have a community impact, noting also demolitions in Valley View and the proximity of the estate to the deep cut. There would still be considerable construction impacts on the local community. A new junction is proposed to connect the orange off-line segment with the existing N11 and onwards to Greystones via Junction 11

(Greystones / Kilpedder / Kilcoole). The corridor returns to the same corridor as Corridor Option 1 (South) staying on the existing N11 and Red Corridor through node J to terminate at node K. The section of on-line corridor from nodes I to K is discussed above.

There would be a loss of passing trade, but reasonable access to the garden centre and car dealership at Junction 9 (Glenview). There would also be a loss of visibility of Glenview Hotel, but much reduced severance of the hotel from the Glen of the Downs.

1.4.2.5 Corridor Option 5 (South)

The final corridor option corresponds to the route taken by Corridor Option 1 (South), but for the corridor being widened through the Glen of the Downs. There is no significant socio-economic impact due to this widening in principle, but that it may bring about an opportunity to facilitate safer access and egress to and from the existing Glen of the Downs car park and picnic area.

Table 1.3: Detailed assessment table Southern Section

	Corridor Option 1 (South)	Corridor Option 2 (South)	Corridor Option 3 (South)	Corridor Option 4 (South)	Corridor Option 5 (South)
	Red G-H-I-K	Cyan G-J Red J-K	Orange G-I Red I-K	Pink G-I-K Red I-K	Red H-I-K
Journey characteristics	Continued northbound access from R762 and new overbridge from Delgany Old Downs (south)	Old Downs, Kilpedder and Newtownmount-Kennedy served by existing N11	Old Downs and Kilpedder served by existing N11	Old Downs and Kilpedder served by existing N11	New overbridge at Delgany (Old Downs)
Journey amenity	Safer access to and from Quill Road. Rationalisation of access to Glen of the Downs carpark. Closure of unsafe northbound diverge to Drummin Lane and of north-bound merge at Old Downs	Connection to Quill Road closed with traffic from here and Donnelly's Road diverted north, presenting a long detour for southbound journeys and also severance. Safer access to the Glen of the Downs carpark as less traffic on the existing N11.	Safer access to and from Quill Road and at Kilpedder (south). Safer access to the Glen of the Downs Carpark as less traffic on the existing N11.	Assume safer access to and from Quill Road and at Kilpedder (south). Safer access to the Glen of the Downs carpark as less traffic on the existing N11.	Safer access to and from Quill Road. Rationalisation of access to Glen of the Downs carpark. Closure of unsafe northbound diverge to Drummin Lane and of north-bound merge at Old Downs
Severance	No change Glen View. Some relief from severance at Delgany (Old Downs). Some continued severance at Kilpedder.	Donnelly's Lane is severed with long diversion needed north to join Ballydonagh Road. Relief from severance in Kilpeddar Improved local connectivity got to Garden Village.	Some relief at Old Downs, but new social severance in Delgany at R762 & Blackberry Road. Some continued severance at Kilpedder	Some relief at Old Downs, but new social severance Delgany at R762 & Blackberry Road. Some continued severance at Kilpedder.	No change Glen View. Some relief from severance at Delgany (Old Downs) Some continued severance at Kilpedder.
Amenity	Continued amenity impact at Glen of the Downs.	Major cut through amenity landscape, but transfer of most traffic from Glen of the Downs.	Severs Delgany Golf Club & club House. Major cut through amenity landscape. Transfer of traffic from Glen of Downs.	Severs Delgany Golf Club. Major cut through amenity landscape. Transfer of almost all traffic from Glen of Downs.	Continued amenity impact at Glen of the Downs, but buffer of road widening
Economic	No significant impact on garden centre or car dealers at J9 or car dealers at Kilpedder.	No visibility of Glenview Hotel but hotel is no longer significantly severed from Glen of the Downs. Some loss of	No visibility of Glenview Hotel but hotel is no longer significantly severed from Glen of the Downs.	No visibility of Glenview Hotel but proximity to Glen of the Downs. Loss of visibility of car dealers and	No significant impact on garden centre or car dealers at J9 or on car dealers at Kilpedder.

	Corridor Option 1 (South)	Corridor Option 2 (South)	Corridor Option 3 (South)	Corridor Option 4 (South)	Corridor Option 5 (South)
	Red G-H-I-K	Cyan G-J Red J-K	Orange G-I Red I-K	Pink G-I-K Red I-K	Red H-I-K
		visibility, but accessibility of car dealers and garden centre at J9. Loss of passing trade to car dealers in Kilpedder.	Accessibility, but loss of visibility of car dealers and garden centre at J9. Impact on Delgany Golf Club	garden centre at J9. Severs Delgany Golf Club	

Table 1.4 provides a quantitative scoring of the five specific components of journey characteristics, journey amenity, community severance, general amenity, and economic effects for each nodal zone along with an average of the summary scores for each zone (to the nearest integer).

Table 1.4: Summary assessment table Southern Section

	Corridor Option 1 (South)	Corridor Option 2 (South)	Corridor Option 3 (South)	Corridor Option 4 (South)	Corridor Option 5 (South)
Journey characteristics	4	5	5	5	4
Journey amenity	5	3	5	5	5
Severance	5	1	2	2	5
Amenity	2	3	1	1	2
Economic	4	4	3	3	4
Qualitative *	Not significant or neutral	Minor or slightly negative	Moderately negative	Moderately negative	Not significant or neutral
Score*	4	3	3	3	4
Preference	Preferred	Intermediate	Least Preferred	Least Preferred	Preferred

* These are averaged qualitative assessments and scores, but there are considerable variations both within impact types and corridor options.

1.5 Summary

The key points to note from the assessment for Human beings are:

- Despite equal scores and ratings each option's score is an average and performs from well to poorly on different criteria and at different locations. This applies to both the Northern and Southern Section, although especially the latter.
- On-line sections of various corridor options score well when provided with parallel service roads and north/south access as journey amenity (safety) is improved and new off-line impacts are avoided.
- In the Northern Section, the respective impacts of the different corridor options on 'journey amenity' are a particular consideration at the R117, cul-de-sac opposite (Dargle Lane), Kilbride Church and Herbert Road.

- Negative impacts on journey amenity (safety) and community severance are particular considerations determining ranking of corridor options at Kilmacanoge. Potentially these impacts can be mitigated to some extent by road design factors.
- In the Southern Section, ‘general amenity’ (Glen of the Downs, the wider landscape, and impacts on golf courses) is a particular consideration for the preference of alternative corridor options.
- There are road design factors which would have an influence on ratings, and which have been assumed in the assessment of options, namely:
 - a. As noted in the Methodology, **Section 1.2**, it is assumed that each of the corridor options will possess pedestrian and cycle facilities that are equivalent in terms of the connectivity they provide.
 - b. That there is no connection between Donnelly’s Lane and the new junction for Corridor Option 2 (South) (cyan off-line corridor segment), although the absence of such a connection presents a long detour for southbound journeys and severance.
 - c. That no form of cut-and-cover is being considered for the Glen of the Downs under Corridor Options 1 (South) and 5 (South).

1.6 References

Transport Infrastructure Ireland Project Appraisal Guidelines for National Roads Unit 7.0 – Multi Criteria Analysis, 2016. Available from:
<https://www.tiipublications.ie/library/PE-PAG-02031-01.pdf>