

Leitrim County Council

Sligo, Leitrim, Northern Counties Railway (SLNCR) Greenway

Option Selection Report

Volume 2 - Section 6 Stage 1 Preliminary Option Assessment

Reference: ARP-PDV-P2-R-001

Final | 26 September 2025



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6. Stage 1 – Preliminary Options Assessment

6.1 Introduction

“During Phase 2, options which progress from Phase 1 are developed taking cognisance of the findings of the constraints study. These options should be developed to an appropriate level of detail to facilitate a systematic assessment of the potential impacts upon the findings of the constraints and opportunities study.” [PE-PMG-02047]

The Phase 1 Feasibility Study (see ARP-PDV-P1-R-003) recommended that a total of five end-to-end Corridor Options and five “Switchover opportunities” between these Corridor Options be progressed to Phase 2 Options Selection for further consideration. At the commencement of Phase 2, a further Geometric Assessment (described in Section 6.4) was undertaken on these Corridor Options and “Switchover Opportunities” at the commencement of Phase 2. Following this assessment, three end-to-end Corridor Options and twenty Switches, herein referred to as the Stage 1 Corridor Options were identified and recommended for presentation to the public as part of the Second Public Consultation (Proposed Options), held between 23 October 2023 and 24 November 2023.

Drawings setting out the Stage 1 Corridor Options, Switches and Nodes (Nodes indicate points which are common to one or more Corridors and/or Switches and denote a location where the Preferred Corridor could switch from one Corridor Option and/or Switch to another) are included in Appendix C and are summarised in Figure 6-1, Figure 6-2, Figure 6-3, and Figure 6-4 below.

For ease of reference each Option Corridor and/or Switch has been assessed between the following Sections:

Section 1 – Carraroe to Collooney - (Node A to G)

Section 2 – Collooney to Dromahair – (Node G to N)

Section 3 – Dromahair to Manorhamilton – (Node N to S)

Section 4 – Manorhamilton to Blacklion / Belcoo (Node S to C1)

Section 5 – Blacklion / Belcoo to Enniskillen (Node C1 to S1 / R1)

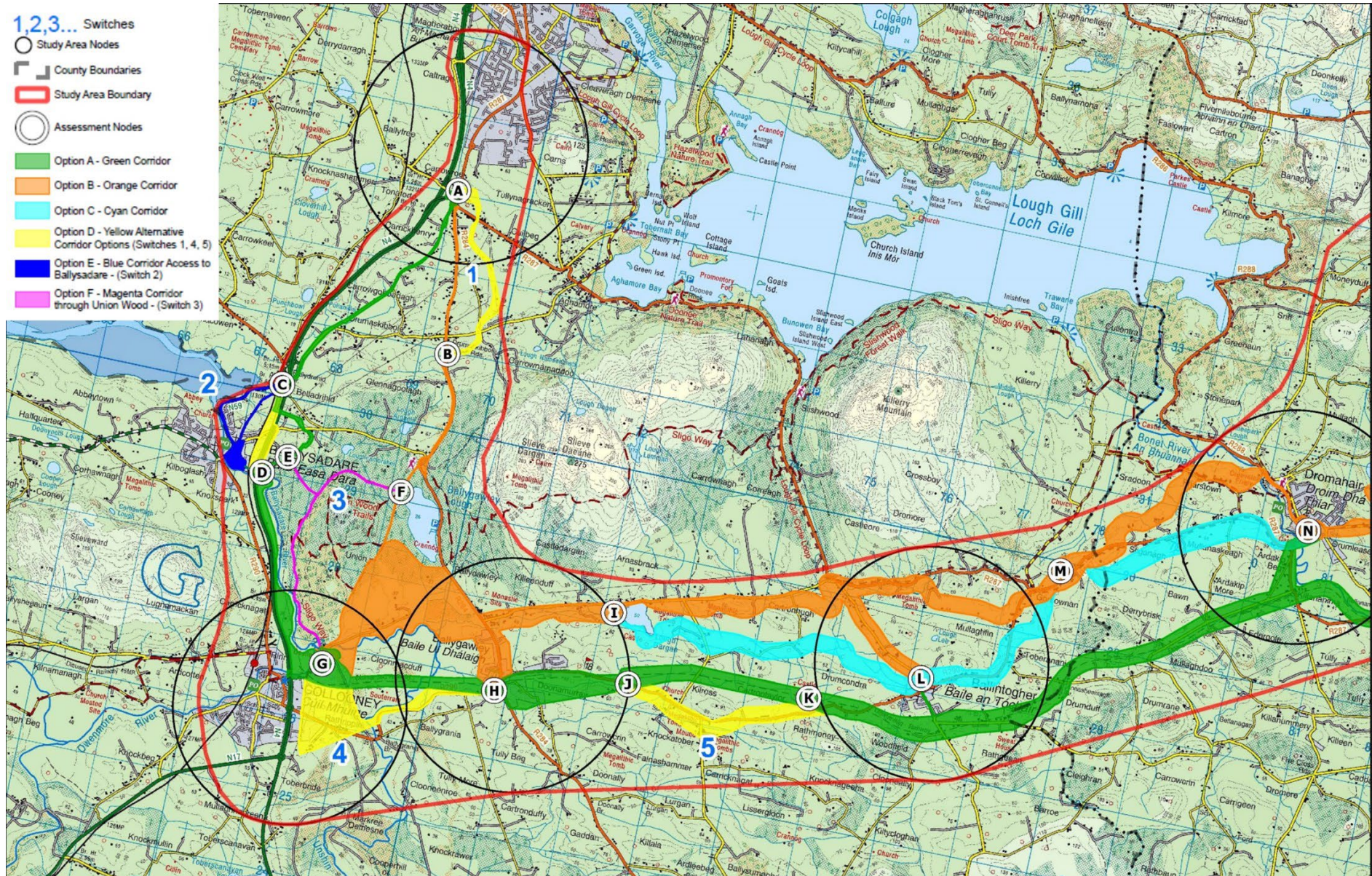


Figure 6-1 Stage 1 Corridor Options - Carraroe to Dromahair



Figure 6-2 Stage 1 Corridor Options - Dromahair to East Barrs

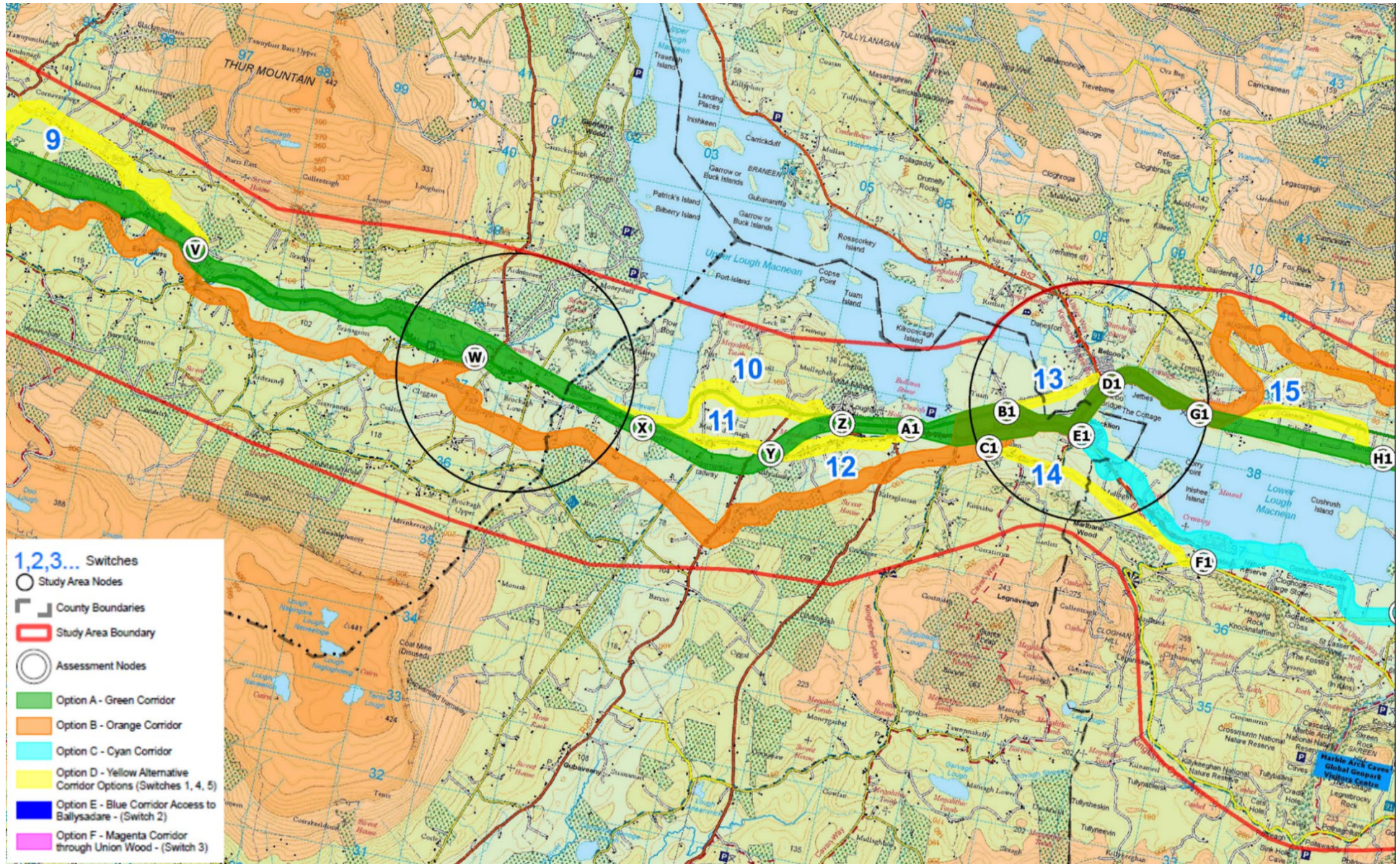


Figure 6-3 Stage 1 Corridor Options – East Barrs to Lough MacNea Lower

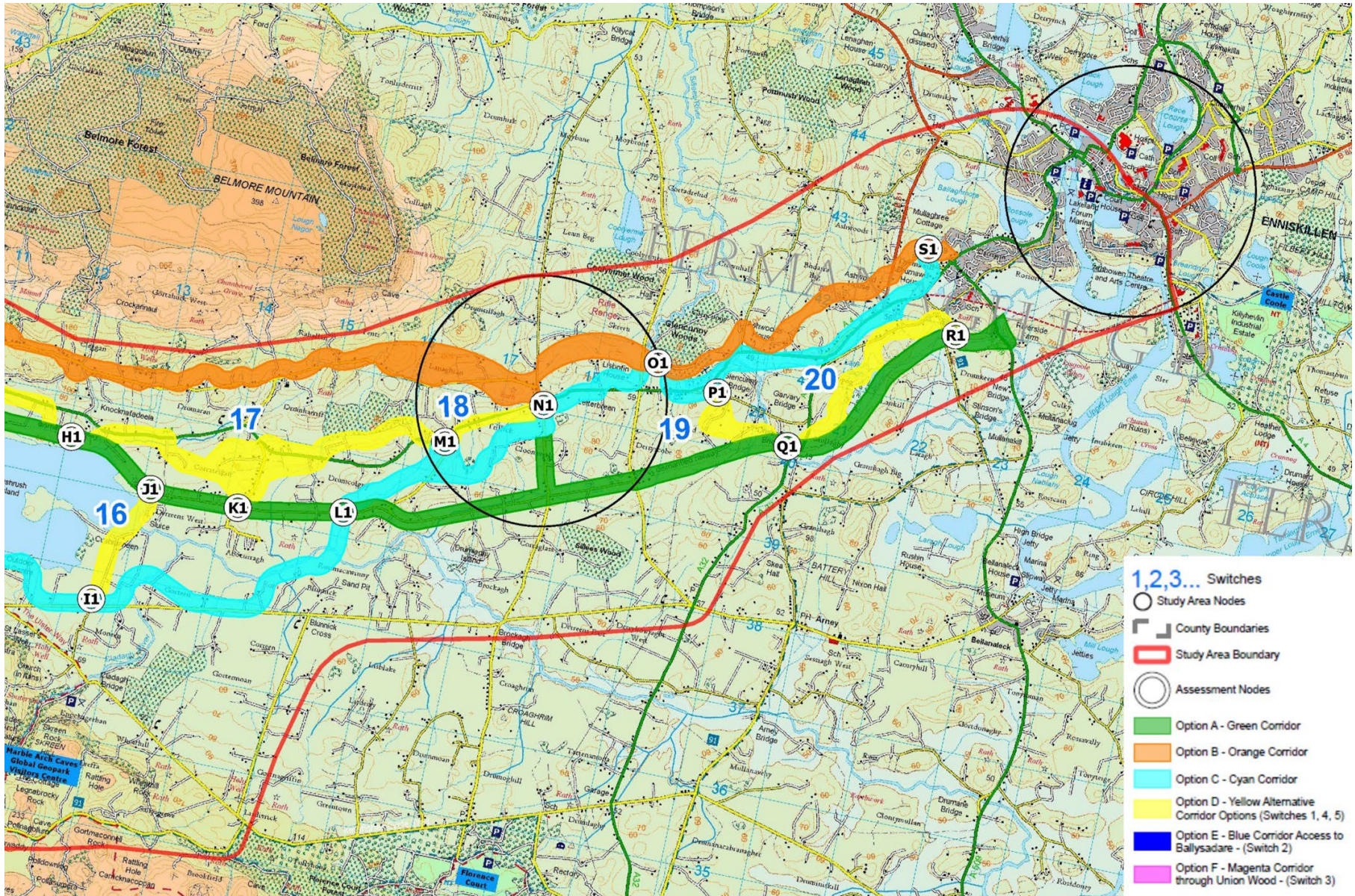


Figure 6-4 Stage 1 Corridor Options - Lough MacNea Lower to Enniskillen

Letter	Option Title	Description
Option A	Green Corridor	Nodes A to R1, via C, E, D, G, H, J, K, O (with link to L & N), P, Q, R, S, T, U, V, W, X, Y, Z, A1, B1, E1, D1, G1, N1 & O1)
Option B	Orange Corridor	Nodes A to S1, via B, F, G, H, I, L, M, N, R, S, V, C1 (with link to W), E1, G1, L1, M1, N1, O1 & P1)
Option C	Cyan Corridor	Nodes A to S1 via B, I (with link to G & H), L, M, N, R, S, V, C1 (with link to W), E1, I1, L1, M1, N1, O1 & P1, (using the Orange Corridor where Cyan not present)
Option D	Yellow Alternative Corridor Options	<p>Switch 1 = Node A to B, as an alternative to the Orange Corridor Option</p> <p>Switch 4 = Node G to H, as an alternative to the Orange and/or Green Corridor Options</p> <p>Switch 5 = Node J to K, as an alternative to the Green Corridor Option</p> <p>Switch 6 = Node O to P, as an alternative to the Green Corridor Option</p> <p>Switch 7 = Node P to Q, as an alternative to the Green Corridor Option</p> <p>Switch 8 = Node Q to S, as an alternative to the Orange and/or Green Corridor Options</p> <p>Switch 9 = Node U to V, as an alternative to the Green Corridor Option</p> <p>Switch 10 = Node X to Z, as an alternative to the Green Corridor Option</p> <p>Switch 11 = Node X to Y, as an alternative to the Green Corridor Option</p> <p>Switch 12 = Node Y to A1, as an alternative to the Green Corridor Option</p> <p>Switch 13 = Nodes B1 to D1, as an alternative to the Green Corridor Option</p> <p>Switch 14 = Node C1 to F1, as an alternative to the Orange, Cyan and/or Green Corridor Options</p> <p>Switch 15 = Node G1 to H1, as an alternative to the Green Corridor Option</p> <p>Switch 16 = Node I1 to J1, as an alternative to the Cyan Corridor Option</p> <p>Switch 17 = Node H1 to M1 via K1, as an alternative to the Green Corridor Option</p> <p>Switch 18 = Node M1 to N1, as an alternative to the Cyan Corridor Option</p> <p>Switch 19 = Node P1 to Q1, as an alternative to the Cyan Corridor Option</p> <p>Switch 20 = Node Q1 to R1, as an alternative to the Green Corridor Option</p>

Letter	Option Title	Description
Option E	Blue Corridor Access to Ballysadare	Switch 2 = Nodes C to D, as an alternative to the Green Corridor Option
Option F	Magenta Corridor through Union Wood	Switch 3 = Nodes F &/or E to G, as an alternative to the Orange and/or Green Corridor Options

Table 6-1 Stage 1 Corridor Option

6.2 Description of Stage 1 Corridor Options

6.2.1 Do-Minimum Option

PE-PAG-02013 advises that the Do-Minimum Option should be considered as the “Base Case” “... for establishing the economic, integration, safety, environmental and accessibility impacts of all options.” It goes on to advise that the “... Do-Minimum Option should include those transportation facilities and services that are committed within the appraisal period.” Where, “committed” refers to “... improvements that have been progressed through planning and are either under construction or are programmed into the capital expenditure budget.”

PE-PAG-02013 advises that the Do-Minimum Option must include the following features:

“The maintenance of existing facilities and services in the study corridor and region;

The completion and maintenance of committed projects or policies in the study corridor that have successfully completed their environmental review; and

The continuation of existing transportation policies.”

As the SLNCR Greenway project progresses it may benefit and/or supplement other planned schemes and projects within the Study Area.

For example, in Fermanagh the proposed A4 Enniskillen Southern Bypass “... will provide a new transport link to the southern side of the town, improving the connection between the A4 Dublin Road and the A4 Sligo Road” [DfI, 2021]. The scheme will include a cycleway / footway along the Bypass, Dublin Road and Derrylin Road as well as enhancements to non-motorised user facilities on the Derrylin Road. The bypass may present an opportunity to tie the SLNCR Greenway into cycle and walking facilities to the Southwest of Enniskillen.

In Sligo, the National Transport Authority (NTA) are currently developing an Active Travel Project along the R287 linking Carraroe / Cuilbeg to Sligo. At present non-motorised user facilities along the R287 in this section consist of a southbound footway and cycle lanes between the Carraroe Roundabout and the Sligo Retail Park Roundabout. To the north of the Sligo Retail Park the southbound footway and cycle lanes continue, and a northbound footway begins circa. 250m north of the roundabout. The Study Area for the SLNCR Greenway extends as far as the Caltragh Interchange on the N4 and the proposed NTA project could link the SLNCR Greenway to existing cycling infrastructure in Sligo and allow for potential Greenway/Active Travel links to Strandhill.

Table 6-2 below sets out schemes and projects that have been included in the Do-Minimum Option.

Section No.	Section Title	Scheme / Project Description
1	Carraroe to Collooney	<p>Ballysadare to Carrignagat Bridge: The provision of footpath and pedestrian facilities. Works are complete.</p> <p>Carrignagat Bridge to Collooney(Quigley's pub) The provision of footpath and pedestrian facilities. Options assessment stage has been completed and approved. Detail design is complete and Contract tenders have been received. It is anticipated that construction works shall commence in Q3 2023. Route selection work has commenced. It is expected to progress this scheme to planning approval. It is anticipated that the scheme will be jointly funded by the NTA, DOT and Development Contributions.</p> <p>Carraroe to GAA Pitch Active Travel Scheme (NTA Funded). Detailed Design substantially complete pending Stage 2 RSA.</p> <p>Carraroe to Sligo City Centre Active Travel Corridor: This project has been approved under the pathfinder umbrella. A Consulting Engineer was appointed and a draft Options Assessment Report submitted in March 2023 for review. A workshop was held with the NTA during April 2023 to agree the progression of the project to preliminary design. Design works are ongoing.</p> <p>Collooney Village Active Travel Scheme (NTA Funded). Works substantially completed.</p> <p>N4 Collooney to Castlebaldwin Active Travel Route (TII Funded). This project is currently at Phase 2 entitled Options Selection.</p> <p>N4 Active Travel Collooney to Toberbride Scheme (TII Funded). Public Consultation No.1 (pre-design) on this scheme was complete in October 2023</p> <p>The Sligo Greenway (TII Funded). TII Phase 1 Gateway received. The Second Public Consultation the proposed route Corridors were presented to stakeholders earlier this year, 2024.</p> <p>Carrowroe to Cuilbeg Shared Active Travel Facilities (NTA Funded) is at Preliminary Design (NTA Gateway 3). The proposed scheme starts at the intersection of the R284 (Ballygawley Road) and the R287 (Dromahaire Road) and continues for approx. 1Km along the R287 (towards Dromahaire) ending at the entrance to St. John's GAA Club. The objective of the scheme is to create a dedicated, shared pedestrian and cyclist link connecting Carrowroe to Cuilbeg.</p>
2	Collooney to Dromahair	<p>Ballygawley Village to Castle Dargan Footpath (NTA Funded). Detailed design complete.</p> <p>Dromahair, Kinlough & Kiltyclogher Footpaths (NTA Funded) (Kinlough located between Dromahair and Manorhamilton and Kiltyclogher located between Manorhamilton and Blacklion / Belcoo)</p> <p>Drumlease National School, Dromahair (Safe Routes to School (SRTS) Scheme) where 'front of school' treatments, including road markings, improved footway and table crossing facilities are proposed on the Churchfield, Drumlease Road, and the L4165.</p>
3	Dromahair to Manorhamilton	<p>St Clare's National School, Manorhamilton (SRTS Scheme) where 'front of school' treatments, including road markings, bollards and improved footway and pedestrian crossing facilities are proposed on the N16, Upper Main Street, Hospital Road and Glen Eoin.</p>
4	Manorhamilton to Blacklion	<p>Traffic calming and footway extensions, Glenfarne (Leitrim County Council RDO) (Glenfarne located between Manorhamilton and Blacklion/Belcoo)</p>
5	Belcoo to Enniskillen	<p>A4 Enniskillen Southern Bypass, Enniskillen, Co. Fermanagh (DfI)</p> <p>A32 Irvinestown Road Cycleway (DfI)</p> <p>Enniskillen Walking and Cycling Study (DfI)</p>

Table 6-2 Projects & Scheme included in the Do-Minimum Option

6.2.2 Description of Proposed Interventions

A number of different interventions have been considered during the development of the Proposed Phase 2 Corridor Options, and are referenced in the Corridor Option descriptions below (Sections 6.2.3, 6.2.4, 6.2.5, 6.2.6, 6.2.7 & 6.2.8).

As set out in Section 3, the SLNCR Greenway would be a low volume, rural Greenway in the Northwest and will be designed in accordance with TII standards, DN-GEO-03047 Rural Cycleway Design (Offline & Greenway) in particular.

The desirable vertical alignment would be of the order of 0.5-3% and the width of the of Shared facilities will be of the order of 3–5m. ‘Online walking and cycling facilities’ would consist of segregated footpaths and cycle tracks where space allows while “Enhanced walking and cycling facilities” will consist of improvements to existing facilities with priority given to appropriate footway provision. Where space is limited cycle lanes with physical separation may be substitute for Cycle Tracks.

‘No through routes’ and / or ‘Quiet streets’ would entail measures similar to those recommended by Sustrans for Low Traffic Neighbourhoods (LTNs), such that *“there is no through route for private motorised vehicles, all homes can be accessed by private vehicles, new public space is created, activating the streets &, fully permeable for those walking, cycling and wheeling.”*¹

Greenway / Offline Shared Use facility road crossings will comply with Table 5.1 and details similar to Figure 5.1 &/or 5.1 of DN-GEO-03047 will be applied for at Grade Crossings. Grade Separated Crossing would be in accordance with DN-STR-03005 - Design Criteria for Footbridges, DN-GEO-03040 - Subways for Pedestrians and Pedal Cyclists, and the requirements of this design standard.

Farm crossings / access to fields would be maintained using Figure 4.9 & 4.10 Farm Crossing Gate Details of DN-GEO-03047.

Boundary treatment shall be in accordance with DN-GEO-03047 and the Code of Best Practice for National and Regional Greenways. The typical standard of boundary treatment will vary depending on land use but a Timber Post and Rail Fence in accordance with CC-SCD-00301-03 will be applied as a standard.

6.2.3 Option A – Green Corridor Option

The Green Corridor Option is an end-to-end corridor option between Carraroe and Enniskillen, and broadly follows the Old Dublin Road, N4 Road Corridor and the line of the historic Sligo, Leitrim, Northern Counties Railway. See Drawing ARP-GEO-P2-DR-026-050 Green Corridor Option in Appendix C.

The Green Corridor Option connects Nodes A to R1, via C, E, D, G, H, J, K, O (with link to L & N), P, Q, R, S, T, U, V, W, X, Y, Z, A1, B1, E1, D1, G1, N1 & O1).

6.2.3.1 Section 1 – Carraroe to Collooney

Nodes A,C, & E - In Sligo, the Green Corridor Option follow then passes road corridor of the R287 / Old Dublin Road between Sligo Retail Park and the Balladrihid (S1) exit off the N4. The Green Corridor Option uses the existing N59 underpass to pass under the N4 to the east of Ballysadare. The Green Corridor Option then remains to the west of the N4 using an existing walking/cycling trail between the N4 and the existing Dublin to Sligo railway line. The Green Corridor Option then cross over the N4 via a new structure before passing through the Ballysadare Community Centre / Ballysadare United FC grounds. The Green Corridor Option then uses an existing forest path to the west of Union Wood / Union Rock heading towards the eastern bank of the Ballysadare River and Ballysadare.

Nodes E to G - West of Ballysadare at least one new river crossing will be required in order to provide a link into Ballysadare via an existing pedestrian underpass of both the N4 and Dublin to Sligo railway line. After

¹ <https://www.sustrans.org.uk/for-professionals/infrastructure/an-introductory-guide-to-low-traffic-neighbourhood-design/an-introductory-guide-to-low-traffic-neighbourhood-design-contents/design-guide/all/5-design/>

crossing the Ballysadare River the Green Corridor Option continues south towards Collooney in the land between the N4 and Ballysadare River. North of Collooney the Green Corridor Option widens to provide scope for at least one new crossing over the Ballysadare River to both link the Greenway into Collooney and continue west towards Ballygawley.

6.2.3.2 Section 2 –Collooney to Dromahair

Nodes G, H, L, & N - East of Collooney the Green Corridor Option broadly follow the historic SLNCR line, passing through Ballygawley and to the south of Ballintogher. The Green Corridor Order continues to follow the historic SLNCR before joining the SLNCR Greenway Dromahair.

6.2.3.3 Section 3 –Dromahair to Manorhamilton

Nodes N, O, P, & Q - The Green Corridor Option then pass to the south of Dromahair following the historic SLNCR line adjacent the southern bank of the Bonnet River (part of the Lough Gill SAC) and sections of the R287, L62031 and R280 toward Manorhamilton. A link would be provided into Dromahair via new walking and cycling facilities along the R287. A new offline pedestrian bridge over the Bonnet river would be required as part of these work. Between Nodes O to P the Green Corridor Option follows the route of the historic SNCR railway line, before incorporating the Manorhamilton to Boggaun walking/cycling route between Nodes P to Q.

Nodes Q, R, & S - Southwest of Manorhamilton the Green Corridor Option leaves the historic SLNCR to use existing walking and cycling facilities along the R280 road corridor into Manorhamilton. Through Manorhamilton the Green Corridor Option would consist of enhance walking and cycling facilities on Upper Main Street and the N16 before moving offline as a Greenway to re-join the historic SLNCR in the vicinity of Manorhamilton Mart.

6.2.3.4 Section 4 –Manorhamilton to Blacklion

Nodes S, T, U, V, & W - The Green Corridor Option then follow the historic SLNCR line as far as East Barrs where it ties into the existing SLNCR Greenway Glenfarne as far as Glenfarne. At Glenfarne a walking and cycling link from the Green Corridor Option to the village would be provided via the R281.

Nodes W, X, Z, A1, B1, E1, & D1 - East of Glenfarne the Green Corridor Option follows the historic SLNCR as far as the southern shore of Lough Macnean Lower. At Lough Macnean Lower the Green Corridor follows the N16 road corridor through Blacklion and the A4 road corridor through Belcoo as a combination of enhanced walking and cycling facilities (online and offline). In Blacklion there is an opportunity to provide an offline Greenway by utilising and upgrading the existing Blacklion Village Trail (Cathal Bui Trail). This would follow along the bank of the Belcoo River instead of following the N16 road corridor.

6.2.3.5 Section 5 –Belcoo to Enniskillen

Nodes D1, G1, H1, & J1 - Leaving Belcoo the Green Corridor Option follows the A4 Sligo Road corridor before joining the Sligo Line road corridor (formerly the historic SLNCR) via an offline Greenway between the A4 and the northern shore of Lough Macnean Lower to the south of the Belcoo Quarry.

Nodes J1, K1, L1, Q1, & R1 - The Green Corridor Option then take the form of an offline facility adjacent to the Sligo Line as far as it's terminus at the site of the Old Florencecourt Station (now in private ownership). The Green Corridor Option then continue on the historic SLNCR to tie into the proposed walking and cycling facilities of the A4 Enniskillen Southern Bypass scheme² in the vicinity of the A509 Derrylin Road, west of Enniskillen.

6.2.4 Option B - Orange Corridor Option

The Orange Corridor Option is an end-to-end corridor option between Carraroe and Enniskillen, and broadly follows the R284, forest trails through Union Wood, the R288, the L8161 (via Carrigeencor), the L2169 (via Derryherk), Ross Lane (south west of Manorhamilton), and the N16 Road Corridor before moving offline as far as Blacklion where it then broadly follows the A4 Road Corridor, Boho Road, and the Gardrum Road

² <https://www.infrastructure-ni.gov.uk/articles/a4-enniskillen-southern-bypass-overview>

before moving offline to tying into the A4 Sligo Road to the south west of Enniskillen in the vicinity of the A4 Sligo Road / A509 Derrylin Road roundabout. See Drawings ARP-GEO-P2-DR-125-148 Orange Corridor Option in Appendix C.

The Orange Corridor Option follows Nodes A to S1, via B, F, G, H, I, L, M, N, R, S, V, C1 (with link to W), E1, G1, L1, M1, N1, O1 & P1).

6.2.4.1 Section 1 – Carraroe to Collooney

Nodes A, B and F – The Orange Corridor Option follows the existing R284 road corridor south of Carraroe through Drumaskibbole as far as the entrance to the Union Wood carpark. The R284 between Carraroe and northbound approach to the Drumaskibbole crossroads (Node A to B) is constrained by properties on both sides of the carriageway meaning that Orange Corridor Option would take the form of enhanced walking and cycling facilities through this section. South of the Drumaskibbole crossroads the Orange Corridor Option would an offline segregated walking and cycling facility adjacent to the R284 before joining the existing path through Union Woods.

Nodes F, G & H - The Orange Corridor Option uses existing paths within Union Wood path to the west and south of Ballygawley Lough. The Orange Corridor Option then widen out south of Union Wood to facilitate the development of a fork where a Greenway alignment would link into Collooney (Node G) via the southern entrance to Union Wood and to Ballygawley (Node H) adjacent to the northbound side of the R284. A link would be provided into Ballygawley via new walking and cycling facilities along the R284.

6.2.4.2 Section 2 – Collooney to Dromahair

Nodes H, I, & L – North of Ballygawley the Orange Corridor Option broadly follows the L3605 as a Greenway passing to the north of the Lough Dargan and the Dargan Castle Estate. The Orange Corridor Option continues to follow the L3605 and R287 road corridors, passing to the north of Ballintogher. A link would be provided into Ballintogher via new walking and cycling facilities on the L3605.

Nodes L to M – North of Ballintogher the Orange Corridor Option moves offline, following existing contours to pass to the south of a constrained section of the R287 road corridor, before rejoining the R287 road corridor in the vicinity of the junction between the R287 / R290 (Node M).

Nodes M to N – Between Ballintogher and Dromahair the Orange Corridor Option moves offline through traversing agricultural lands passing to the south of the Gortlowan Motte, to the north of Creevelea Friary and through Dromahair Park to crossing the Bonnet River via a new bridge. The Orange Corridor Option then pass through Dromahair via the R288, Churchfield and Drumlease Road where enhanced walking and cycling facilities within the village would be provided .

6.2.4.3 Section 3 – Dromahair to Manorhamilton

Nodes N to R – The Orange Corridor Option follows the Drumlease Road corridor before moving offline to pass to the north of Carrigeencor Lough. From here the Orange Corridor Option broadly follows the local road network passing through the townlands of Carrigeencor, Cloonaquin, Derryherk, Benbo & Carrickleitrim before tying into Ross Crescent / Ross Lane to the South of Manorhamilton

The Orange Corridor Option would be a Greenway adjacent to the south / westbound side of the local road network through this section however it will be constrained by the floodplain of the Bonnet River and associated tributaries resulting in several new river crossing being required.

6.2.4.4 Section 4 – Manorhamilton to Blacklion

Nodes R, S, & T - South of Manorhamilton the Orange Corridor Option would be a Greenway which follows the southern bank of the Owenmore River before moving offline through agricultural land to pass to the south of the Manorhamilton Mart and N16 road corridor. Links to Manorhamilton would be provided via existing Active Travel facilities on the R280 and enhanced walking and cycling facilities on Ross Lane and new public link in the vicinity of Manorhamilton Mart.

Nodes S, V, & W - East of Manorhamilton the Orange Corridor Option remain offline from the N16 but moves further to the south to pass to the south of Munakill More Lough and through the townlands of Easte Barrs, Stranagress and Killycloghan to the south of Glenfarne. in the direction of a southeast direction that continues

the Corridor towards Glenfarne. The Orange Corridor Option in this section traverses agricultural land and crosses the Scardin River, Cornavannoge River and several other minor watercourses as it follows the contours of the existing terrain in a circuitous alignment. Passing through East Barrs, the Orange Corridor Option would use a section of the local network where new walking and cycling facilities would be provided. A link would be provided into Glenfarne via new walking and cycling facilities in the vicinity of the Rainbow Ballroom and the L6215 / R281 staggered crossroads on the N16.

Nodes W, C1, & B1 – Between Glenfarne and Blacklion the Orange Corridor Option continues as an offline Greenway traversing agricultural land and areas of forestry and crossing the R207 and R206 before joining the R206 road corridor heading in a southeasterly direction to cross the R207. The Corridor would then change to a northeasterly direction to link into the R206 and N16 To the southwest of Blacklion. Along the R206 the Orange Corridor Option would be a combination of offline and online walking and cycling facilities until it joins the N16 where enhance walking and cycling facilities would be provided.

Nodes B1, E1, & D1 – At Blacklion the Orange Corridor Option follows the N16 road corridor through Blacklion and the A4 road corridor through Belcoo as a combination of enhanced walking and cycling facilities (online and offline).

6.2.4.5 Section 5 – Belcoo to Enniskillen

Nodes D1, G1, & N1 – Leaving Belcoo the Orange Corridor Option follows the A4 Sligo Road corridor before moving offline in the vicinity of Aughrim Road. There is steeper than desirable gradient on the existing Aughrim Road so the Orange Corridor Option moves offline, through agricultural land to join the Gardrum Road. Upon joining the Gardrum Road the Orange Corridor Option then and follows the Gardrum Road corridor in an easterly direction towards Letterbreen. The Orange Corridor Option in this section would be a combination of new offline and online cycling and walking facilities owing to the existing alignment of the Gardrum Road, the topography and the presence of private dwellings on both sides of the carriageway.

Nodes N1, O1, & S1 – Between Letterbreen and Enniskillen the Orange Corridor Option proceeds as an offline Greenway running to the north of the A4. East of Letterbreen the Orange Corridor Option passes through agricultural land and forestry such as Glencunny Woods before tying into the A4 Sligo Road to the south west of Enniskillen in the vicinity of the A4 Sligo Road / A509 Derrylin Road roundabout.

6.2.5 Option C - Cyan Corridor Option

The Cyan Corridor Option is an end-to-end corridor option between Carraroe and Enniskillen. The Cyan Corridor Option would use the Orange Corridor Option in Section 2 between Collooney and Ballygawley (Node H to I) and the emerging Preferred Corridor in Sections 1 (Nodes A to G), 3 and 4 (Nodes N to E1). See Drawing ARP-GEO-P2-DR-211-220 Cyan Corridor Option in Appendix C.

The Cyan Corridor Option follows Nodes A to S1 via B, I (with link to G & H), L, M, N, R, S, V, C1 (with link to W), E1, I1, L1, M1, N1, O1 & P1, (using the Orange Corridor where Cyan not present).

6.2.5.1 Section 2 - Ballygawley to Dromahair

Node I to L - The Cyan Corridor Option deviates from the Orange Corridor Option in the vicinity of Dargan Lough (Node I) where it passes to the south of Dargan Lough in the vicinity of the Castle Dargan ruins. The Cyan Corridor Option continues offline seeking the path of least resistance from a topography perspective through agricultural land before crossing the L3605 around the northern extents of Ballintogher.

Node L to N – Between Ballintogher and Dromahair the Cyan Corridor Option would broadly follow the route of the R290 and R287. The Cyan Corridor Option in this section would be a combination of new offline and online cycling and walking facilities owing to the existing alignment of the R290 and R287, the topography and the presence of private dwellings on both sides of the carriageway. The Cyan Corridor Option continues east and follows the route of the R287 to enter the south of Dromahair where the Corridor would cross the River Bonnet (part of the Lough Gill SAC). A new offline pedestrian bridge over the Bonnet river would be required as part of these work.

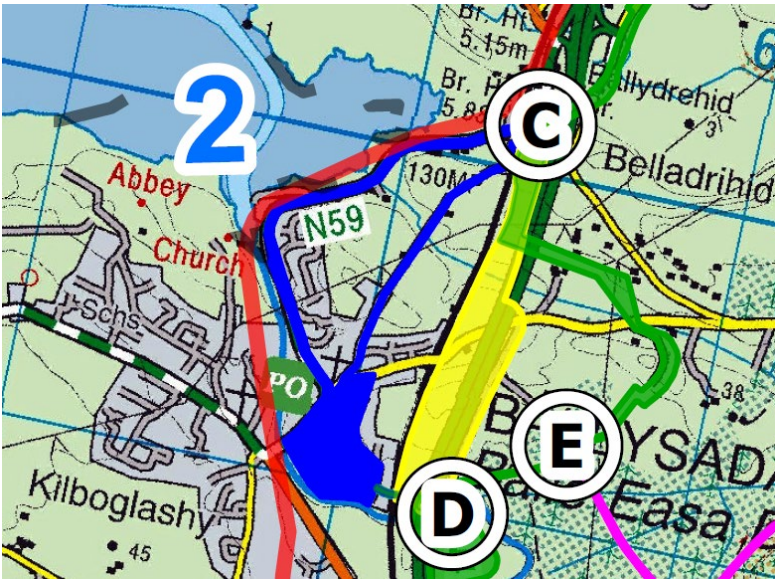


Figure 6-6 Switch 21 – Belladrihid to Union Wood (Node C to D)

Section 2 - Collooney to Dromahair

Switch 4 - Collooney to Ballygawley offers an alternative to the Orange and/or Green Corridor Options between Node G to H, see Figure 6-7 below. Switch 4 widens to the east of Collooney to provide opportunities for an alternative link into the town from the east. The corridor broadly follows the R290 towards Ballygawley. A new crossing of the Unshin River SAC would be required as part of this option.

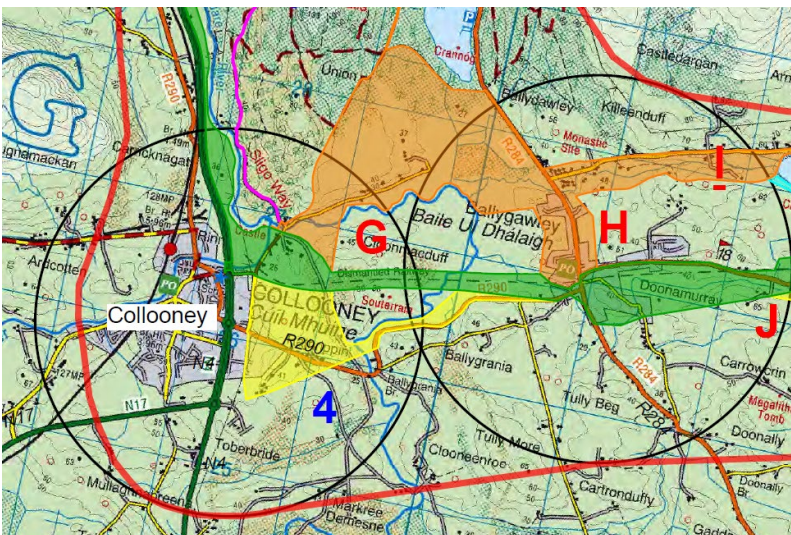


Figure 6-7 Switch 4 – Collooney to Ballygawley (Node G to H)

Switch 5 – Ballygawley to Ballintogher offers an alternative to the Green Corridor Option between Ballygawley and Ballintogher (Node J to K), see Figure 6-8 below. Switch 5 would broadly follow the route of the R290 and would consist of new offline and online walking and cycling facilities in the vicinity of the road corridor.

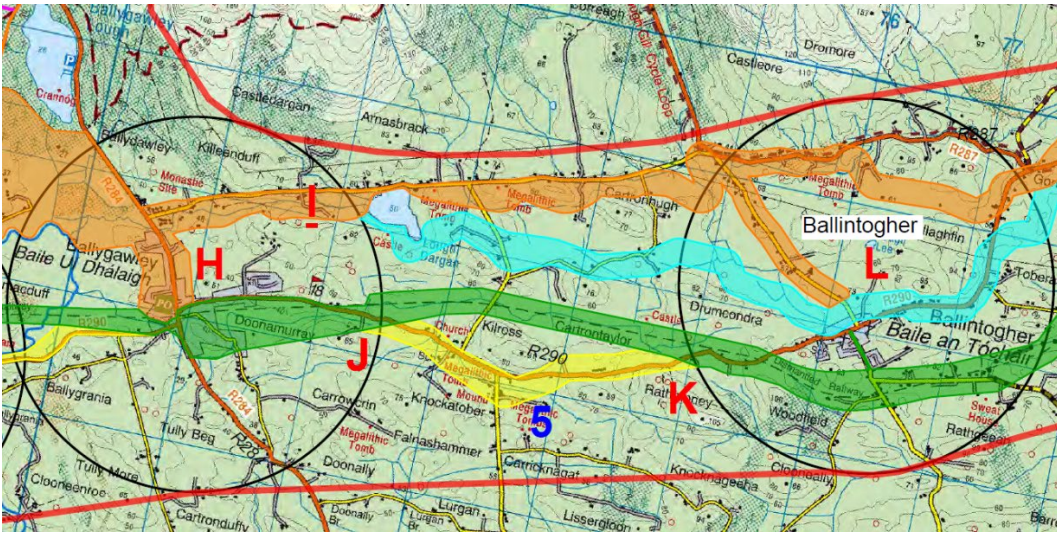


Figure 6-8 Switch 5 - Ballygawley to Ballintogher (Node J to K)

Section 3 – Dromahair to Manorhamilton

Switch 6 - R287 at Sox offers an alternative to the Green Corridor Option between Node O to P, see Figure 6-9 below. Switch 6 follows the route of the R287 and R280 to align with a section of the North West Cycle Trail and would consist of new offline and online walking and cycling facilities in the vicinity of the road corridor.

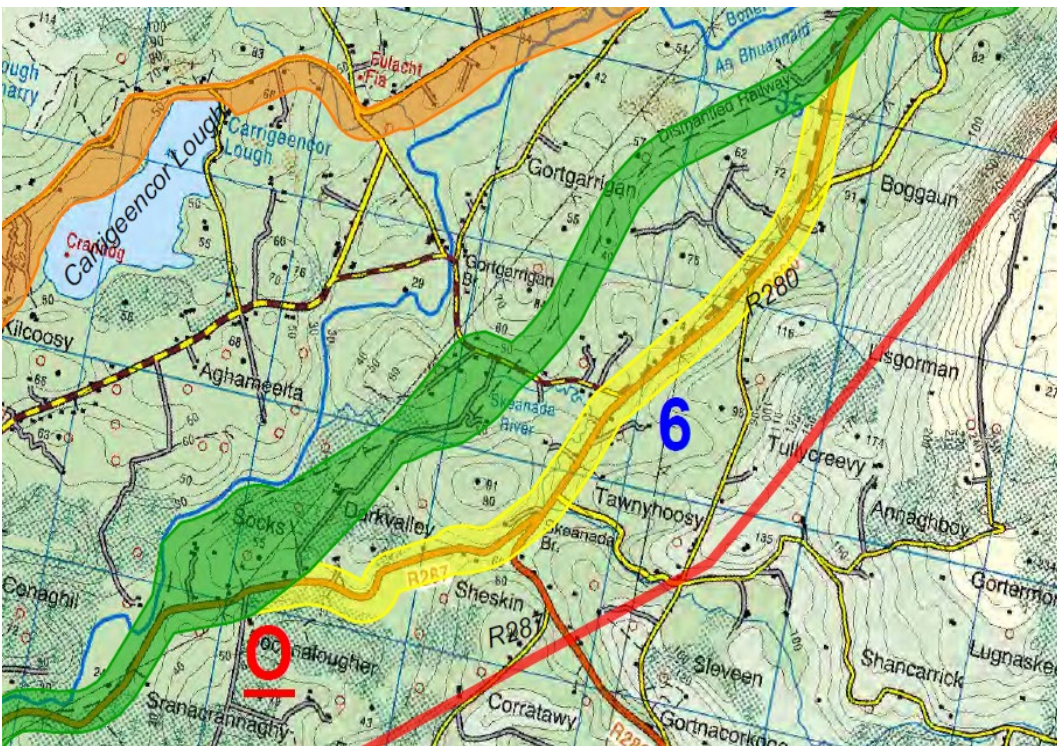


Figure 6-9 Switch 6 - R287 at Sox (Node O to P)

Switch 7 – R280 North West Cycle Trail offers an alternative to the Green Corridor Option between Node P to Q, see Figure 6-10 below. Switch 7 follows the route of the R280 to align with a section of the North West Cycle Trail and would consist of new offline and online walking and cycling facilities in the vicinity of the road corridor.

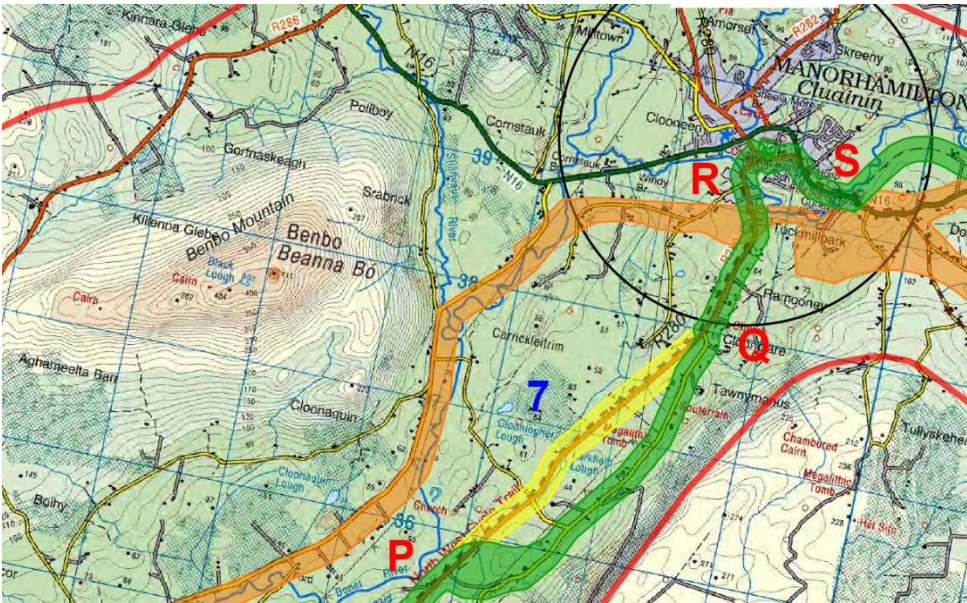


Figure 6-10 Switch 7 - R280 North West Cycle Trail (Node P to Q)

Switch 8 – Historic SLNCR to Manorhamilton Mart offers an alternative to the Orange and/or Green Corridor Options between Node Q to S, see Figure 6-11 below. Switch 8 would consist of a Greenway following the route of the historic SNCR railway line, passing to the south of Manorhamilton in the vicinity of the Manorhamilton Mart.



Figure 6-11 Switch 8 – Historic SLNCR to Manorhamilton Mart (Nodes Q to S)

6.2.6.2 Section 4 – Manorhamilton to Blacklion

Switch 9 – R283, Thur Mountain offers an alternative to the Green Corridor Option between Node U to V. As shown in Figure 6-12 below, east of Munakill More Switch 9 offers an alternative to the north of the Green Corridor by joining the R283 to head east closer to Thur Mountain before linking into the existing SLNCR Greenway east of Glenfarne. The Corridor Option would consist of new offline and online walking and cycling facilities in the vicinity of the road corridor.

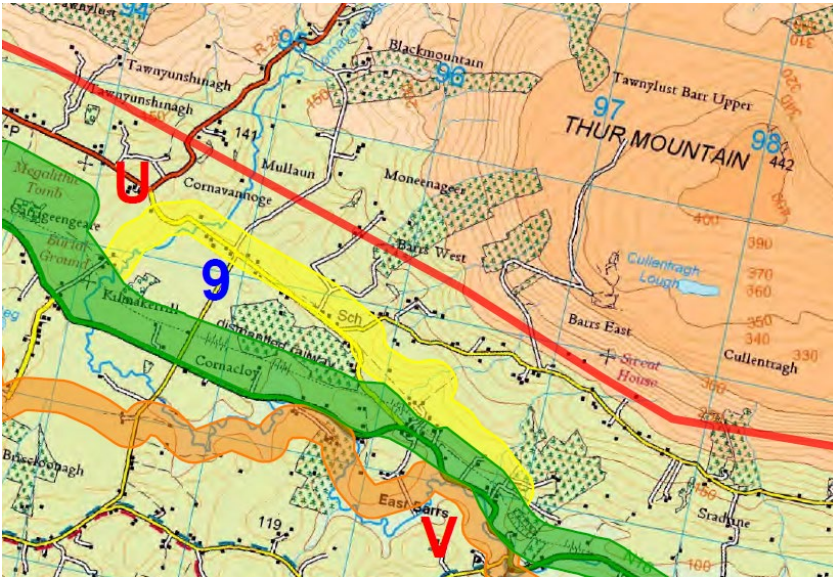


Figure 6-12 Switch 9 - R283, Thur Mountain (Nodes U to V)

Switch 10 – N16, Lough Macnean Upper offers an alternative to the Green Corridor Option between Node X to Z, see Figure 6-13 below. Switch 10 follows the N16 road corridor near the southern shore of Lough Macnean Upper. The alignment would consist of new offline and online walking and cycling facilities in the vicinity of the road corridor.

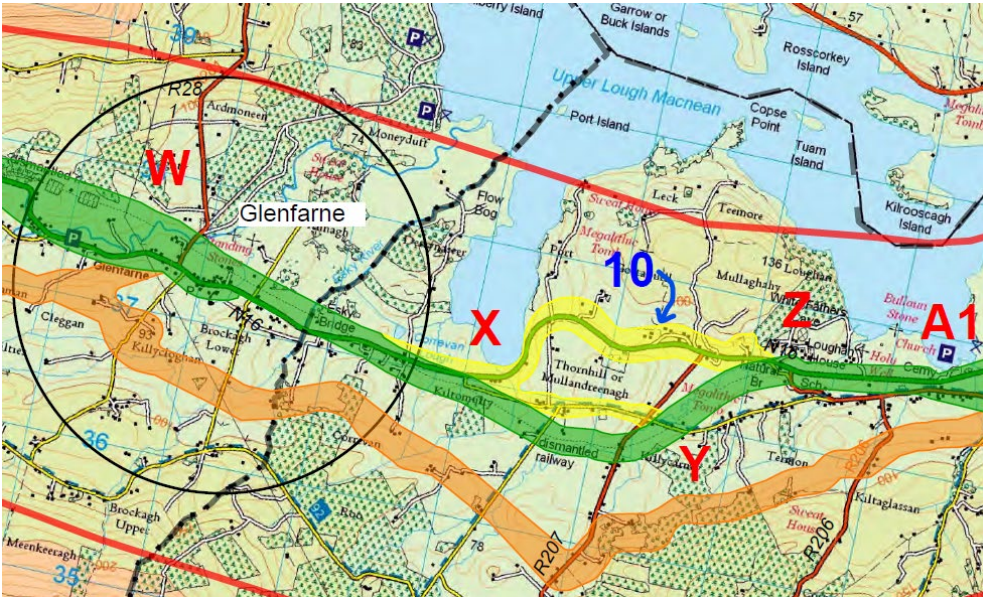


Figure 6-13 Switch 10 - N16, Lough Macnean Upper (Node X to Z)

Switch 11 – L5000 & L1001 Thornhill Road offers an alternative to the Green Corridor Option between Node X to Y, see Figure 6-14 below. Switch 11 follows the L5000 and L1001 Thornhill Road corridor between the historic SLNCR and the N16 road corridor. A ‘Quiet streets’ approach and prohibiting through traffic will be considered between these Nodes.

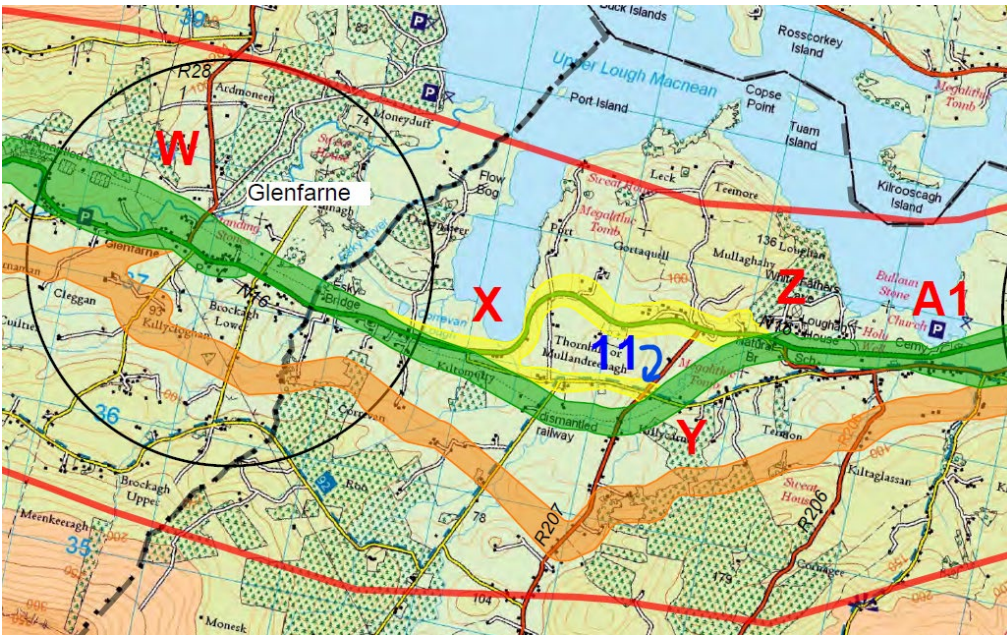


Figure 6-14 Switch 11 – L5000 and L1001 Thornhill Road (Node X to Y)

Switch 12 – L1000 Thornhill Road and R206 offers an alternative to the Green Corridor Option between Node Y to A1, see Figure 6-15 below. Situated between Glenfarne and Blacklion, Switch 12 follows the route of the L1000 Thornhill Road and the R206. Consideration being given to making this a no through route and applying a ‘Quiet streets’ approach.



Figure 6-15 Switch 12 - L1000 Thornhill Road and R290

Switch 13 – via a new bridge at the site of the Historic SLNCR railway bridge over Belcoo River. This Switch offer an alternative to the Green Corridor Option between Nodes B1 to D1, see Figure 6-16 below. Switch 13 proposes an offline walking and cycling route following the historic SLNCR to the west of Blacklion and Belcoo.

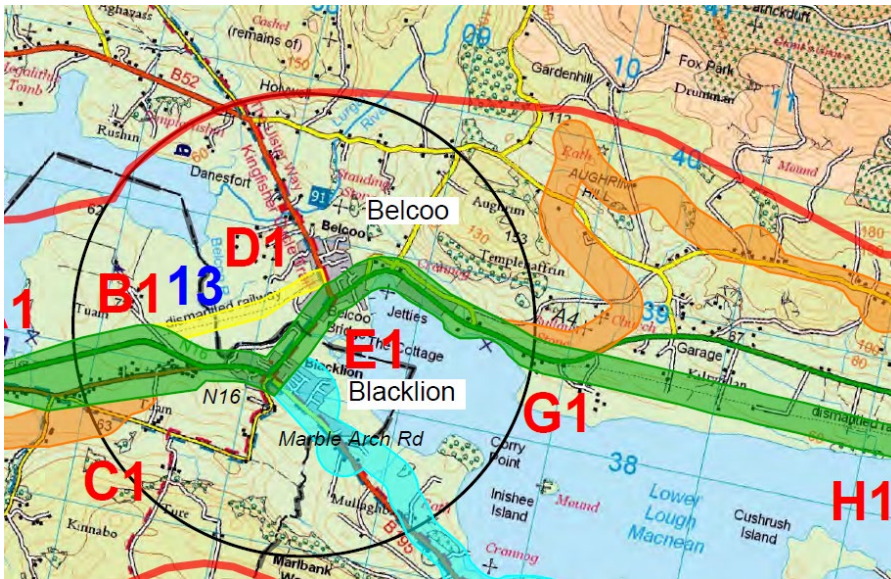


Figure 6-16 Switch 13 - New bridge at the site of the Historic SLNCR railway bridge over Belcoo River

6.2.6.3 Section 5 - Blacklion/Belcoo to Enniskillen

Switch 14 - Marlbank Wood offers a switch between the Orange, Cyan and/or Green Corridor Options to the south of Blacklion, between Node C1 to F1. As shown in Figure 6-17 below, Switch 14 initially follows the L1011 where a no through route / ‘Quiet streets’ approach would be introduced before the alignment moves offline to pass to the north of Marlbank Wood through agricultural land before tying back into the Marble Arch Road.

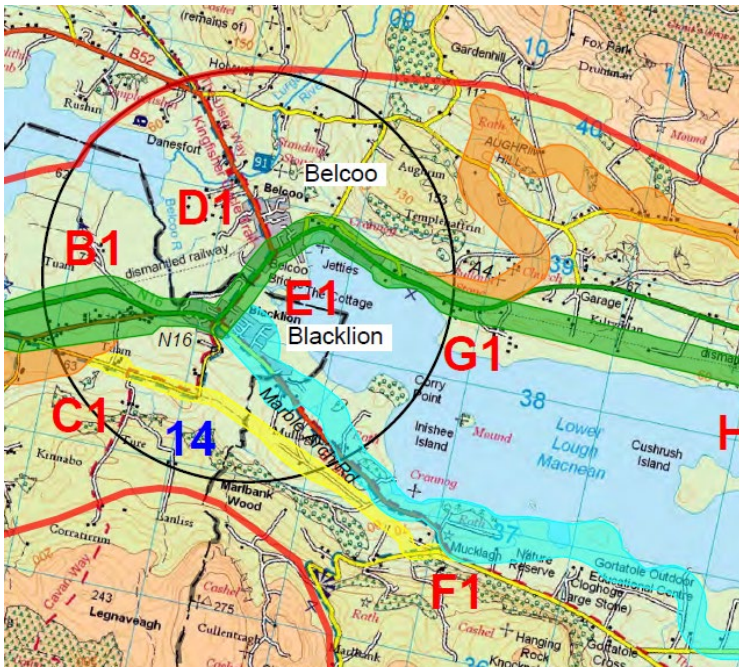


Figure 6-17 Switch 14 - Marlbank Wood (Node C1 to F1)

Switch 15 – A4 at the Belcoo Quarry offers an alternative to the Green Corridor Option between Node G1 to H1 (see Figure 6-18 below). Switch 15 follows the route of the A4 Sligo Road to the north of Lough Macnean Lower in the vicinity of the Belcoo Quarry. Switch 15 would involve the provision of new segregated walking and cycling facilities along the A4.

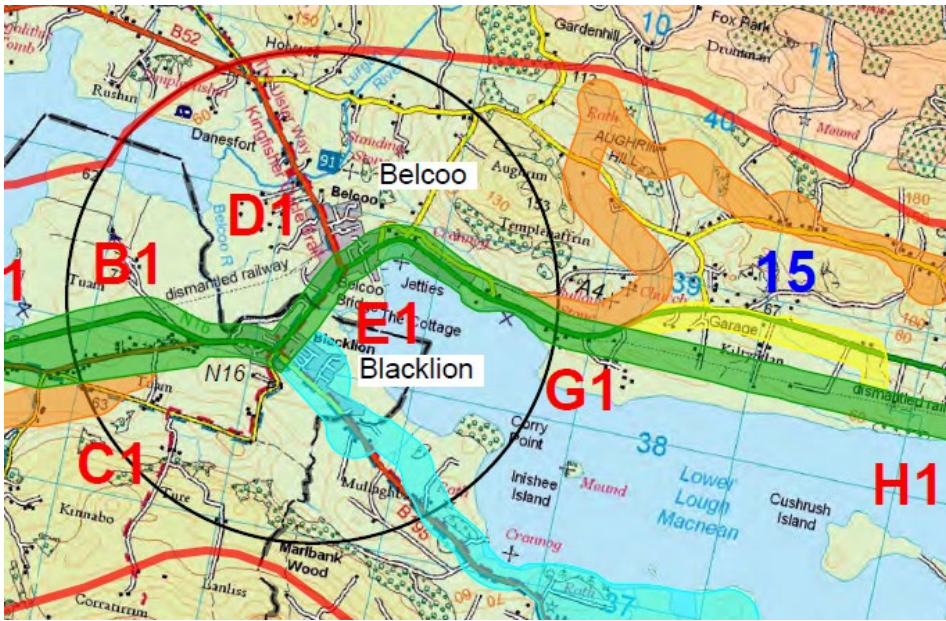


Figure 6-18 Switch 15 - A4 at the Belcoo Quarry (Node G1 to H1)

Switch 16 – East shore of Lough Macnean Lower offers a switch opportunity to (and from) the Cyan Corridor Option to the Green Corridor Option to the east of Lough Macnean Lower between Node I1 to J1. (See Figure 6-19 below). This would be achieved through a new offline walking and cycling facility adjacent to an existing shared access. A new crossing of the Arney River would be required as part of Switch 16.

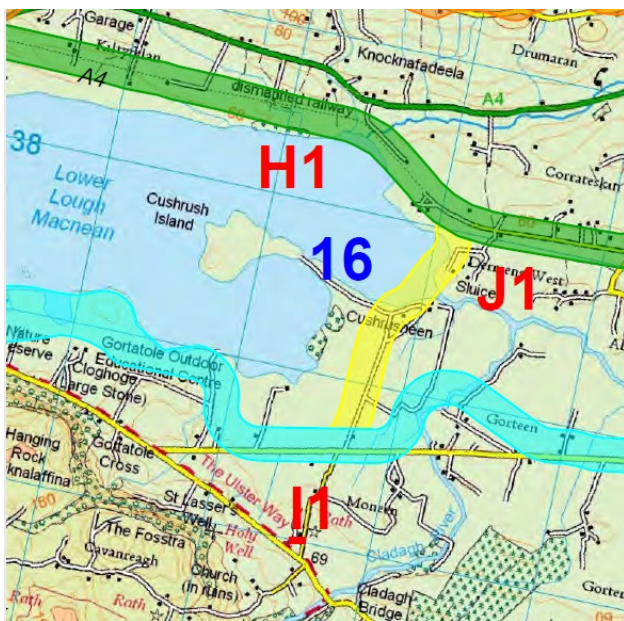


Figure 6-19 Switch 16 - East shore of Lough Macnean Lower (Node I1 to J1)

Switch 17 – Mullaghduin offers alternatives to the Green Corridor Option between Nodes H1, K1 & M1. See Figure 6-20 below. Switch 17 initially follows the A4 Sligo Road in the form of a new offline walking and cycling facility before traversing agricultural land to the south of the A4 towards the Abohill Road. A link back to the Green Corridor could be provided in proximity to the Sligo Line/ Abohill Road junction (Node K1) or Switch 17 could continue offline in an easterly direction towards Letterbreen crossing the A4 Sligo Road and traversing agricultural land to the north of the road corridor before linking into the Cyan Corridor Option (Node M1) west of Letterbreen.

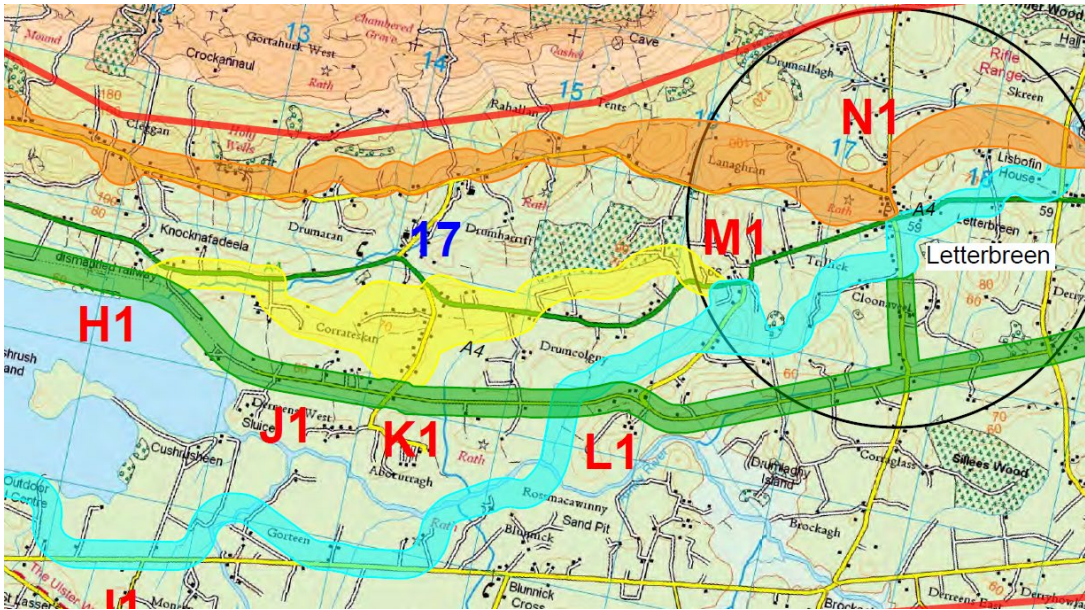


Figure 6-20 Switch 17 - Mullaghduin (Nodes H1, K1 & M1)

Switch 18 – A4 into Letterbreen offers an alternative to the Cyan Corridor Option between Node M1 to N1 by following the A4 Sligo Road into Letterbreen through a combination of new online walking and cycling facilities (see Figure 6-21 below).

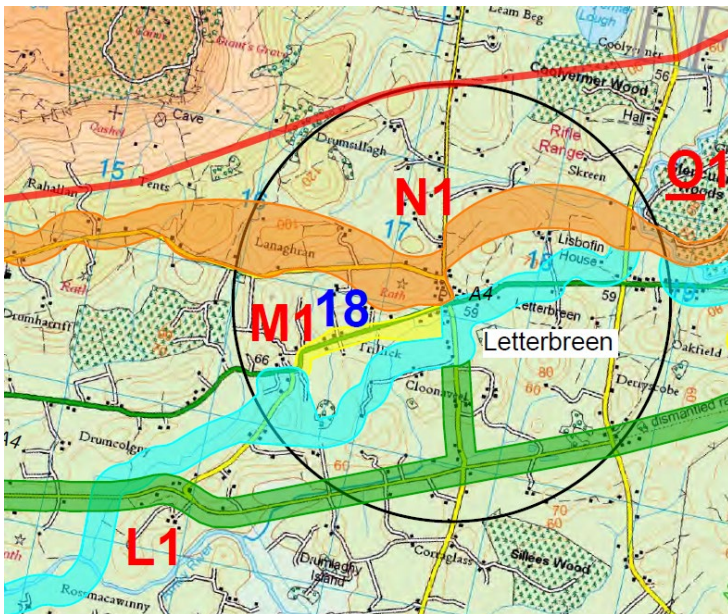


Figure 6-21 Switch 18 - A4 into Letterbreen (Node M1 to N1)

Switch 19 – Glencunny Woods to Drumrainy Bridge offers an opportunity to switch to (and from) the Cyan Corridor Option to the Green Corridor Option in the vicinity of Glencunny Woods and Drumrainy Bridge (Node P1 to Q1) by following a shared access and traversing agricultural land. See Figure 6-22 below.

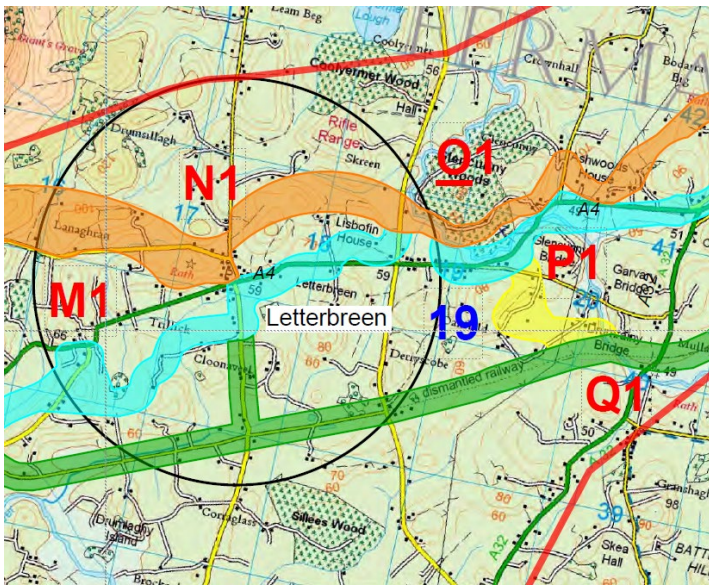


Figure 6-22 Switch 19 - Drumrainy Bridge (Node P1 to Q1)

Switch 20 - Drumrainy Bridge to Cappog Road offers an alternative to the Green Corridor Option between Node Q1 to R1, see Figure 6-23 below. In the vicinity of Drumrainy Bridge Switch 20 move offline through agricultural land before tying into Cappog Road where a no through route / ‘Quiet streets’ approach is being considered.

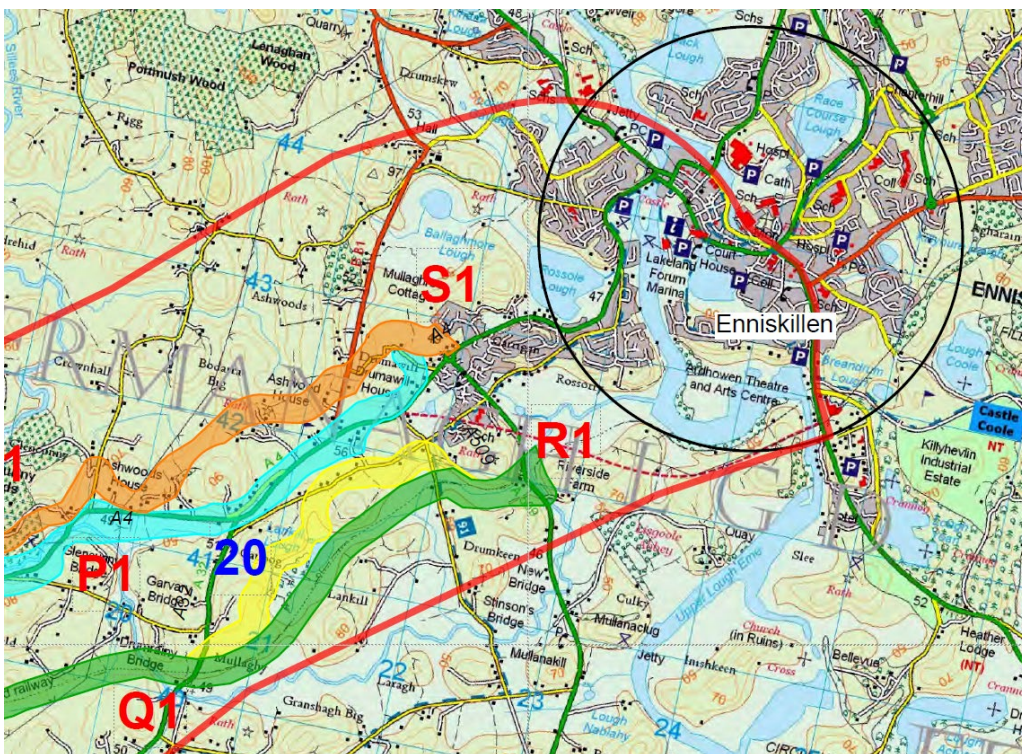


Figure 6-23 Switch 20 - Drumrainy Bridge to Cappog Road (Node Q1 to R1)

6.2.7 Option E – Blue Corridor Access to Ballysadare (Switch 2)

The Blue Corridor Access to Ballysadare (Switch 2) is shown in Figure 6-24 below. Switch 2 offers an alternative to the Green Corridor Option and the Yellow Alternative Corridor - Switch 21 between Nodes C to D. Switch 2 uses existing crossings of the N4 and the existing Dublin-Sligo railway whilst also providing direct access into the town of Ballysadare.

The Blue Corridor would involve the enhancement of existing walking and cycling facilities through Ballysadare, namely online walking and cycling facilities along the N59 and the signpost EuroVelo 1 which would consist of upgrades to an offline path between the N59 and “Old Road” in Ballysadare. From “Old Road” walking and cycling facilities in Bushy Park and Youngs Roads would be upgraded to tie into an existing walking and cycling route that passes under the Dublin-Sligo railway and N4 in the vicinity of the Ballysadare River (Node D).

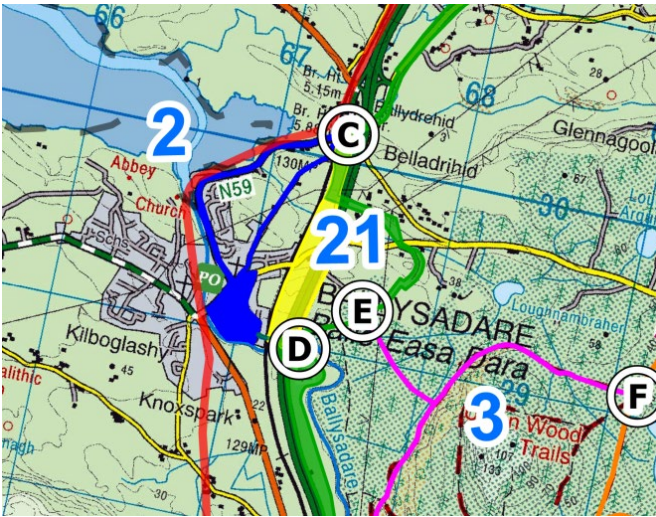


Figure 6-24 Switch 2 - Blue Corridor Access to Ballysadare

6.2.8 Option F – Magenta Corridor through Union Wood (Switch 3)

The Magenta Corridor through Union Wood (Switch 3) is shown in is shown in Figure 6-25 below. Switch 3 offers an alternative to the Orange Corridor Option between Node F to G and/or the Green Corridor Option between Node E to G. Switch 3 uses existing paths through Union Wood to the west of Union Rock.

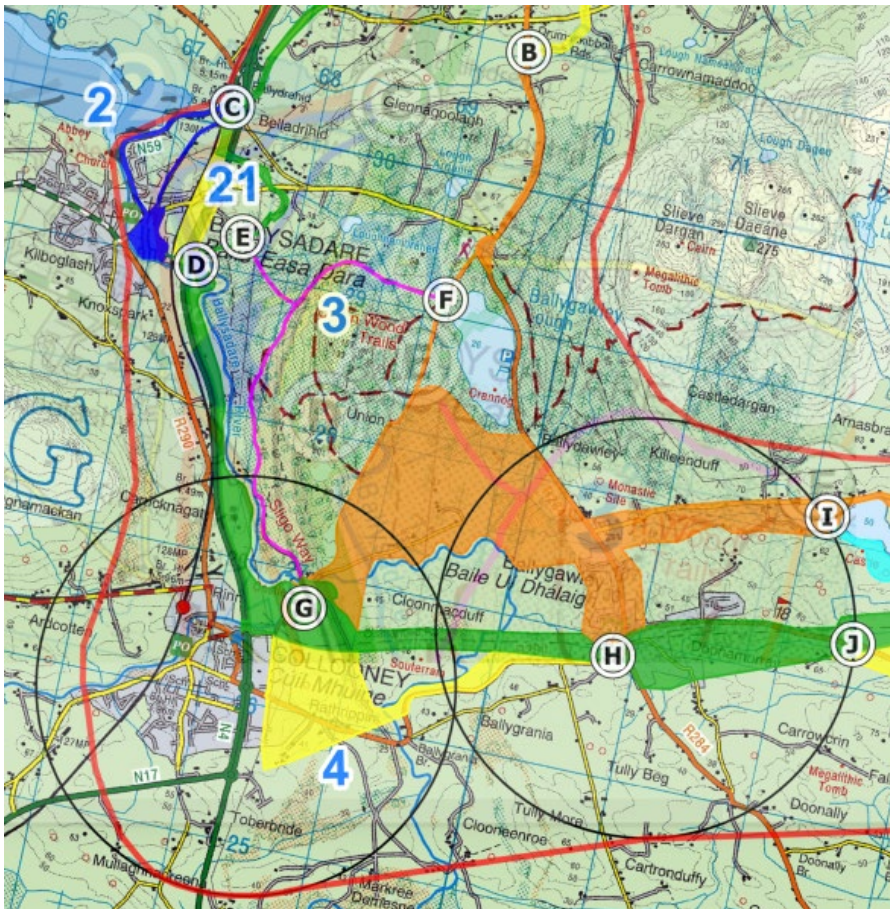


Figure 6-25 Switch 3 - Magenta Corridor through Union Wood

6.3 Findings from Second Public Consultation

The purpose of the Second Public Consultation was to inform the public of the Corridor Options that have been developed as part of this phase of the project along with the key constraints identified to date and the programme for advancement for the project. The Second Public Consultation took place between 23 October 2023 and 24 November 2023. The public were notified of the public consultation period and consultation events through advertisement on different forms of media, including the project website, the Irish governments consultation site, print, broadcast, and social media.

A total of four in person consultation events were held on the following dates:

- Public Consultation Event 1: 06 November 2023, Sligo Park Hotel & Leisure Club, Co. Sligo. – 110 attendees.
- Public Consultation Event 2: 07 November 2023, Community Centre Belcoo, Co. Fermanagh. – 50 attendees.
- Public Consultation Event 3: 08 November 2023, The Rainbow Ballroom, Glenfarne, Co. Leitrim – 50 attendees.
- Public Consultation Event 4: 16 November 2023, Fermanagh House, Enniskillen, Co. Fermanagh – 60 attendees.

As part of this public consultation an exercise was completed to identify landowners who are potentially impacted by one or more of the proposed Corridor Options. Landowner data was sourced from the Land and Property Service (Northern Ireland) in June 2023 and the Property Registration Authority (Ireland) in March 2023.

In advance of the consultation period commencing, a total of 3183 letters were issued to landowners within the Study Area and statutory stakeholders between 18 October 2023 and 19 October 2023 informing potentially impacted landowners about the project and inviting them to attend one of the three in-person consultation events. A copy of the letter is contained within Appendix A of the 'Public Consultation Report - Option Selection' (see Appendix E).

A total of 16 Councillors within the municipal district of the SLNCR Greenway Study Area attended a Teams meeting with the Project Team on 19 October 2023 where they were informed of the process used by the Project Team to develop the Corridor Options and to answer any queries they may have in advance of the public consultation period.

Following this meeting it was decided that an additional in person consultation event would be held in Enniskillen to encourage greater engagement with residents in the area and to increase the project's profile in Enniskillen. To advertise this event an additional 544 letters were sent to residents and landowners within Fermanagh and Omagh on 26 October 2023 to inform them of the additional in-person consultation event being held.

During the public consultation period, a total of 1,816 users (unique IP addresses) visited the website. Between Monday 23 October 2023 and Friday 24 November 2023 the website was visited a total of 4,027 times.

Throughout the public consultation period, formal submissions were accepted via post, feedback forms during the consultation events, the 'contact us' page on the website, and by email. A total of 147 individual submissions were received via the project website, project email and in-person submissions during the various consultation events.

Feedback received during the in-person consultation events was mixed. In general people were positive towards the idea of Greenway but had concerns around where the final route might be.

Discussions around how different corridor options could potentially impact landowners dominated discussion during in person events and typically those that were most vocal in opposition to a Greenway held concerns around the potential impact which a Greenway could have on their land / farm. The potential for severance of land and the knock-on impact that this could have on the viability/operation of a farm was the most prevalent reason for landowners within a Corridor Option having a negative opinion towards the project.

Those in favour of the project expressed opinions such as the positive impact to the local community which a Greenway could have and/or the economic benefits the project could bring to the local area. The absence of

safe walking and cycling facilities outside of towns and facilities were raised as reasons for attendees to the consultation events being in favour of the project.

The feedback received shows that there is a mixture of support and opposition for the project. It has reaffirmed that there is desire for the provision of safe walking and cycling infrastructure across the region whilst also highlighting landowner concerns should the preferred route impact upon their holding.

A copy of the second *Public Consultation Report - Option Selection* can be found in Appendix E.

6.4 Engineering Assessment

6.4.1 Introduction

An engineering assessment and appraisal of each of the twenty Switches relative to the Corridor Option for which they offer an alternative has been completed. This engineering assessment has been broken down into the following criteria:

- Journey Quality
- Safety
- Structures
- Comparative Cost

The methodology and results of each assessment are presented in the following sections.

The assessment has been divided geographically into Sections, between settlements within the Study Area. The following Sections are used:

- Section 1 – Carraroe to Collooney
- Section 2 – Collooney to Dromahair
- Section 3 – Dromahair to Manorhamilton
- Section 4 – Manorhamilton to Blacklion / Belcoo
- Section 5 – Blacklion / Belcoo to Enniskillen

In the engineering assessment, the Corridor Options and Switches are scored (7 to 1) based on Table 13.0.9 of the *Project Appraisal Guidelines (PAG) Unit 13.0 - Appraisal of Active Modes*, unless otherwise stated. Each impact shall be scored based on the seven-point scale below and an integer shall be assigned according to the impact level.

1	2	3	4	5	6	7
Major Negative	Moderate Negative	Minor Negative	Neutral	Minor Positive	Moderate Positive	Major Positive

Table 6-3 TII's Seven-point scoring procedure

The primary constraints considered in this assessment, including road crossings, structures, and elevation contours, are outlined in Figure 6-26, Figure 6-27, Figure 6-28, and Figure 6-29 below. These can also be viewed in ARP-PDV-P2-DR-255-258 Stage 1 Engineering Assessment in Appendix C.

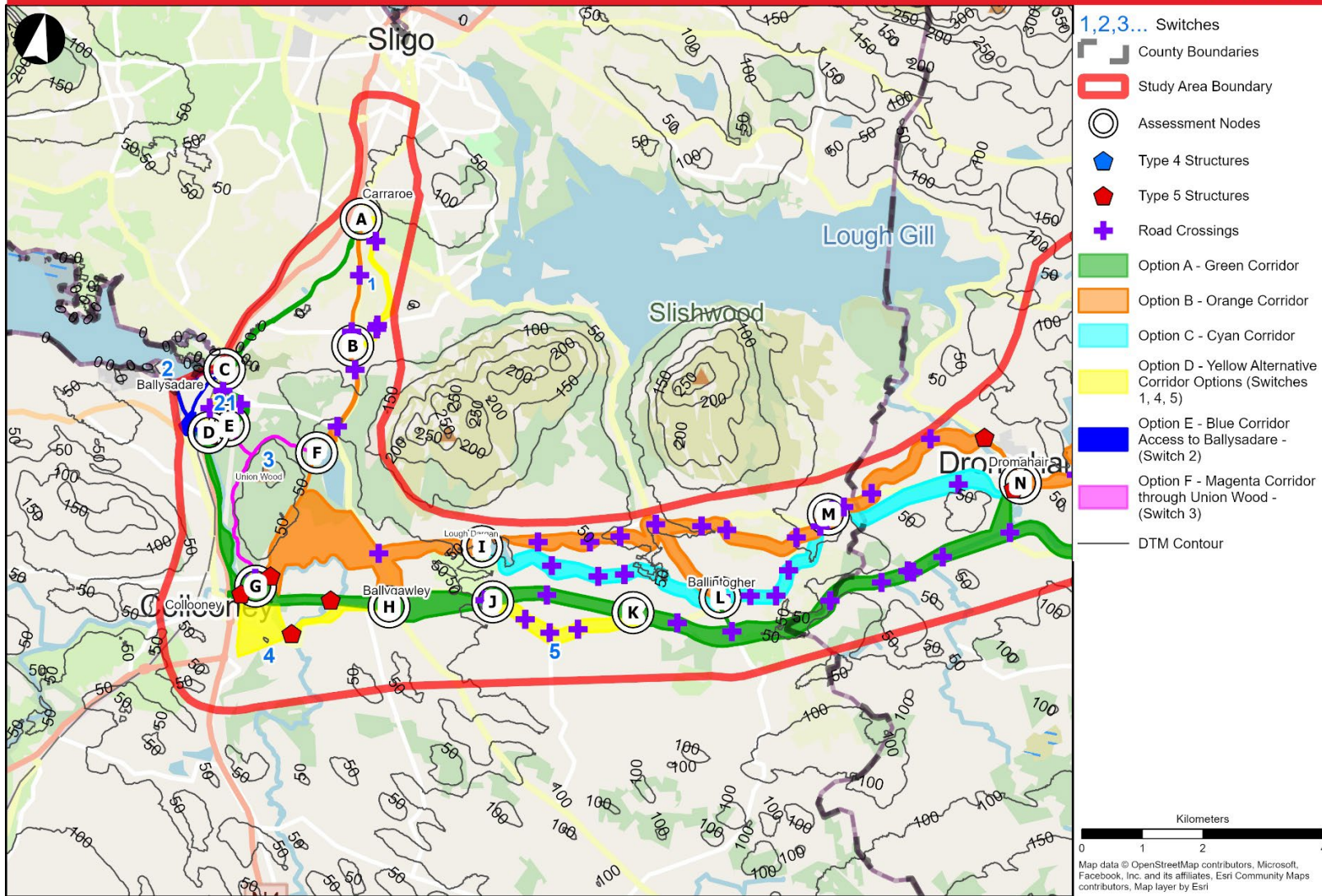


Figure 6-26 Stage 1 Corridor Options - Engineering Assessment Sheet 1

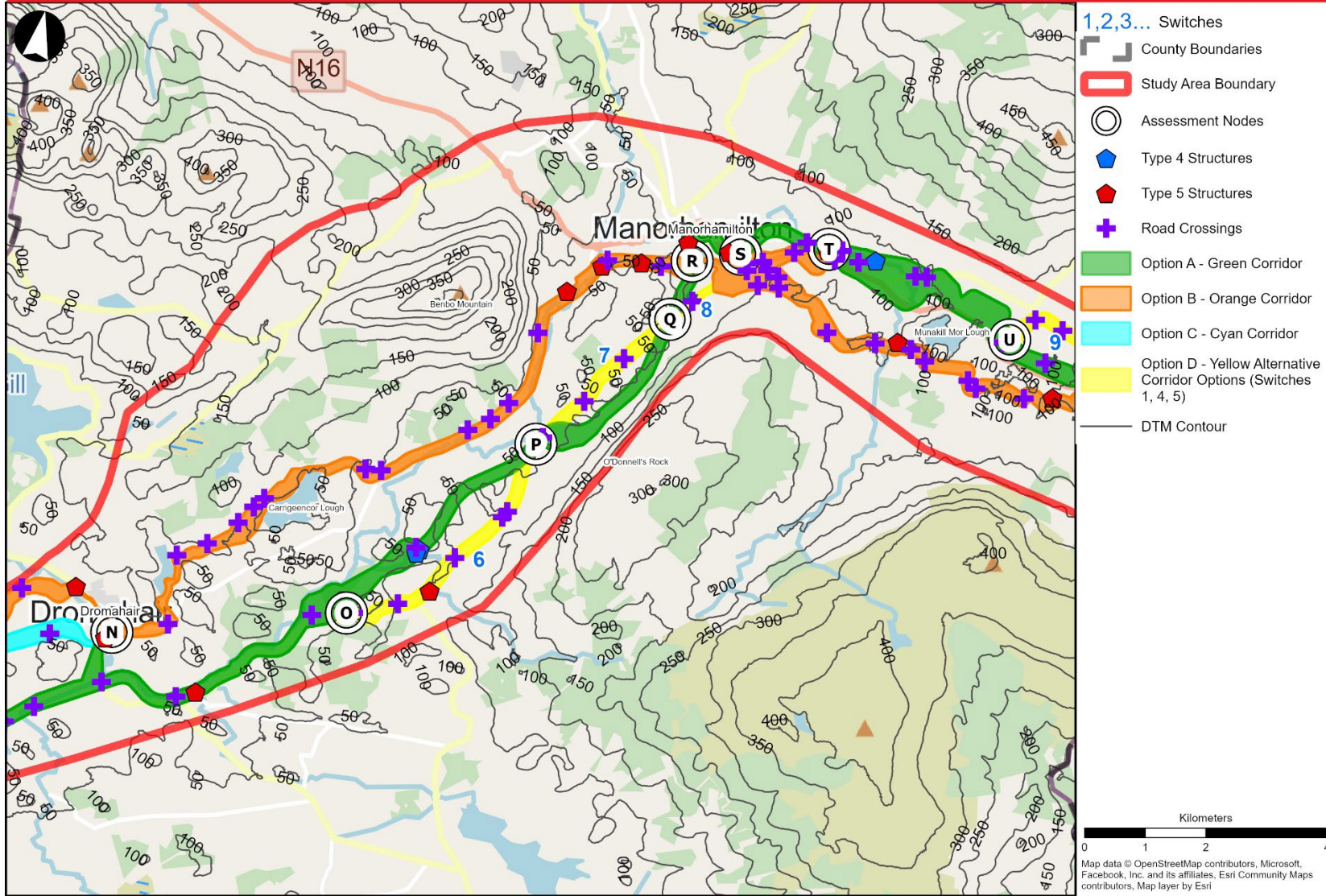


Figure 6-27 Stage 1 Corridor Options - Engineering Assessment Sheet 2

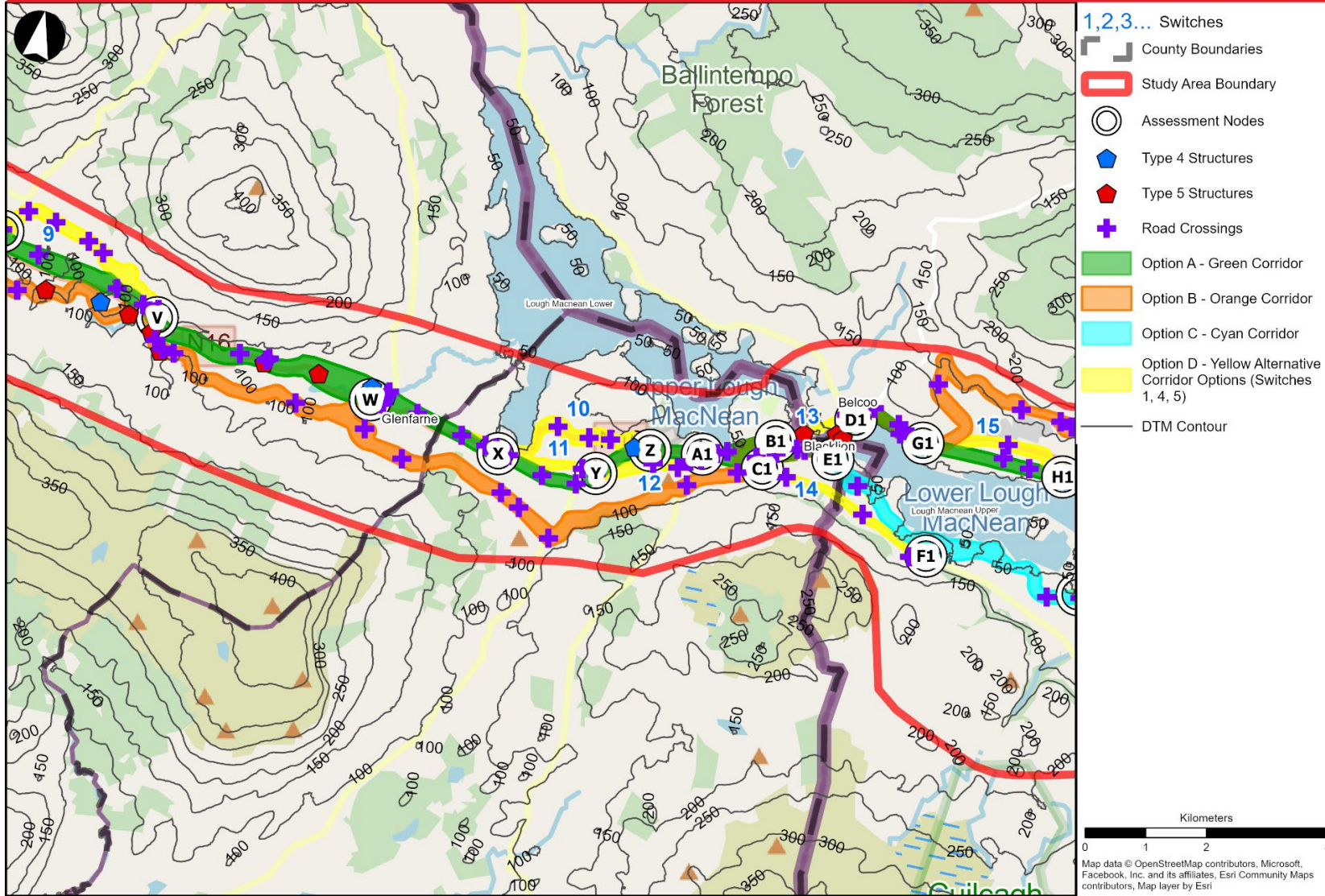


Figure 6-28 Stage 1 Corridor Options - Engineering Assessment Sheet 3

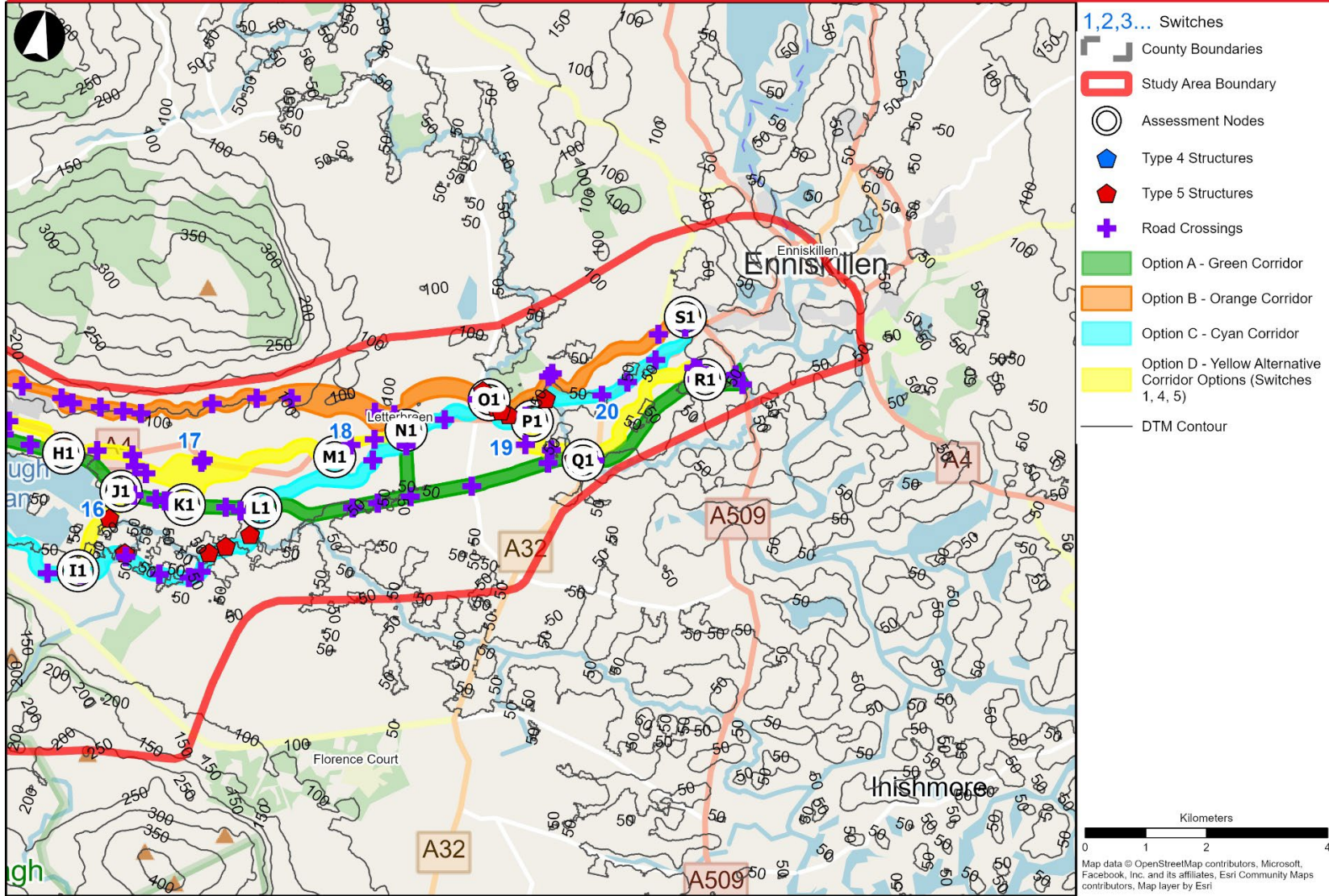


Figure 6-29 Stage 1 Corridor Options - Engineering Assessment Sheet 4

6.4.2 Journey Quality

The TAF Sub-criterion ‘Journey Quality’ has been qualitatively appraised by considering the Directness, Comfort and Segregation & Separation offered by each of the Corridor Options.

Directness has been assessed based on the length of the Corridor between each of the key population centres identified. Due to the topography being constrained in locations within the Study Area some of the Corridors are required to follow contours to try and limit the vertical gradient of the facility. This results in a less direct route between the population centres and a longer journey time and greater costs.

The comfort of the facility has been assessed in terms of the vertical geometry, the width of the facility and the level of separation that could be provided within the Corridor Option.

The vertical geometry of each Corridor Options has been assessed based on TII’s design standard for Rural Cycleway Design (Offline & Greenway), DN-GEO-03047. A summary of the vertical alignment requirements for cycling facilities as outlined in DN-GEO-03047 is shown in Figure 6-30. It is noted within the standard that ‘*Comfort and attractiveness of a cycleway will be greatly increased if the route follows a shallow gradient.*’ Adhering to these gradients will enable a universally accessible facility to be provided, that is attractive to people of all age groups and abilities.

Requirement	Gradients
Desirable Minimum	0.5%
Desirable Maximum	3%
One Step Below Desirable Maximum	5% (max 150m long)

Figure 6-30 DN-GEO-03047 Vertical Alignment Requirements

Indicative alignments were created for each Corridor Option using modelling software (Civil3D) and open-source Digital Terrain Model (DTM) information (1m grid). These alignments were used to create vertical profiles for each Corridor Option. These vertical profiles were assessed against the standards shown in Figure 6-30. In addition, a site visit was undertaken in some locations. This was able to confirm or better inform what the vertical profile of the Corridor Options would likely be, particularly Corridors adjacent to existing roads. It should be noted that for the purpose of the assessment the sections of the Green Corridor that are directly on the historic SLNCR railway line, are assumed to be universally accessible and provide a facility that adheres to the standards in Figure 6-30.

Width and Segregation is also considered within this assessment. An offline, fully segregated Greenway facility, similar to what is shown in Figure 6-31 would be more comfortable and attractive for users compared to an online footpath, cycle lane or cycle track facility. Therefore, a fully segregated Greenway would score higher as part of this assessment. If the Corridor is constrained for space and would only facilitate a cycle lane or cycle track it has been assessed to identify if it would conform with the widths and clearances set out in section 2.6 of the Cycle Design Manual. If these cannot be achieved the Corridor will score lower on the basis that this would be less comfortable for the user and therefore reduce the level of service.

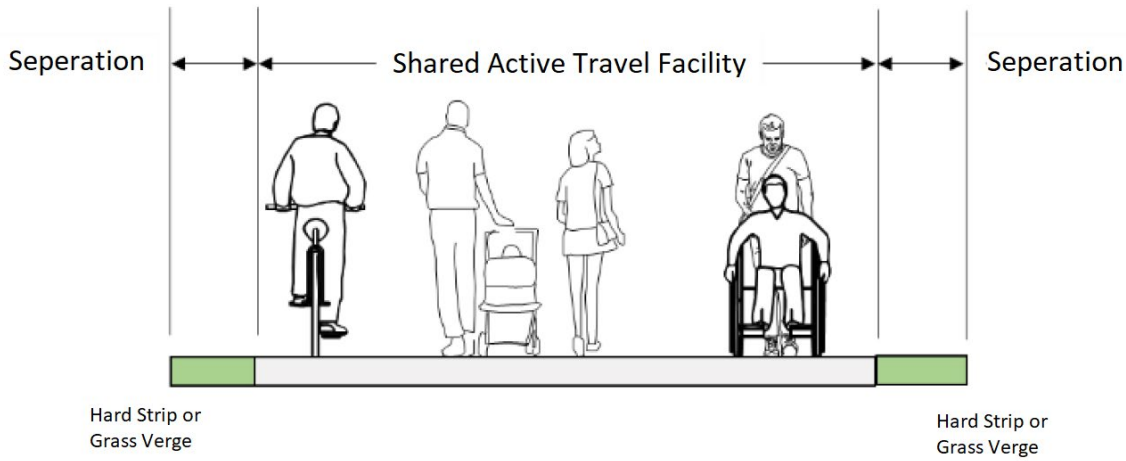


Figure 6-31 Greenway Cross section from DB-GEO-03047 Rural Cycleway Design

A Corridor Option with greater separation from the local road network would be more attractive to Greenway users than a facility adjacent to the carriageway. An offline solution affords a greater level of comfort to users than a facility adjacent to a busy road. The number of crossings of the local road network will also contribute to the users feeling of comfort as for at grade crossing the Greenway user would be required to yield to vehicular traffic introducing the need to stop and start rather than continuing at their own pace.

The comparative assessment of the Corridor Options is based on the seven-point scale as shown in Section 6.4.1. The Corridor Options are compared and scored against the Do-Nothing Option. For this assessment, any facility provided would be an improvement on the existing situation, as existing walking and cycling infrastructure within the Study Area are limited to population centres. As a result, the Corridor Options will all score 4 or above for this assessment. Areas where there are existing walking or cycling infrastructure e.g. through Union Wood in Section 1 will likely score less than a new Greenway facility in an area where there are no existing walking or cycling facilities.

6.4.2.1 Section 1 – Carraroe to Collooney - (Node A to G)

The Green Corridor Option from Node A to C would consist of a new shared use path adjacent to the existing Old Dublin Road Corridor. It is expected that there would be suitable space to provide the width and segregation required in the Cycle Design Manual for an 80kph road. As the Corridor follows an existing road there would be multiple interactions with existing roads and accesses. The exact the number would be dependent on the side of the road on which the facility is provided on but a conservative 16No. interactions can be considered likely. Initial alignments indicate that a compliant geometric alignment, both vertical and horizontal could be provided resulting in a facility that would be comfortable for users of varying ability and conform to TII standards. As there is an existing footpath along some sections of the Old Dublin Road (discontinuous facilities) the Green Corridor Option between Node A to C has been assigned a PAG score of 6 – Moderate Positive.

Between Node C to E the Green Corridor Option uses an existing walking/cycling trail between the N4 and the existing Dublin to Sligo railway line. The existing path is offline and fully segregated. The existing path follows the terrain but is steeper than desirable in places. Within this section of the Green Corridor Option two new formal crossings of the N4 and a local road would be provided before connecting into an existing offline, segregated path through the north of Union Wood. The Green Corridor Option between Node A to C has been assigned a PAG score of 5 – Minor Positive.

Between Node E to G the Green Corridor Option would consist of an offline shared use path on the land between the N4 and the Ballysadare river, conforming to the width and segregation required in the Cycle Design Manual. Initial alignments indicate that a compliant geometric alignment, both vertical and horizontal could be provided resulting in a facility that would be comfortable for users of varying ability and conform to TII standards. Despite the Green Corridor Option providing a high level of ‘Comfort’ and ‘Directness’ a score of 6 – Moderate Positive has been assigned as there is already an existing path through Union Wood on the opposite side of the river.

Table 6-4 below summarises the scores for this section of the Green Corridor

Green Corridor Option Nodes	Score
A-C	6
C-E	5
E-G	6

Table 6-4 Stage 1 Eng. Assessment, Section 1 Green Corridor Option Journey Quality

Between Node A and B the Orange Corridor Option is constrained by properties on both sides of the R284. The Orange Corridor Option would take the form of enhanced walking and cycling facilities adjacent to the existing carriageway but would not comply to requirements noted in the Cycle Design Manual both in terms of segregated and/or cross section. Initial alignments indicate that the vertical alignment of the existing R284 between these Nodes does not conform to TII standards in terms of walking and cycling with existing gradients $\geq 5\%$ over 150m. As the Corridor follows an existing road there would multiple interactions with existing roads and accesses. The exact the number would be dependent on the side of the road on which the facility is provided on but a conservative 20No. interaction locations can be considered likely. The Orange Corridor Option between Node A to B has been assigned a PAG score of 5 – Minor Positive on the basis that there is not currently a continuous walking/cycling facility between these nodes and the introduction of continuous footways would be an improvement.

Between Node B to F the facility provided within the Orange Corridor Option would be a fully segregated walking and cycling facility adjacent to the R284 before joining the existing path through Union Wood. This section would conform to the width and segregation required in the Cycle Design Manual. However, in terms of the vertical geometry, initial alignments indicate that the vertical alignment of the existing R284 between these Nodes does not conform to TII standards in terms of walking and cycling with existing gradients $\geq 5\%$ over 150m. The facility would also interact with three existing roads and accesses in this section. The Orange Corridor Option between Node B to F has been assigned a PAG score of 5 – Minor Positive.

Between Node F to G the Orange Corridor Option would use existing paths within Union Wood, providing a fully segregated facility. The paths have the potential to be upgraded and widened where required, to provide a facility that conforms to the width required in the Cycle Design Manual. The facility would interact with a limited number of existing roads or accesses depending on the route and a site walkover confirmed that a localised improvements /realignments to the existing path would create a comfortable route for users of varying ability. The Orange Corridor Option between Node B to F has been assigned a PAG score of 5 – Minor Positive

Orange Corridor Option Nodes	Score
A-B	5
B-F	5
F-G	5

Table 6-5 Stage 1 Eng. Assessment, Section 1 Orange Corridor Option Journey Quality

Yellow Alternative Corridor - Switch 1 provides an offline alternative to the Orange Corridor Option. This facility would be fully segregated and would adhere to the width and segregation required in the Cycle Design Manual. Initial alignments indicate that a compliant geometric alignment, both vertical and horizontal could be provided resulting in a facility that would be comfortable for users of varying ability and conform to TII standards. The Yellow Alternative Corridor - Switch 1 crosses one regional road and two small local roads. Yellow Alternative Corridor - Switch 1 is preferable to the Orange Corridor Option between Nodes A to B.

Corridor Option (Node A-B)	Score
Orange Corridor Option	5
Yellow Alternative Corridor - Switch 1	7

Table 6-6 Stage 1 Eng. Assessment, Section 1 Switch 1 Journey Quality

The Blue Corridor Access to Ballysadare - Switch 2 provides an alternative to the Green Corridor Option in this section. The Blue Corridor Access to Ballysadare - Switch 2 would involve the enhancement of existing walking and cycling facilities through Ballysadare, namely online walking and cycling facilities along the N59 and/or use the existing signposted EuroVelo 1 route on the Bushy Park Road. A facility along the N59 would not comply to requirements noted in the Cycle Design Manual both in terms of segregation and/or cross section and a facility on Bushy Park Road would not conform to TII standards in terms of walking and cycling with existing gradients $\geq 5\%$ over 150m. However, initial alignments indicate that the vertical alignment of the existing N59 would conform to TII standards in terms of gradient. The Blue Corridor Access to Ballysadare - Switch 2 between Node C to E has been assigned a PAG score of 5 – Minor Positive.

Yellow Alternative Corridor – Switch 21 provides an alternative option to the Blue and Green Corridor Options between Nodes C-D. Switch 21 would provide an offline route to the east of Ballysadare that ties into the path between Ballysadare and Union Wood and offers an alternative to the existing EuroVelo 1 cycle route on Bushy Park. The facility would be fully segregated and adhere to the width and segregation requirements of TII standards. Initial alignments indicate that the facility would not conform to TII standards in terms of walking and cycling with existing gradients $\geq 5\%$ over 150m but would be an improvement on the existing alignment of Bushy Park (Switch 2).

Corridor Option (Node C to E)	Score
Green Corridor Option	5
Blue Corridor Access to Ballysadare - (Switch 2)	5
Yellow Alternative Corridor - Switch 21	6

Table 6-7 Stage 1 Eng. Assessment, Section 1 Blue Corridor Access to Ballysadare Journey Quality

The Magenta Corridor uses the existing Union Wood path and provides an alternative option to the Orange Corridor Option (Node F to G) and Green Corridor Option (Node E to G) in this section. A site walkover confirmed that a localised improvements /realignments to the existing path would create a comfortable route for users of varying ability and could adhere to the widths required in the Cycle Design Manual. The facility would interact with a limited number of existing roads or accesses.

Vertical gradients on the Orange Corridor Option are more constrained between these Nodes, hence why it has scored less than the Magenta and Green Corridor Options.

Corridor Option (Node E to G)	Score
Green Corridor Option	6
Magenta Corridor through Union Wood - (Switch 3)- Switch 3	6

Table 6-8 Stage 1 Eng. Assessment, Section 1 Magenta Corridor (E to G) Journey Quality

Corridor Option (Node F to G)	Score
Orange Corridor Option	5
Magenta Corridor through Union Wood - (Switch 3)	6

Table 6-9 Stage 1 Eng. Assessment, Section 1 Magenta Corridor (F to G) Journey Quality

6.4.2.2 Section 2 – Collooney to Dromahair – (Node G to N)

Between Nodes G to N the Green Corridor Option would provide a fully segregated facility that adheres to the width and segregation required in the Cycle Design Manual. Initial alignments indicate that a compliant geometric alignment, both vertical and horizontal could be provided resulting in a facility that would be comfortable for users of varying ability and conform to TII standards.

The Green Corridor Option broadly follow the historic SLNCR railway line which provides a more direct link between these Nodes when compared to the Orange and Cyan Corridors in this section. The Green Corridor Option would pass through Ballygawley and a direct link in Ballintogher would be provided via enhance walking and cycling facilities on “Kingsfort”. The Green Corridor Option between Node G to L has been assigned a PAG score of 7 – Major Positive.

South and east of Dromahair the Green Corridor Option would also use the existing demonstration section of the SLNCR Greenway. A walking and cycling link into Dromahair would also be provided via a “Quiet streets” facility on the L4252 and enhancements to existing footways along the R287. The Green Corridor Option between Node L to N has been assigned a PAG score of 6 – Moderate Positive.

Green Corridor Option Nodes	Score
G-H	7
H-J	7
J-K	7
K-L	7
L-N	6

Table 6-10 Stage 1 Eng. Assessment, Section 2 Green Corridor Option Journey Quality

Between Node G to L the Orange Corridor Option would provide either a segregated facility offset from the existing local road network and / or an offline Greenway. A link off this facility would be provided into both Ballygawley and Ballintogher via walking and cycling facilities adjacent to the R284 and L3605, respectively. Initial alignments indicate that while a vertical alignment which conforms to TII standards in terms of walking and cycling could be developed by following the existing terrain, it would be more circuitous and likely have a larger footprint than the Green Corridor Option. The Orange Corridor Option between Node G to I has been assigned a PAG score of 7 – Major Positive.

Initial modelling also returned that an alignment that would adhere to the width and segregation required in the Cycle Design Manual could be developed, except for a short section to the north of Lough Dargan between Node I and L where private dwellings, the existing topography (cross slope) and the Lough create a pinch point where an engineered solution would be required in order to achieve full segregation, potentially a boardwalk across the northern shore of the Lough). The Orange Corridor Option between Node I to L has been assigned a PAG score of 6 – Moderate Positive.

Between Node L to M the Orange Corridor Option would be wholly offline until it reaches Gortownan and interacts with the R290 where at least two road crossing would be required in order to follow the topography, avoid private dwellings and the junction between the R290 and R287. Initial alignments indicate that while a vertical alignment which conforms to TII standards in terms of walking and cycling could be developed it would be more circuitous than the Green Corridor Option and earthworks (cut slopes and embankments) in excess of 0.5m in height may be required, resulting in a larger footprint. The Orange Corridor Option between Node L to M has been assigned a PAG score of 5 – Minor Positive.

Between Node M to N the Orange Corridor Option would pass through Dromahair via the R287, R288, Churchfield and Drumlease Road where enhanced walking and cycling facilities would be provided. Owing to the existing building line these facilities are unlikely to adhere to the width and segregation required in the Cycle Design Manual and discontinuities in the cycling provision cannot be ruled out at this stage. The Orange Corridor Option between Node M to N has been assigned a PAG score of 5 – Minor Positive.

Table 6-11 sets out the scores that have been assigned to each piece of the Orange Corridor between the relevant Nodes.

Orange Corridor Option Nodes	Score
G-H	7
H-I	7
I-L	6
L-M	5
M-N	5

Table 6-11 Stage 1 Eng. Assessment, Section 2 Orange Corridor Option Journey Quality

Between Nodes I to L the Cyan Corridor Option would provide an offline Greenway facility outside of Ballintogher, with walking and cycling facilities provided through the village. Initial alignments indicate that while a vertical alignment which conforms to TII standards in terms of walking and cycling could be developed by following the existing terrain. The Cyan Corridor Option between Node I to L has been assigned a PAG score of 7 – Major Positive.

Similar to the Orange Corridor Option, in the vicinity of Gortownan the Cyan Corridor Option begins to interact with the R290 where at least two road crossing would be required in order to follow the topography, avoid private dwellings and the junction between the R290 and R287. Between Ballintogher and Gortownan, near Tobernainia earthworks (cut slopes and embankments) in excess of 0.5m in height may be required to achieve a more desirable vertical alignment resulting in a larger footprint. The Cyan Corridor Option between Node L to M has been assigned a PAG score of 5 – Minor Positive.

Between Nodes M and N the Cyan Corridor would provide an offline Greenway and Initial alignments indicate that a compliant geometric alignment, both vertical and horizontal could be provided resulting in a facility that would be comfortable for users of varying ability and conform to TII standards. The Cyan Corridor Option between Node M to N has been assigned a PAG score of 6 – Moderate Positive as to the south the SLNCR Greenway Dromahair already provides a recreational walking and cycling facility. Table 6-12 sets out the scores that have been assigned to each piece of the Cyan Corridor between the relevant Nodes.

Cyan Corridor Option Nodes	Score
I-L	7
L-M	5
M-N	6

Table 6-12 Stage 1 Eng. Assessment, Section 2 Cyan Corridor Option Journey Quality

Switch 4 provides an alternative to the Green and/or Orange Corridor Options between Node G to H. A facility that would adhere to the width and segregation required in the Cycle Design Manual would be provided within this Alternative Corridor. Initial alignments indicate that while a vertical alignment which conforms to TII standards in terms of walking and cycling could be developed for the Greenway this would not be the case for the link into Collooney where existing gradients of $\geq 5\%$ are present over $>150\text{m}$. The Yellow Alternative Corridor would also have greater interaction with the exiting road network and at least one additional road crossing (of the R290) would be required relative to the Green and Orange Corridor Options.

For these reasons, the Yellow Alternative Corridor – Switch 4 has been assigned a PAG score of 6 – Moderate Positive.

Corridor Option (Nodes G to H)	Score
Orange Corridor Option (G-H)	7
Green Corridor Option (G-H)	7
Yellow Alternative Corridor - Switch 4 (G-H)	6

Table 6-13 Stage 1 Eng. Assessment, Section 2 Switch 4 Journey Quality

Switch 5 provides an alternative option to the Green Corridor Option between Node J to K. A facility that would adhere to the width and segregation required in the Cycle Design Manual would be provided within this Alternative Corridor. Initial alignments indicate that while a vertical alignment which conforms to TII standards in terms of walking and cycling could be developed. However, the route would be more circuitous and less direct compared to the Green Corridor Option as it follows existing contours whilst avoiding properties and cultural heritage sited located adjacent to the R290.

The Yellow Alternative Corridor would also have greater interaction with the exiting road network and at least one additional road crossing (of the R290) would be required relative to the Green Corridor Option. For these reasons, the Yellow Alternative Corridor – Switch 5 has been assigned a PAG score of 6 – Moderate Positive.

Corridor Option (Nodes J to K)	Score
Green Corridor Option	7
Yellow Alternative Corridor – Switch 5	6

Table 6-14 Stage 1 Eng. Assessment, Section 2 Switch 5 Journey Quality

6.4.2.3 Section 3 – Dromahair to Manorhamilton – (Node N to S)

Between Node N to P the Green Corridor Option would provide a fully segregated facility that would adhere to the width and segregation required in the Cycle Design Manual. Initial alignments indicate that a compliant geometric alignment, both vertical and horizontal could be provided resulting in a facility that would be comfortable for users of varying ability and conform to TII standards.

The Green Corridor Option broadly follow the historic SLNCR railway line between these Nodes which provides a straighter and more direct route when compared to the Orange Corridor Option. Between Nodes N to O the proposed facility would be adjacent to the R287 and at least one road crossing cannot be ruled out at this time. The Green Corridor Option between Node N to O has been assigned a PAG score of 6 – Moderate Positive and a score 7 – Major Positive between Node O to P.

Between Node P to Q the Green Corridor Option leaves the historic SLNCR line by crossing the R280 to follow an existing ‘Quiet streets’ facility along a quiet local road (Larkfield Manor). This route is already signposted as a walking and cycling route and a ‘Quiet streets’ approach would be adopted along this section with access restricted to local access only. This facility would not be fully segregated from local traffic and a site visit confirmed that the existing vertical gradient exceed 5% over >150m in places. The Green Corridor Option between Node P to Q has been assigned a PAG score of 5 – Minor Positive.

Between Node Q to S the Green Corridor Option would provide enhanced walking and cycling facilities through Manorhamilton. Owing to the urban nature and existing building line full segregated would not be practical and the width available may lead to departures from the requirements set out in the Cycle Design Manual.

A site visit confirmed that existing vertical gradients exceed 5% over >150m in places through Manorhamilton would not be universally accessible and any facility within the Green Corridor Option would have a greater interaction with side roads and accesses to properties and commercial facilities when compared to the Yellow Alternative Corridor – Switch 8 and/or the Orange Corridor Options which both pass to the south of Manorhamilton. For these reasons, the Green Corridor Option between Node Q to S has been assigned a PAG score of 5 – Minor Positive.

Green Corridor Option Nodes	Score
N-O	6
O-P	7
P-Q	5
Q-R	5
R-S	5

Table 6-15 Stage 1 Eng. Assessment, Section 3 Green Corridor Option Journey Quality

Between Node N to R the Orange Corridor Option would provide a fully segregated facility that would adhere to the width and segregation required in the Cycle Design Manual. The Corridor is more constrained in terms of vertical geometry in Section 3 when compared to the Green Corridor Option.

Initial alignments indicate that a compliant geometric alignment, both vertical and horizontal could be provided across the majority of the route however there would be areas between Dromahair and Carrigeencor Lough where existing vertical gradients exceed 5% over >150m in places and a compliant alignment may not be practical without taking a more circuitous route and significant earthworks (cut slopes and embankments in excess of 0.5m in height) resulting in a larger footprint.

Between Nodes N to R the Orange Corridor Option would have approx. 14 road crossing roads making it a less comfortable from a Journey Quality perspective than the Green Corridor Option. The Orange Corridor Option between Node N to R has been assigned a PAG score of 6 – Moderate Positive.

Between Node R to S the Orange Corridor Option would provide a fully segregated facility that would adhere to the width and segregation required in the Cycle Design Manual. The existing topography to the southeast of Manorhamilton is constrained and initial alignments indicate that the vertical alignment between these Nodes may not conform to TII standards in terms of walking and cycling with existing gradients $\geq 5\%$ over 150m but would be preferable when compared to the Green Corridor Option.

The Orange Corridor would have less interaction with side roads and accesses to properties and commercial facilities when compared to the Green Corridor Option between these Nodes. The Orange Corridor Option between Node R to S has been assigned a PAG score of 6 – Moderate Positive.

Orange Corridor Option Nodes	Score
N-R	6
R-S	6

Table 6-16 Stage 1 Eng. Assessment, Section 3 Orange Corridor Option Journey Quality

Yellow Alternative Corridor – Switch 6 provides an alternative to the Green Corridor Option between Nodes O to P. A facility that would adhere to the width and segregation required in the Cycle Design Manual could be provided adjacent to the R287 and R280 but there may be discontinuities in the provision. Initial alignments indicate that the vertical alignment between these Nodes may not conform to TII standards in terms of walking and cycling with existing gradients $\geq 5\%$ over 150m and there would be additional road crossings and interaction with direct accesses relative to the Green Corridor Option. For these reasons, the Yellow Alternative Corridor – Switch 6 has been assigned a PAG score of 5 – Minor Positive.

Corridor Option	Score
Green Corridor Option	7
Yellow Alternative Corridor – Switch 6	5

Table 6-17 Stage 1 Eng. Assessment, Section 3 Switch 6 Journey Quality

Yellow Alternative Corridor – Switch 7 provides an alternative to the Green Corridor Option in this section. A facility that would adhere to the width and segregation required in the Cycle Design Manual would be provided adjacent to the R280. Initial alignments indicate that a vertical alignment which conforms to TII standards in terms of walking and cycling could be developed by following the existing terrain. Similarly to the Green Corridor, Yellow Alternative Corridor – Switch 7 would cross the R280 but would also have an additional crossing of a local road. Yellow Alternative Corridor – Switch 7 between Node P to Q has been assigned a PAG score of 6 – Moderate Positive.

Corridor Option (Node P to Q)	Score
Green Corridor Option	5
Yellow Alternative Corridor – Switch 7	6

Table 6-18 Stage 1 Eng. Assessment, Section 3 Switch 7 Journey Quality

Yellow Alternative Corridor – Switch 8 provides an alternative to the Green Corridor Option between Nodes Q to S. The facility would be fully segregated and would adhere to the width and segregation required in the Cycle Design Manual. A facility that would adhere to the width and segregation required in the Cycle Design Manual could be provided and initial alignments indicate that a compliant geometric alignment, both vertical and horizontal could be provided resulting in a facility that would be comfortable for users of varying ability and conform to TII standards. Yellow Alternative Corridor – Switch 8 provides a more direct route for users continuing on the Greenway and would have less interaction with side roads and accesses to properties and commercial facilities when compared to the Green Corridor Option. Yellow Alternative Corridor – Switch 8 between Node Q to S has been assigned a PAG score of 6 – Moderate Positive.

Corridor Option (Nodes Q to S)	Score
Green Corridor Option	5
Yellow Alternative Corridor – Switch 8	6

Table 6-19 Stage 1 Eng. Assessment, Section 3 Switch 8 Journey Quality

6.4.2.4 Section 4 – Manorhamilton to Blacklion / Belcoo (Node S to E1)

Between Node S and C1 the Green Corridor Option would provide a fully segregated facility that would adhere to the width and segregation required in the Cycle Design Manual. Initial alignments indicate that a compliant geometric alignment, both vertical and horizontal could be provided resulting in a facility that would be comfortable for users of varying ability and conform to TII standards. Between Nodes S to C1 the Green Corridor Option crosses approximately twenty-three existing roads and shared accesses with three of these interactions being with regional roads (R283, R281 & R206) and one being a National Primary road (N16). The Green Corridor Option broadly follows the historic SLNCR railway line which provides a more direct link between Manorhamilton and Blacklion when compared to the Orange Corridor Option and includes the SLNCR Greenway Glenfarne,

Between Nodes S to Z the Green Corridor Option would be an offline Greenway and scores a 7 – Major Positive. Between Nodes Z to B1 segregated (and where practical separated) walking and cycling facilities would be provided adjacent to the N16 resulting in a score of 6 – Moderate Positive. Between Nodes B1 and D1 an offline Greenway would be provided with a score of 7 – Major Positive and between Nodes B1 to E1 enhanced walking and cycling facilities, linking into the Blacklion Village Trail (Cathal Buí Trail) would be provided resulting in a score of 6 – Moderate Positive.

Green Corridor Option Nodes	Score
S-T	7
T-U	7
U-V	7
V-W	7
W-X	7
X-Y	7
Y-Z	7
Z-A1	6
A1-B1	6
B1-E1	6

Table 6-20 Stage 1 Eng. Assessment, Section 4 Green Corridor Option Journey Quality

Between Node S and C1 the Orange Corridor Option would provide a fully segregated facility that would adhere to the width and segregation required in the Cycle Design Manual. The Orange Corridor Option is more constrained in terms of vertical geometry compared to the Green Corridor, and initial alignments indicate that the vertical alignment in the area southeast of Manorhamilton (Nodes S to T) may not conform to TII standards in terms of walking and cycling and has been assigned a PAG score of 6 – Moderate Positive

As the Orange Corridor Option passes to the south of Munakill Mór Lough and heads in the direction of Glenfarne, existing vertical gradients improve but a more circuitous route would be required relative to the Green Corridor Option in order to provide a route which would be comfortable for users of varying ability and to avoid significant earthworks (cut slopes and embankments in excess of 0.5m in height). This would also be true for the Orange Corridor between Glenfarne (Node W) and west of Blacklion (Node C1). The Orange Corridor between Nodes S to C1 has been assigned a PAG score of 6 – Moderate Positive.

Between Nodes C1 to E1 the Orange Corridor Option would provide enhanced walking and cycling facilities through along the R206 and N16. These facilities would be constrained by private dwelling along the R208 and the existing building line along the N16 meaning that full segregated would not be practical and the width available would lead to departures from the requirements set out in the Cycle Design Manual and potentially discontinuities in the cycling provision. The Orange Corridor between Nodes C1 to E1 has been assigned a PAG score of 5 – Minor Positive.

Cyan Corridor Option Nodes	Score
S-T	6
S-V	6
V-W	6
W-C1	6
C1-E1	5

Table 6-21 Stage 1 Eng. Assessment, Section 4 Orange Corridor Option Journey Quality

Yellow Alternative Corridor – Switch 9 provides an alternative to the Green Corridor Option between Nodes U to V. Yellow Alternative Corridor – Switch 9 would provide a fully segregated facility that would adhere to the width and segregation required in the Cycle Design Manual. However, initial alignments indicate that short sections of this facility would not conform to TII standards in terms of vertical geometry as the existing gradients exceed 5% over 150m. Yellow Alternative Corridor – Switch 9 would also have a greater interaction with the existing road network when compared to the Green Corridor Option between these nodes but would offer a direct link to St. Michael’s National School, Glenfarne. Yellow Alternative Corridor – Switch 9 between Node U to V has been assigned a PAG score of 6 – Moderate Positive.

Corridor Option (Node U to V)	Score
Green Corridor Option	7
Yellow Alternative Corridor – Switch 9	6

Table 6-22 Stage 1 Eng. Assessment, Section 4 Switch 9 Journey Quality

Yellow Alternative Corridor – Switch 10 provides an alternative to the Green Corridor Option between Nodes X to Z. A facility that would adhere to the width and segregation required in the Cycle Design Manual could be provided adjacent to the N16 road corridor near the southern shore of Lough Macnean Upper but there may be discontinuities in the provision. Initial alignments indicate that short sections of Yellow Alternative Corridor – Switch 10 and initial alignments indicate that the vertical alignment in the area southeast of Manorhamilton (Nodes S to T) may not conform to TII standards in terms of walking and cycling. Yellow Alternative Corridor – Switch 10 between Node X to Z has been assigned a PAG score of 6 – Moderate Positive.

Corridor Option (Node X to Z)	Score
Green Corridor Option (X-Y-Z)	7
Yellow Alternative Corridor – Switch 10	6

Table 6-23 Stage 1 Eng. Assessment, Section 4 Switch 10 Journey Quality

Yellow Alternative Corridor – Switch 11 provides an alternative to the Green Corridor Option between Nodes X to Y. It follows the L5000 and L1001 Thornhill Road corridor between the historic SLNCR and N16 road corridor where it was initially proposed that a no through route and a ‘Quiet streets’ approach would be applied. However, it was highlighted during the Second Public Consultation that this road is used as a locally as an alternative route to the N16 and as a result it would be unlikely that a ‘Quiet streets’ would be effective and that there would be local opposition to preventing through traffic.

Instead, an offline alignment was developed and while a segregated facility that would adhere to the width and segregation required in the Cycle Design Manual could be provided initial alignments indicate that the vertical alignment would not conform to TII standards in terms of walking and cycling with existing gradients frequently exceeding 5% over 150m. Yellow Alternative Corridor – Switch 11 between Node X to Z has been assigned a PAG score of 5 – Minor Positive.

Corridor Option (Node X to Y)	Score
Green Corridor Option	7
Yellow Alternative Corridor – Switch 11	5

Table 6-24 Stage 1 Eng. Assessment, Section 4 Switch 11 Journey Quality

Yellow Alternative Corridor – Switch 12 provides an alternative to the Green Corridor Option in this section. It follows the L1000 Thornhill Road and R206. Similar to Yellow Alternative Corridor – Switch 11 above, it was initially proposed that a no through route and a ‘Quiet streets’ approach would be applied. However, it was highlighted during the Second Public Consultation that this road is used as a locally as an alternative route to the N16 and as a result it would be unlikely that a ‘Quiet streets’ would be effective and that there would be local opposition to preventing through traffic.

Instead, an offline alignment was developed and while a segregated facility that would adhere to the width and segregation required in the Cycle Design Manual could be provided initial alignments indicate that the vertical alignment would not conform to TII standards in terms of walking and cycling with existing gradients frequently exceeding 5% over 150m. Yellow Alternative Corridor – Switch 12 between Node Y to A1 has been assigned a PAG score of 5 – Minor Positive.

Corridor Option (Node Y to A1)	Score
Green Corridor Option	7
Yellow Alternative Corridor – Switch 12	5

Table 6-25 Stage 1 Eng. Assessment, Section 4 Switch 12 Journey Quality

6.4.2.5 Section 5 – Blacklion / Belcoo to Enniskillen (Node E1 to S1 / R1)

Between Node E1 and G1 the Green Corridor Option follows the N16/A4 through Blacklion/ Belcoo. The Corridor has been widened in Blacklion to include the Blacklion Village Trail (Cathal Buí Trail) that follows the bank of the Belcoo River. Site visits indicate that a compliant geometric alignment, both vertical and horizontal could be provided resulting in a facility that would be comfortable for users of varying ability and conform to TII standards. Using the existing village trail and Belcoo River Park will reduce the interaction with existing roads and makes achieving segregation / separation for vulnerable road users through Blacklion / Belcoo possible. Due to there being existing walking facilities through Blacklion /Belcoo, the impact of the Green Corridor between these Nodes is considered a ‘Moderate Positive’ rather than a ‘Major Positive’.

Between Node G1 and J1 the Green Corridor Option crosses the A4 and continues via an offline Greenway between the A4 and the northern shore of Lough Macnean Lower to the south of the Belcoo Quarry. This section of the Green Corridor Option would provide a segregated facility that would adhere to the width and segregation required in the Cycle Design Manual. Initial alignments indicate that while a vertical alignment which conforms to TII standards in terms of walking and cycling could be developed.

Between Node J1 and R1 the Green Corridor Option takes the form of an offline facility on or adjacent to the historic SLNCR line and ties into the proposed walking and cycling facilities of the A4 Enniskillen Southern Bypass scheme. This section of the Green Corridor Option would provide a segregated facility that would adhere to the width and segregation required in the Cycle Design Manual.

Green Corridor Option Nodes	Score
E1 – G1	6
G1 – J1	7
J1 – R1	7

Table 6-26 Stage 1 Eng. Assessment, Section 5 Green Corridor Option Journey Quality

Between Node C1 and G1 the Orange Corridor Option follows the Green Corridor Option. See section above for the assessment between these Nodes.

Between G1 and S1 the Orange Corridor Option would provide a segregated facility that would adhere to the width and segregation required in the Cycle Design Manual. The Orange Corridor Option is more constrained in terms of vertical geometry compared to the Green Corridor in this section. Initial alignments indicate that short sections of this facility would not conform to TII standards in terms of vertical geometry as the existing gradients exceed 5% over 150m. The facility would take a more circuitous route as it follows the topography to limit the vertical gradients. This would create a less direct route for users compared to the Green Corridor Option that follows the historic SLNCR line in this section and has resulted in the Orange Corridor Option being assigned a score 5 – Minor Positive between Nodes G1 to S1.

Orange Corridor Option Nodes	Score
C1 – G1	6
G1 – S1	5

Table 6-27 Stage 1 Eng. Assessment, Section 5 Orange Corridor Option Journey Quality

Between E1 and F1 the Cyan Corridor Option provides a segregated facility to the south of Lough Macnean Lower that would adhere to the width and segregation required in the Cycle Design Manual. The topography is constrained in this location and initial alignments indicate that short sections of this facility would not conform to TII standards in terms of vertical geometry as the existing gradients exceed 5% over 150m.

Between F1 and L1 the Cyan Corridor Option provides a segregated facility that would adhere to the width and segregation required in the Cycle Design Manual. Initial alignments indicate that while a vertical alignment which conforms to TII standards in terms of walking and cycling could be developed.

Between L1 and N1 the Cyan Corridor Option provides a segregated facility that would adhere to the width and segregation required in the Cycle Design Manual. The topography is constrained in this location and initial alignments indicate that short sections of this facility would not conform to TII standards in terms of vertical geometry as the existing gradients exceed 5% over 150m. The Cyan Corridor Option would take a more circuitous route as it follows the topography to limit the vertical gradients. This would create a less direct route for users compared to the Green Corridor Option that follows the historic SLNCR line in this section. For these reasons, the Cyan Corridor Option has been assigned a PAG score of 6 – Moderate Positive between Nodes L1 to N1.

Between N1 and S1 the Cyan Corridor Option would be a combination of new offline and online walking and cycling facilities in the vicinity of the A4 road corridor. The facility would adhere to the width and segregation required in the Cycle Design Manual, however it is likely that the Cyan Corridor Option would require multiple crossing points of the A4. This increased interaction with the road corridor would reduce the directness of the facility and therefore the level of service for users. In addition, there may be short sections of the Cyan Corridor Option where the gradients would not be universally accessible. For these reasons, the Cyan Corridor Option has been assigned a PAG score of 5 – Minor Positive between Nodes N1 to S1.

Cyan Corridor Option Nodes	Score
E1 – F1	6
F1- L1	7
L1 – N1	6
N1- S1	5

Table 6-28 Stage 1 Eng. Assessment, Section 5 Cyan Corridor Option Journey Quality

The Yellow Alternative Corridor – Switch 13 provides an alternative to the Green Corridor Option in this section. It follows the route of the Historic SLNCR line and would involve a new bridge at the site of the historic railway bridge over the Belcoo River. The Yellow Alternative Corridor – Switch 13 would provide a segregated facility that would adhere to the width and segregation required in the Cycle Design Manual. Initial alignments indicate that while a vertical alignment which conforms to TII standards in terms of walking and cycling could be developed. The Yellow Alternative Corridor – Switch 13 has been assigned a PAG score of 7 – Major Positive and is the preferred option between these Nodes.

Corridor Option (Node B1 to D1)	Score
Green Corridor Option (B1-E1-D1)	6
Yellow Alternative Corridor – Switch 13	7

Table 6-29 Stage 1 Eng. Assessment, Section 5 Switch 13 Journey Quality

Yellow Alternative Corridor – Switch 14 initially follows the L1011 where a no through route / ‘Quiet streets’ approach would be introduced before the alignment moves offline to tie back into the Marble Arch Road. Initial alignments indicate that significant sections of this facility would not conform to TII standards in terms of vertical geometry as the existing gradients exceed 5% over 150m and the Yellow Alternative Corridor – Switch 14 has been assigned a PAG score of 4 – Neutral as a result.

Corridor Option (Node C1 to F1)	Score
Green Corridor Option (C1 to E1) and Cyan Corridor Option (E1 to F1)	6
Orange Corridor Option (C1 to E1) and Cyan Corridor Option (E1 to F1)	6
Yellow Alternative Corridor – Switch 14	4

Table 6-30 Stage 1 Eng. Assessment, Section 5 Switch 14 Journey Quality

Yellow Alternative Corridor – Switch 15 offers an alternative to the Green Corridor Option in this section by following the A4 Sligo Road. The Yellow Alternative Corridor – Switch 15 would provide a segregated facility that would adhere to the width and segregation required in the Cycle Design Manual. The Green Corridor Option would be slightly more direct for users compared to Yellow Alternative Corridor – Switch 15, however the difference is negligible and therefore will not contribute to a difference in score.

While initial alignments indicate that while a vertical alignment which conforms to TII standards in terms of walking and cycling could be developed but would involve either a crossing of the A4 or significant earthworks. Being a trunk road carrying regional traffic an additional crossing point of the A4 would make Yellow Alternative Corridor – Switch 15 less preferable than the Green Corridor Options.

For this reason, the Yellow Alternative Corridor – Switch 15 is less preferable than the Green Corridor Option between Nodes G1 to H1 and has been assigned a PAG score of 6 – Moderate Positive.

Corridor Option (Node G1 to H1)	Score
Green Corridor Option	7
Yellow Alternative Corridor – Switch 15	6

Table 6-31 Stage 1 Eng. Assessment, Section 5 Switch 15 Journey Quality

Yellow Alternative Corridor – Switch 16 would offer a switch opportunity between the Cyan Corridor Option and the Green Corridor Option to the east of Lough Macnean Lower. To accommodate a like for like assessment between Nodes the Yellow Alternative Corridor – Switch 16 has been appraised between Node I1 and L1 using the Green Corridor Option (J1 to L1) and compared against the Cyan Corridor Option between these Nodes.

Between Nodes J1 to L1 The Yellow Alternative Corridor – Switch 16 and Green Corridor Option would provide a segregated facility that would adhere to the width and segregation required in the Cycle Design Manual. While Initial alignments indicate that while a vertical alignment which conforms to TII standards in terms of walking and cycling could be developed this would be dependent on the type of structure used to cross the Arney River at the mouth of the Lough.

Between Nodes J1 to L1 The Yellow Alternative Corridor – Switch 16 and Green Corridor Option would interact with two more private accesses/roads than the Cyan Corridor Option which is not considered to be significant differentiator. Therefore both Corridor Options have been assigned the same score of 7 – Major Positive between Nodes J1 to N1.

Corridor Option (Node G1 to H1)	Score
Cyan Corridor Option (I1 to L1)	7
Yellow Alternative Corridor – Switch 16 (I1 to J1) and Green Corridor Option (J1 to L1)	7

Table 6-32 Stage 1 Eng. Assessment, Section 5 Switch 16 Journey Quality

Yellow Alternative Corridor – Switch 17 would offer an alternative to the Green Corridor Option between Nodes H1 to K1 and the Green and Cyan Corridor Options between Nodes H1 to M1. The Yellow Alternative Corridor – Switch 17 would provide a segregated facility that would adhere to the width and segregation required in the Cycle Design Manual. Initial alignments indicate that while a vertical alignment which conforms to TII standards in terms of walking and cycling could be developed.

Between these Nodes H1 to M1, Yellow Alternative Corridor – Switch 17 would cross the A4 at least once which would be avoided by the Green and Cyan Corridor Options between these Nodes. Being a trunk road carrying regional traffic this additional crossing point of the A4 would make Yellow Alternative Corridor – Switch 17 less preferable than the Green and Cyan Corridor Options between Nodes H1 to M1 and has been assigned a PAG score of 6 – Moderate Positive.

Corridor Option (Nodes H1, K1 and M1)	Score
Green Corridor Option (H1 to L1) and Cyan Corridor Option (L1 to M1)	7
Yellow Alternative Corridor – Switch 17	6

Table 6-33 Stage 1 Eng. Assessment, Section 5 Switch 17 Journey Quality

The Yellow Alternative Corridor – Switch 18 would offer an alternative to the Cyan Corridor Option. Yellow Alternative Corridor – Switch 18 would provide a more direct route for users compared to the Cyan Corridor Option and initial alignments indicate that while a vertical alignment which conforms to TII standards in terms of walking and cycling could be developed.

However, while a segregated facility that would adhere to the width and segregation required in the Cycle Design Manual, it would require alterations to the A4, which could include at least one road crossing which would be avoided by the Cyan Corridor Options. Being a trunk road carrying regional traffic this additional crossing point of the A4 would make Yellow Alternative Corridor – Switch 17 less preferable than the Cyan Corridor Options and has been assigned a PAG score of 5 – Minor Positive.

Corridor Option (Node M1 to N1)	Score
Cyan Corridor Option	6
Yellow Alternative Corridor – Switch 18	5

Table 6-34 Stage 1 Eng. Assessment, Section 5 Switch 18 Journey Quality

Yellow Alternative Corridor – Switch 19 would offer an opportunity to switch between the Cyan and Green Corridor Options. To accommodate a like for like assessment between Nodes the Yellow Alternative Corridor – Switch 19 has been appraised between Node P1 and R1 using both Yellow Alternative Corridor – Switch 20 (Q1 to R1) and/or the Green Corridor Option (Q1 to R1) before comparing both to the Cyan Corridor Option between Nodes P1 to S1.

This Yellow Alternative Corridor – Switch 19 would provide a segregated facility that would adhere to the width and segregation required in the Cycle Design Manual. However, However, initial alignments indicate that short sections of this facility would not conform to TII standards in terms of vertical geometry as the existing gradients exceed 5% over 150m. Between Nodes Q1 to R1 the Green Corridor Option would be preferable to Yellow Alternative Corridor – Switch 20 for the reasons outline below.

Between these Nodes P1 to S1, the Cyan Corridor Option would cross the A4 at least twice which would be avoided by using Yellow Alternative Corridor – Switch 19. Being a trunk road carrying regional traffic this

additional crossing point of the A4 would make Cyan Corridor less preferable than the Yellow Alternative Corridors.

Corridor Option	Score
Cyan Corridor Option (P1 to S1)	5
Yellow Alternative Corridor – Switch 19 and Green Corridor Option (Q1 to R1)	7
Yellow Alternative Corridor – Switch 19 and Switch 20	6

Table 6-35 Stage 1 Eng. Assessment, Section 5 Switch 19 Journey Quality

Yellow Alternative Corridor – Switch 20 offers an alternative to the Green Corridor Option. A no through route / ‘Quiet streets’ approach on Cappog Road would be provided as part of the Yellow Alternative Corridor – Switch 20, with the rest of the Corridor being an Offline Greenway. The vertical alignment on the Offline Greenway section would not conform to TII standards as the existing gradients exceed 5% over 150m.

The Cappog Road is also used as a locally as an alternative route to the A4 meaning a ‘Quiet streets’ would not be effective and that there would be local opposition to preventing through traffic. The Green Corridor Option would provide an Offline Greenway which could comply with the National Cycle Manual and TII standards and so is preferable to Yellow Alternative Corridor – Switch 20 between Nodes Q1 to R1.

Corridor Option (Node Q1 to R1)	Score
Green Corridor Option	7
Yellow Alternative Corridor – Switch 20	6

Table 6-36 Stage 1 Eng. Assessment, Section 5 Switch 20 Journey Quality

6.4.3 Safety

An independent Stage F Part 1 Road Safety Audit (Stage F1 RSA) has been completed on each of the Corridor Options. The full report is included in Appendix F.

Following a review of each of the Corridor Options, and Switches, and an assessment of the Auditors Checklist for Stage F Road Safety Audits contained within Appendix A of the TII Road Safety Audit Guidelines, GE-STY-01027 (Dec. 2017), the Audit Team identified a number of key safety areas for assessing, and comparing, the Corridor Options for the SLNCR Greenway. The categories chosen for the comparative assessment include:

1. On-Road vs Off-Road.
2. Road Crossings.
3. Gradients.
4. Horizontal Alignment.
5. Links to Urban Centres.

Section 3.2 of the Stage F1 RSA Report describes each of these five categories in further detail, the reasons for their inclusion in the comparative assessment and how each of the Corridor Options were assessed against each category.

Table 5.2 of the Stage F1 RSA Report provides a Total Score (Lowest Score is the Best) for each of the Corridor Options and Switches. In order to include these scores in the Option Appraisal the following conversion as applied:

- Scores less than or equal to 9 were assigned a PAG score of 7
- Scores greater than 9 but less than or 13 were assigned a PAG score of 6
- Scores of greater than or equal to 13 were assigned a PAG score of 5.

This was considered appropriate as the Do-Minimum Option would equate to a PAG score of 4 and “The Audit Team, however, would not consider any of these projects, or the maintenance of existing facilities, as a favourable alternative to any of the proposed Corridor Options in this section, particularly in relation to achieving the objectives of the Scheme, and would, therefore, rank the ‘Do-Minimum’ Option lower than all of the Proposed Corridor Options, which the Audit Team consider would improve on the existing facilities along the general scheme corridor, regardless of what Corridor Option is chosen.” [Stage F1 RSA, Section 4.1.1]

6.4.3.1 Section 1 – Carraroe to Collooney

In this section the Orange Corridor Option offers the most sections of offline facilities when compared with the Green Corridor Option and is considered the safer route due to the reduced interaction with traffic.

However, the Green is considered to be the safer route within this section as it has fewer road crossings and fewer ‘high demand horizontal curves’ (for example 90-degree bends). In addition, the Green Corridor Option is considered better than the Orange Corridor Option with regards to providing links to urban centres. Overall, both Corridor Options score the same in this section.

Corridor Option (Node A to G)	Total RSA Score	Appraisal Score
Green Corridor Option	9	7
Orange Corridor Option	9	7

Table 6-37 Stage F1 RSA - Section 1 Scoring

The Orange Corridor Option includes on-street facilities on the R284, which results in greater interaction with traffic, and is therefore considered less safe.

However, in all other categories the Orange Corridor Option is preferable. It has fewer road crossings, a straighter horizontal alignment and provides better links to urban centres by directly catering for a ribbon development. Overall, the Orange Corridor Option is preferable in this section.

Corridor Option (Node A to B)	Total RSA Score	Appraisal Score
Orange Corridor Option	7.25	7
Yellow Alternative Corridor - Switch 1	10.75	6

Table 6-38 Stage F1 RSA - Yellow Alternative Option - Switch 1 (Node A-B) Rankings

The Green and Yellow Alternative Corridor provide an offline route, while the Blue Corridor Access to Ballysadare – (Switch 2) provides a link through Ballysadare which throughout much of its length, includes on-road facilities which would increase interaction between users traffic on the N59. The Yellow Alternative Corridor (Switch 21) contains the most ‘high demand horizontal curves’ (for example 90-degree bends) and is therefore ranked lower than both the Green and Blue Corridor Access to Ballysadare – (Switch 2).

Both the Green Corridor Option and Blue Corridor Access to Ballysadare – (Switch 2) have a similar number of road crossings and are therefore ranked equally in this category. The Yellow Alternative Corridor (Switch 21) has the least number of road crossings and therefore ranks preferable in this category.

The Blue Corridor Access to Ballysadare – (Switch 2) provides a better link to urban centres and ranks higher in this category. Overall, the Green Corridor is preferred between Nodes C to E.

Corridor Option (Node C to E)	Total RSA Score	Appraisal Score
Green Corridor Option	7	7
Blue Corridor - Switch 2	13.25	5
Yellow Alternative Corridor - Switch 21	12.75	6

Table 6-39 Stage F1 RSA – Switch 2 (Node C-E) Rankings

Magenta Corridor through Union Wood - (Switch 3) offers similar off-line infrastructure between Nodes C and D as the Green and Orange Corridor Options but also provides greater connectivity to urban areas and is therefore considered a more favourable Corridor Option over the Green and Orange Corridor Options between these Nodes.

The Green Corridor Option, Orange Corridor Option and Magenta Corridor through Union Wood - (Switch 3) have a similar number of road crossings and are ranked equally.

The Green and Orange Corridor Options have a slightly favourable horizontal alignment than Magenta Corridor through Union Wood - (Switch 3) and would rank equally above Switch 2. Overall, the Orange and Green Corridors are preferred between these Nodes.

Corridor Option (Node E/F to G)	Total RSA Score	Appraisal Score
Magenta Corridor through Union Wood - (Switch 3)	9.75	6
Orange Corridor Option	7.25	7
Green Corridor Option	7.25	7

Table 6-40 Stage F1 RSA - Switch 3 (Node E/F-G) Rankings

6.4.3.2 Section 2 Collooney to Dromahair

Regarding the three end-to-end Corridor Options, there is little difference in relation to the sections of offline and online facilities with all three corridors ranking equally under this category in this section.

The Cyan Corridor Option has the fewest number of road crossings, with the Green Corridor Option ranking second and the Orange Corridor Option ranking third. The Cyan Corridor Option is considered the safest in terms of gradients as it offers the least distance over which the gradient is above 5%. The Green Corridor Option is ranked next with the Orange Corridor Option ranking last. The Green Corridor Option has the least ‘high demand horizontal curves’ (for example 90-degree bends), followed by the Cyan Corridor Option and then the Orange Corridor Option.

The Green Corridor Option is considered better in terms of connectivity to urban centres than both the Orange Corridor Option and the Cyan Corridor Option. Overall, the favourable end-to-end corridor in this section is the Green Corridor Option.

Corridor Option (Node G to N)	Total RSA Score	Appraisal Score
Green Corridor Option	10	6
Orange Corridor Option	18	5
Cyan Corridor Option	13.25	5

Table 6-41 Stage F1 RSA - Section 2 Scoring

There is little difference in relation to the sections of offline and online facilities for the three Corridor Options and all have the same number of road crossings, and there are no segments where the gradients exceed 5%. As a result, under these three categories, the Corridors Options rank equally.

None of the Corridor Options have any ‘high demand horizontal curves’, however the Green Corridor Option has a straighter horizontal alignment than the other two options and would be preferable as a result.

Both the Green Corridor Option and Orange Corridor Option are preferred over Switch 4 as Switch 4 does not provide a link to Ballygawley. The Green Corridor Option is the preferred corridor between these Nodes.

Corridor Option (Node G to H)	Total RSA Score	Appraisal Score
Green Corridor Option	7.5	7
Yellow Alternative Corridor - Switch 4	13.25	5
Orange Corridor Option	11.25	6

Table 6-42 Stage F1 RSA - Yellow Alternative Option - Switch 4 (Node G-H) Rankings

There is little difference in relation to the sections of offline and online facilities, both the Yellow Alternative Corridor - Swich 5 and the Green Corridor Option rank equally between these nodes.

The Green Corridor Option has no road crossings while the Yellow Alternative Corridor - Switch 5 has three crossings, therefore the Green Corridor is considered preferable under this category. The Green Corridor Option has a straighter horizontal alignment than Switch 5 and would rank higher.

Yellow Alternative Corridor - Swich 5 caters for ribbon development between nodes J and K, as opposed to the Green Corridor Option, which it is an alternative to, which is more rural and passes to the north of these developments.

For linking to urban centres, Yellow Alternative Corridor - Swich 5 is preferable to the Green Corridor Option as it accommodates a ribbon development. Overall, the Green Corridor Option and Yellow Alternative Corridor - Switch 5 rank the same between these Nodes.

Corridor Option (Node J to K)	Total RSA Score	Appraisal Score
Green Corridor Option	9.25	6
Yellow Alternative Corridor - Switch 5	10.25	6

Table 6-43 Stage F1 RSA - Yellow Alternative Option - Switch 5 (Node J-K) Rankings

6.4.3.3 Section 3 – Dromahair to Manorhamilton

The Green Corridor Option ranks lower regarding the sections of online and offline facilities due to the section of the corridor that passes through the town of Manorhamilton. The Orange Corridor Option passes to the south of Manorhamilton via an offline facility and therefore ranks higher.

Green Corridor Option has a significantly fewer number of road crossings (4 vs 12) when compared with the Orange Option. The Orange Corridor Option has fewer sections where the gradient exceeds 5% compared to the Green Corridor Option. It has fewer ‘high demand horizontal curves’ (for example 90-degree bends) therefore the Orange Corridor Option ranks higher in these two categories.

The Green Corridor Option enters Manorhamilton and therefore ranks higher at providing linkages to urban centres. Overall, the end-to-end corridors in this section rank the same.

Corridor Option (Node N to S)	Total RSA Score	Appraisal Score
Green Corridor Option	12	6
Orange Corridor Option	10.5	6

Table 6-44 Stage F1 RSA - Section 3 Scoring

Yellow Alternative Corridor - Switch 6 would include sections of both offline and online facilities while the Green Corridor Option is an entirely offline route. The Green Corridor Option also has fewer road crossings when compared with the Yellow Alternative Corridor - Switch 6. The horizontal alignment of the Green Corridor Option is also preferable. The Green Corridor Option ranks higher based on these three categories.

Yellow Alternative Corridor - Switch 6 has a gradient greater than 5% over a distance of 500m while the Green Corridor Option has a gradient greater than 5% over a distance of 1,000m. Yellow Alternative Corridor - Switch 6 therefore ranks higher. Overall, the Green Corridor Option is preferred between these Nodes.

Corridor Option (Node O to P)	Total RSA Score	Appraisal Score
Green Corridor Option	9	7
Yellow Alternative Corridor - Switch 6	13.5	5

Table 6-45 Stage F1 RSA - Yellow Alternative Option - Switch 6 (Node O-P) Rankings

Yellow Alternative Corridor - Switch 7, between Nodes P and Q, would include sections of both offline and online facilities while the Green Corridor Option, between the same Nodes, is an entirely offline route, and would rank higher.

The Green Corridor Option has fewer road crossings when compared with the Yellow Alternative Corridor - Switch 7 (1 vs 2) and is considered preferable of the two Corridor Options.

Yellow Alternative Corridor - Switch 7 has a gradient greater than 5% over a distance of 100m while the Green Corridor Option has a gradient greater than 5% over a distance of 150m, resulting in the Yellow Alternative Corridor - Switch 7 ranking higher.

The Green Corridor Option, however only by a relatively small distance both the Green Corridor Option and Yellow Alternative Corridor - Switch 7 have the same number of ‘high demand horizontal curves’ (for example 90-degree bends) and similar horizontal alignments overall. Both Routes are, therefore, ranked equally. Overall, the Green Corridor Option is preferable.

Corridor Option (Node P to Q)	Total RSA Score	Appraisal Score
Green Corridor Option	9	7
Yellow Alternative Corridor - Switch 7	11.75	6

Table 6-46 Stage 1 RSA - Yellow Alternative Option - Switch 7 (Node P-Q) Rankings

Both the Yellow Alternative Corridor - Switch 8 and the Orange Corridor Option would be full offline route between Nodes Q and S and would, therefore, rank equally, however both corridors would rank higher than the Green Corridor Option which includes sections of existing walking and cycling facilities as it passes through Manorhamilton between these Nodes.

The Green and Orange Corridor Options have no road crossings while the Yellow Alternative Corridor - Switch 8 has one road crossing, making it the least preferable Corridor Option between these nodes in this comparative assessment, with the Green and Orange Corridor Options ranking equally.

The Green Corridor Option is ranked higher than both the Orange Corridor Option and Yellow Alternative Corridor - Switch 8 as it has a gradient greater than 5% over the shortest section.

The Green and Orange Corridor Options and Yellow Alternative Corridor - Switch 8 have ‘high demand horizontal curves’ (for example 90-degree bends). All three Corridor Options would be considered acceptable between these nodes.

Corridor Option (Node Q to S)	Total RSA Score	Appraisal Score
Yellow Alternative Corridor - Switch 8	12	6
Orange Corridor Option	7.5	7
Green Corridor Option	8.75	7

Table 6-47 Stage F1 RSA - Yellow Alternative Option - Switch 8 (Node Q-S) Rankings

6.4.3.4 Section 4 Manorhamilton to Blacklion/Belcoo

There is little difference between the Green Corridor Option and the Orange Corridor Option in relation to the sections of offline and online facilities in this section and both Corridor Options have, therefore, been ranked equally.

Although the Green Corridor Option is considered to be the safer route within this section in terms of fewer road crossings, the Orange Corridor Option is considered to be preferable in terms of gradients, with a shorter distance over which the gradient is above 5%, with less than half the distance of the Green Corridor Option that exceeds a gradient of 5%.

The Orange Corridor Option however has significantly more ‘high demand horizontal curves’ than the Green Corridor Option which the road safety audit team advised “can present safety problems for users such as restricting forward visibility to opposing users...” and are considered less safe as a result.

Both the Green Corridor Option and Orange Corridor Option pass through Glenfarne and Belcoo/Blacklion. As a result, neither route is considered favourable over the other in this section in relation to their connectivity to urban centres. Overall the Green Corridor Option ranks higher between these Nodes.

Corridor Option (Node S to E1)	Total RSA Score	Appraisal Score
Green Corridor Option	9	7
Orange Corridor Option	10.25	6

Table 6-48 Stage F1 RSA - Section 4 Scoring

Yellow Alternative Option - Switch 10 would include sections of both offline and online facilities while the Green Corridor Option, between the same nodes (X to Z), is an entirely offline route. The Green Corridor Option would, therefore, be ranked higher at this location in terms of road safety.

In terms of road crossings, both the Green Corridor Option and Switch 10 have the same number, and are therefore, ranked equally in this category.

Although both the Yellow Alternative Option - Switch 10 and the Green Corridor Option have no ‘high demand horizontal curves’ (for example 90-degree bends), the Yellow Alternative Option - Switch 10 has a longer distance than the Green Corridor Option where the gradient exceeds 5%, therefore the Green Corridor Option is considered to be preferable.

Yellow Alternative Option - Switch 10 does not offer any benefits over the Green Corridor Option, in relation to connectivity to urban centres. The Green Corridor Option is therefore ranked higher overall.

Corridor Option (Node X to Z)	Total RSA Score	Appraisal Score
Green Corridor Option	7.5	7
Yellow Alternative Option - Switch 10	14	5

Table 6-49 Stage F1 RSA - Yellow Alternative Option - Switch 10 (Node X-Z) Ranking

Yellow Alternative Option - Switch 11 is a fully offline route, similar to the Green Corridor Option, however, it offers a more direct route and is, therefore, considered to be more favourable than the Green Corridor Option in this location.

Yellow Alternative Option - Switch 11 also has fewer road crossing than the Green Corridor Option and is therefore considered preferable.

Between Nodes X and Y, Yellow Alternative Option - Switch 11 has a longer distance than the Green Corridor Option where the gradient exceeds 5%, and the Green Corridor Option is, therefore, considered to be preferable. However, in the horizontal alignment category, Switch 11 offers a better horizontal alignment overall between Nodes X and Y and would, therefore, be considered preferable to the Green Corridor Option.

In terms of links to urban centres, Yellow Alternative Option - Switch 11 does not offer any benefits over the Green Corridor Option.

Corridor Option (Node X to Y)	Total RSA Score	Appraisal Score
Yellow Alternative Option - Switch 11	11	6
Green Corridor Option	11.5	6

Table 6-50 Stage F1 RSA - Yellow Alternative Option - Switch 11 (Node X-Y) Ranking

Yellow Alternative Option - Switch 12, between Nodes Y and A1, is a fully offline route, similar to the Green Corridor Option between the same nodes, however, it offers a more direct route and is, therefore, considered to be more favourable at this location.

The Green Corridor Option has fewer road crossings when compared with Yellow Alternative Option - Switch 12. Therefore, the Green Corridor Option is considered preferable under this category.

Similar to Yellow Alternative Option - Switches 10 and 11, Yellow Alternative Option - Switch 12 has a longer distance than the Green Corridor Option where the gradient exceeds 5%, and the Green Corridor Option is, therefore, considered to be preferable. Yellow Alternative Option - Switch 12 has marginally more ‘high demand horizontal curves’ (for example 90-degree bends) than the Green Corridor Option (1 vs 0), the Green Corridor Option is considered to be a preferable Corridor Option as a result. The Green Corridor Option also provides a better overall alignment.

Yellow Alternative Option - Switch 12 caters for ribbon development between Nodes Y and A1, as opposed to the Green Corridor Option, which is more rural, and is considered favourable over the Green Corridor Option between these two Nodes. The Green Corridor Option is preferable in this location.

Corridor Option (Node Y to A1)	Total RSA Score	Appraisal Score
Yellow Alternative Option – Switch 12	11.75	6
Green Corridor Option	10.75	6

Table 6-51 Stage F1 RSA - Yellow Alternative Option - Switch 12 (Node Y-A1) Ranking

Yellow Alternative Option - Switch 13, between Nodes B1 and D1 is a fully offline route while the Green Corridor Option between the same nodes provides online walking and cycling facilities as it passes through Belcoo/Blacklion and is constrained by the road cross-section. Yellow Alternative Option - Switch 13 is therefore, ranked higher than the Green Corridor Option.

Between Nodes B1 and D1 Switch 13 has fewer road crossings than the Green Corridor Option. Yellow Alternative Option - Switch 13 has one road crossing, and the Green Corridor Option has two. Yellow Alternative Option - Switch 13 also has a gradient greater than 5% over a distance of 150m while the Green Corridor Option has a gradient greater than 5% over a distance of 475m, resulting in the Yellow Alternative Option - Switch 13 being the preferable Corridor Option between these Nodes in both categories. Yellow Alternative Option - Switch 13 has no ‘high demand horizontal curves’ (for example 90-degree bends) while the Green Corridor Option has one 90-degree bend and offers a better horizontal alignment overall between these two nodes (B1 to D1).

Although ranking higher in the other categories, Yellow Alternative Option - Switch 13 does not offer any benefits over the Green Corridor Option in relation to connectivity to urban centres. Overall, Yellow Alternative Option - Switch 13 ranks higher between these nodes.

Corridor Option (Node B1 to D1)	Total RSA Score	Appraisal Score
Yellow Alternative Option - Switch 13	9.5	6
Green Corridor Option	13	5

Table 6-52 Stage F1 RSA - Yellow Alternative Option - Switch 13 (Node B1-D1) Ranking

Yellow Alternative Option - Switch 14 offers an alternative to all three end-to-end Corridor Options at this location; therefore, it is difficult to compare the Corridor Options. If the Cyan Corridor Option is selected in Section 4, the Yellow Alternative Option - Switch 14 would be preferable, however it would not be favoured over the Green or Orange Corridor Options.

Between Nodes C1 and F1, the end-to-end Corridor Options have less road crossings than the Yellow Alternative Option - Switch 14, resulting in either of the end-to-end options being considered preferable.

The Cyan Corridor Option has a shorter distance over which the gradient exceeds 5% when compared with the Yellow Alternative Option - Switch 14 and is considered to be a preferable Corridor Option as a result. Yellow Alternative Option - Switch 14 also has two 'high demand horizontal curves' (for example 90-degree bends) and the Cyan Corridor Option has none, the Cyan Corridor Option also offers a better horizontal alignment between these nodes, therefore, is preferable in both the gradients and horizontal alignment categories.

Yellow Alternative Option - Switch 14 does not offer any benefits over the Green and Cyan Corridor Options between Nodes C1 and F1). Overall, the end-to-end Corridor Options rank higher than the Yellow Alternative Option - Switch 14.

Corridor Option (Node C1 to F1)	Total RSA Score	Appraisal Score
Yellow Alternative Option - Switch 14	13.75	5
Green / Orange / Cyan Corridor Options	7.5	7

Table 6-53 Stage F1 RSA - Yellow Alternative Option - Switch 14 (Node C1-F1) Ranking

6.4.3.5 Section 5 Blacklion/Belcoo to Enniskillen

There is little difference between the three end-to-end Corridor Options in relation to sections of offline and online facilities in this section. The Cyan Corridor Option, however, contains short sections of online facilities which would lead to this Corridor being ranked lower than the other two in relation to road safety.

Regarding road crossings, the Cyan Corridor Option is considered to be the most preferable Corridor Option within this section as it has the fewest number.

The Green and Cyan Corridor Options have similar distances where the gradient exceeds 5%, therefore are ranked equally. The Orange Corridor Option ranks second.

In terms of horizontal alignment, the Green Corridor Option has the fewest 'high demand horizontal curves' (for example 90-degree bends), followed by the Orange Corridor Option, then the Cyan Corridor Option. Therefore, the Green Corridor Option is considered to be the most preferable Corridor Option of the three.

The Orange Corridor Option passes to the north of Letterbreen but closer to the town than the Green Corridor Option. The Cyan Corridor Option also passes to the south of Letterbreen, closer to the town than the Green Corridor Option, but further than the Orange Corridor Option. Therefore, the Orange Corridor Option is considered favourable in terms of connectivity to Letterbreen. The Green Corridor Option scores the best out of all end-to-end Corridors in this section.

Corridor Option (Node E1 to S1/R1)	Total RSA Score	Appraisal Score
Green Corridor Option	11.5	6
Orange Corridor Option	11.75	6
Cyan Corridor Option	14.25	5

Table 6-54 Stage F1 RSA - Section 5 Scoring

There is no real difference between Switch 15 and the Green Corridor Option between Nodes G1 and H1, in relation to the sections of offline and online facilities, both options are therefore ranked equally. Both Corridor Options are also ranked equally in terms of road crossings, with both having only one crossing.

However, the Yellow Alternative Option - Switch 15 has a gradient greater than 5% over twice the distance of the Green Corridor Option, therefore, is considered to be less preferable than the Green Corridor Option between Nodes G1 and H1.

Yellow Alternative Option - Switch 15 and the Green Corridor Option both have two ‘high demand horizontal curves’ (for example 90-degree bends), however, the Green Corridor Option provides a straighter horizontal alignment overall and is considered to be the favoured option.

Yellow Alternative Option - Switch 15 does not offer any benefits over the Green Corridor Option between nodes G1 and H1 in relation to connectivity to urban centres. Overall, the Green Corridor Option is the most favourable.

Corridor Option (Node G1 to H1)	Total RSA Score	Appraisal Score
Yellow Alternative Option - Switch 15	11	6
Green Corridor Option	9.25	6

Table 6-55 Stage F1 RSA - Yellow Alternative Option - Switch 15 (Node G1-H1) Ranking

There is no significant difference between the Yellow Alternative Option - Switch 16 and the Cyan Corridor Option between Nodes I1 and J1, in relation to the sections of offline and online facilities, both options are therefore ranked equally. Both Options are also ranked equally in terms of road crossings, with both having no crossings.

In the gradients category, Yellow Alternative Option - Switch 16 and the Cyan Corridor Option, are again, ranked equally with both options having gradients greater than 5% over a distance of 50m.

Both the Yellow Alternative Option - Switch 16 and the Cyan Corridor Option have no ‘high demand horizontal curves’ (for example 90-degree bends). Yellow Alternative Option - Switch 16, which links to the Green Corridor Option at this location, would, however, offer a better horizontal alignment as opposed to continuing on the Cyan Corridor Option, Yellow Alternative Option - Switch 16 has been ranked higher than the Cyan Corridor Option as a result.

Yellow Alternative Option - Switch 16 however, does not offer any benefits over the Cyan Corridor Option, in relation to connectivity to urban centres. The Cyan Corridor Option is most preferable in this location overall.

Corridor Option (Node I1 to J1)	Total RSA Score	Appraisal Score
Yellow Alternative Option - Switch 16	11	6
Cyan Corridor Option	9.25	6

Table 6-56 Stage F1 RSA - Yellow Alternative Option - Switch 16 (Node I1-J1) Ranking

There is no real difference between Switch 17 and the Green Corridor Option between Nodes H1, K1 and M1 in relation to sections of offline and online facilities, therefore both Corridor Options are ranked equally.

Yellow Alternative Option - Switch 17 has fewer road crossings than the Green Corridor Option and is therefore considered preferable in this category. Switch 17 also has gradients greater than 5% over a distance of 50m while the Green Corridor Option has gradients greater than 5% over a distance of 350m, therefore the Yellow Alternative Option - Switch 17 is also considered to be preferable in this category as well.

However, Switch 17 has three ‘high demand horizontal curves’ (for example 90-degree bends) while the Green Corridor Option has none. The Green Corridor, therefore, provides a better horizontal alignment and is considered to be preferable.

Yellow Alternative Option - Switch 17 does not offer any benefits over the Green Corridor Option in relation to connectivity to urban centres. While the Green Corridor Option is marginally more preferable than the Yellow Alternative Option – Switch 17 both have been assigned an appraisal score of 6 – Moderate Positive.

Corridor Option (Node H1, K1 to M1)	Total RSA Score	Appraisal Score
Yellow Alternative Option - Switch 17	11.25	6
Green	10	6

Table 6-57 Stage F1 RSA - Yellow Alternative Option - Switch 17 (Node H1, K1-M1) Ranking

Yellow Alternative Option - Switch 18 between Nodes M1 and N1 includes sections of both offline and online facilities while the Cyan Corridor Option is an entirely offline route. Therefore, the Cyan Corridor Option is ranked higher than Switch 18 in terms of road safety. However, Yellow Alternative Option - Switch 18 has fewer road crossings when compared with the Cyan Corridor Option.

Yellow Alternative Option - Switch 18 has gradients greater than 5% over a distance of 100m while the Cyan Corridor Option has gradients greater than 5% over a distance of 250m, the Yellow Alternative Option - Switch 18 is, therefore, considered to be the safer route. Yellow Alternative Option - Switch 18 also ranks higher in terms of horizontal alignment, with only two ‘high demand horizontal curves’ (for example 90-degree bends), compared to the Cyan Corridor Option that has four.

Yellow Alternative Option - Switch 18 however, does not offer any benefits over the Cyan Corridor Option in relation to connectivity to urban centres. Overall, Yellow Alternative Option - Switch 18 ranks highest.

Corridor Option (Node M1 to N1)	Total RSA Score	Appraisal Score
Yellow Alternative Option - Switch 18	10.75	6
Cyan Corridor Option	11.75	6

Table 6-58 Stage F1 RSA - Yellow Alternative Option - Switch 18 (Node M1-N1) Ranking

All of the Corridor Options being compared between Nodes P1 and R1 (Green Corridor Option, Yellow Alternative Option - Switch 19 and Switch 20) and between Nodes P1 and S1 (Cyan Corridor Option) are offline at this location. There is, therefore, no significant difference between the three possible Corridor Options between Nodes P1 and R1/S1 in relation to the sections of offline and online facilities and all Corridor Options would, therefore, be ranked equally.

Between Nodes P1 and R1/S1, all of the Corridor Options have the same number of road crossings (5), and are, therefore, ranked equally.

Between Nodes P1 and R1/S1, the combination of Yellow Alternative Option - Switch 19 and the Green Corridor Option has gradients greater than 5% over a distance of 100m, the combination of Yellow Alternative Option - Switch 19 and Switch 20 has gradients greater than 5% over a distance of 575m and the Cyan Corridor Option has gradients greater than 5% over a distance of 70m. The Cyan Corridor Option is, therefore, considered to be the most preferred and ranks first, followed by the combination of Yellow Alternative Option - Switch 19 and the Green Corridor Option and then the combination of Yellow Alternative Option - Switch 19 and Switch 20.

In the horizontal alignment category, between Nodes P1 and R1/S1, the combination of Yellow Alternative Option - Switch 19 and the Green Corridor Option has one ‘high demand horizontal curve’ (for example 90-

degree bends), the combination of Yellow Alternative Option - Switch 19 and Switch 20 has two ‘high demand horizontal curves’ (for example 90-degree bends) and the Cyan Corridor Option has six. The combination of Yellow Alternative Option - Switch 19 and the Green Corridor Option is, therefore, considered to be the safest option and ranks first, followed by the combination of Yellow Alternative Option - Switch 19 and Switch 20 and then the Cyan Corridor Option.

Yellow Alternative Option - Switch 19 and both 20 and/or Green Corridor Option do not offer any benefits over the Cyan Corridor Option in relation to connectivity to urban centres.

Corridor Option (P1 to Q1)	Total RSA Score	Appraisal Score
Yellow Alternative Options - Switch 19 and Switch 20	18.25	5
Cyan Corridor Option	11	6
Yellow Alternative Option - Switch 19 and Green Corridor Option	11	6

Table 6-59 Stage F1 RSA - Yellow Alternative Option - Switch 19 (Node P1-Q1) Ranking

Both the Green Corridor Option and the Yellow Alternative Option - Switch 20 provide an offline route between Nodes Q1 and R1, therefore both Corridor Options would be ranked equally in this section. Both Corridor Options are also ranked the same in the road crossings category, with both having two crossings.

The Green Corridor Option does not include any locations where the gradient exceeds 5%, whereas the Yellow Alternative Option - Switch 20 has gradients greater than 5% over a distance of 475m, therefore the Green Corridor Option is considered to be preferable.

Between Nodes Q1 and R1, Yellow Alternative Option - Switch 20 has one ‘high demand horizontal curve’ (for example 90-degree bends) while the Green Corridor Options has none. The Green Corridor Option offers a better, and safer horizontal alignment between these two nodes.

Yellow Alternative Option - Switch 20 does not offer any benefits over the Green Corridor Option in relation to connectivity to urban centres. The Green Corridor Option scores the best overall.

Corridor Option (Q1 to R1)	Total RSA Score	Appraisal Score
Yellow Alternative Option - Switch 20	12.75	6
Green Corridor Option	7.5	7

Table 6-60 Stage F1 RSA - Switch 20 (Node Q1-R1) Ranking

6.4.4 Structures

An ‘Outline Structure Assessment’ is contained in Appendix G. The ‘Outline Structure Assessment’ includes an overhead satellite image showing the indicative structure / watercourse crossing locations along each of the Corridor Options, as well as an image of the crossing location from Google Street View where available. Crossings for each Corridor Option have been identified using virtual mapping (ArcGIS). A crossing will be required where the proposed Corridor Option crosses a watercourse or a protected area (SAC/NHA).

Each of these crossings have been classified as one of the five crossing types below:

- Type 1 – <0.9m (Pipe and below)
- Type 2 – 0.9-2m (Box Culvert)
- Type 3 – 2-6m (Box Culvert)³

³ Example - https://fpmccann.co.uk/wp-content/uploads/2021/06/Box-Culverts-Portal-Frames_230222.pdf

- Type 4 – ≤12m (Single Span Bridge)⁴
- Type 5 – >12m (Bridge, multi span and/ or obviously complex)

The type of crossing has been determined primarily based on the span, which has been estimated by taking measurements on satellite imagery of the watercourse or existing structures close to the location. Google Maps Street View has also been used to assist this process. It has been assumed that a Bridge >12m (Type 5) is required for any crossings over a SAC to minimise impact.

An additional category has been assigned where a corridor interacts with a protected area but does not require a crossing over it. In these locations works may be required within a protected area and additional measures will need to be considered to ensure a low impact design is provided.

The following sections summarise the structures required for each of the Switches and their corresponding end-to-end Corridor Option to determine if the switch or the end-to-end corridor is preferred. At this stage in the assessment, the information available does not allow for a comprehensive quantitative assessment, and therefore a simplified 1-3 ranking system has been applied to each of the Corridors, with 1 representing a Low Preference and 3 representing a High Preference. Where there is little to differentiate between Corridors a Score of 2 has been assigned.

Type 1, 2 and 3 Structures are minor in nature and will not be considered for the purpose of ranking Corridor Options on the basis that their cost will be considered in a later section. An additional Type 5 Structure on a particular Corridor Option relative to another is considered to be a significant differentiator owing to the potential complexity and cost of delivering such structure and would be less preferable. Similarly but less significant Type 4 Structures also have the potential to be complicated to construct when sited in environmentally sensitive areas and so are also considered to be a differentiator between Corridor Options.

6.4.4.1 Section 1 – Carraroe to Collooney

Table 6-61 highlights that the Green Corridor Option requires a Type 5 Structure (over the N4), whereas the Blue Corridor Option and Yellow Alternative Corridor does not. This is considered a significant differentiator and so a score of 1, 3 and 3 have been assigned, respectively.

Corridor Option	Structure Summary	Ranking
Green Corridor Option	Type 5	1
Blue Corridor – Switch 2	-	3
Yellow Alternative Corridor - Switch 21	-	3

Table 6-61 Stage 1 Eng. Assessment, Section 1 Switch 2 Structures

6.4.4.2 Section 2 – Collooney to Dromahair

Table 6-62 highlights that the Orange, Green and Yellow Alternative Corridor require the same number of Type 5 structures with the Orange Corridor requiring an additional Type 1 Pipe. As this is a minimal difference, these three Corridor Options would score the same in this section.

Corridor Option	Structure Summary	Ranking
Orange Corridor Option	Type 5, Type 1	2
Green Corridor Option	Type 5	2
Yellow Alternative Corridor - Switch 4	Type 5	2

⁴ Example - <https://www.bisonbridges.co.uk/timber-bridges>

Table 6-62 Stage 1 Eng. Assessment, Section 2 Switch 6 Structures

Table 6-63 highlights that the Green Corridor Option requires a Type 2 box culvert whereas the Yellow Alternative Corridor requires no structures. However this differentiator is not considered to be significant so both Corridor Options have been assigned a score of 2.

Corridor Option	Structure Summary	Ranking
Green Corridor Option	Type 2	2
Yellow Alternative Corridor – Switch 5	None	2

Table 6-63 Stage 1 Eng. Assessment, Section 2 Switch 5 Structures

6.4.4.3 Section 3 – Dromahair to Manorhamilton

Table 6-64 notes that while the Green Corridor requires more structures than the Yellow Alternative Corridor the Yellow Alternative Corridor would require an additional Type 5 and so is less preferable.

Corridor Option (Node O to P)	Structure Summary	Ranking
Green Corridor Option	Two Type 4, Type 2, Type 1	2
Yellow Alternative Corridor – Switch 6	Type 5, Type 1	1

Table 6-64 Stage 1 Eng. Assessment, Section 3 Switch 6 Structures

Table 6-65 highlights that the Yellow Alternative Corridor requires more two Type 2 structures compared to one Type 1 structure on Green Corridor Option. This differentiator is not considered to be significant so both Corridor Options have been assigned a score of 2.

Corridor Option	Structure Summary	Ranking
Green Corridor Option	Type 1	2
Yellow Alternative Corridor – Switch 7	Two Type 2	2

Table 6-65 Stage 1 Eng. Assessment, Section 3 Switch 7 Structures

Table 6-66 highlights that the Green Corridor requires an additional Type 5 bridge Structure relative to the Yellow Alternative Corridor. This is considered a significant differentiator and so a score of 1 and 3 have been assigned, respectively.

Corridor Option	Structure Summary	Ranking
Green Corridor Option	Type 5	1
Yellow Alternative Corridor – Switch 8	Type 1	3

Table 6-66 Stage 1 Eng. Assessment, Section 3 Switch 8 Structures

6.4.4.4 Section 4 – Manorhamilton to Blacklion/Belcoo

Table 6-67 highlights that the Yellow Alternative Corridor requires more two additional Type 3 structures relative to the Green Corridor Option. On the basis that cost, which will be considered in later section is the key differentiator here a score of 2 has been assigned to both Corridor Options.

Corridor Option (Node U to V)	Structure Summary	Ranking
Green Corridor Option	Type 1, Type 2, Type 3	2
Yellow Alternative Corridor – Switch 9	Two Type 2, Three Type 3	2

Table 6-67 Stage 1 Eng. Assessment, Section 4 Switch 9 Structures

Table 6-68 highlights that a Type 4 Structure is required on the Yellow Alternative Corridor, however as this does not relate to a designated site and cost, which will be considered in later section is the key differentiator here, a score of 2 has been assigned to both Corridor Options.

Corridor Option (Node X to Z)	Structure Summary	Ranking
Green Corridor Option	Type 1, Type 3	2
Yellow Alternative Corridor – Switch 10	Type 1, Type 4	2

Table 6-68 Stage 1 Eng. Assessment, Section 4 Switch 10 Structures

There are no significant variation between the structures required for Yellow Alternative Corridor – Switch 11 and the Green Corridor Option between Nodes X to Y. Both Corridor Options have been assigned a score of 2.

Table 6-69 highlights that Green Corridor requires two Type 2 structures compared to one Type 1 and one Type 1 structure on the Yellow Alternative Corridor. This differentiator is not considered to be significant so both Corridor Options have been assigned a score of 2.

Corridor Option (Node Y to A1)	Structure Summary	Ranking
Green Corridor Option	Two Type 2	2
Yellow Alternative Corridor – Switch 12	Type 1, Type 2	2

Table 6-69 Stage 1 Eng. Assessment, Section 4 Switch 12 Structures

Table 6-70 highlights that the Yellow Alternative Corridor requires an additional Type 5 bridge Structure relative to the Green Corridor Option. This is considered a significant differentiator and so a score of 1 and 3 have been assigned, respectively.

Corridor Option (Node B1 to D1)	Structure Summary	Ranking
Yellow Alternative Corridor – Switch 13	Type 5	1
Green Corridor Option	None	3

Table 6-70 Stage 1 Eng. Assessment, Section 5 Switch 13 Structures

6.4.4.5 Section 5 – Blacklion/Belcoo to Enniskillen

Table 6-71 highlights that while there are differences in the number and Type of structures between the three Options, none are complex/involve working in a designated site. On the basis that cost, which will be considered in later section is the key differentiator here a score of 2 has been assigned to both Corridor Options.

Corridor Option (Node C1 to F1)	Structure Summary	Ranking
Green Corridor Option (C1 to E1) and Cyan Corridor Option (E1 to F1)	Five Type 1, Type 2, Type 3	2
Orange Corridor Option (C1 to E1) and Cyan Corridor Option (E1 to F1)	Five Type 1, Type 2, Type 3	2
Yellow Alternative Corridor – Switch 14	Type 1, Type 2	2

Table 6-71 Stage 1 Eng. Assessment, Section 5 Switch 14 Structures

Table 6-72 highlights that the Green Corridor requires an additional Type 2 structure compared to the Yellow Alternative Corridor. This differentiator is not considered to be significant so both options has been assigned a score of 2.

Corridor Option (Node G1 to H1)	Structure Summary	Ranking
Green Corridor Option	Type 1, two Type 2	2
Yellow Alternative Corridor – Switch 15	Three Type 1, Type 2	2

Table 6-72 Stage 1 Eng. Assessment, Section 5 Switch 15 Structures

Table 6-73 highlights that the Cyan Corridor in this section requires four Type 5 Structures compared to one Type 5 Structure on the Yellow Alternative Corridor. This is considered a significant differentiator and so a score of 1 and 3 have been assigned, respectively.

Corridor Option (Node	Structure Summary	Ranking
Cyan Corridor Option (I1 to L1)	Three Type 1, Two Type 2, Type 3, Four Type 5	1
Yellow Alternative Corridor – Switch 16 (I1 to J1) and Green Corridor Option (J1 to L1)	Type 2, Type 5	3

Table 6-73 Stage 1 Eng. Assessment, Section 5 Switch 16 Structures

Table 6-74 highlights that the Yellow Alternative Corridor requires two more Type 1 structures when compared to the Green and Cyan Corridor Options. This differentiator is not considered to be significant so both Corridor Options have been assigned a PAG score of 2.

Corridor Option (Nodes H1, K1 and M1)	Structure Summary	Ranking
Green Corridor Option (H1 to L1) and Cyan Corridor Option (L1 to M1)	Two Type 2, Type 3	2
Yellow Alternative Corridor – Switch 17	Two Type 1, Two Type 2, Type 3	2

Table 6-74 Stage 1 Eng. Assessment, Section 5 Switch 17 Structures

Table 6-75 highlights that the Yellow Alternative Corridor requires a Type 3 structure relative to the Cyan Corridor Option. On the basis that cost, which will be considered in later section is the key differentiator here a score of 2 has been assigned to both Corridor Options.

Corridor Option (Node M1 to N1)	Structure Summary	Ranking
Cyan Corridor Option	Two Type 1	2
Yellow Alternative Corridor – Switch 18	Type 1, Type 3	2

Table 6-75 Stage 1 Eng. Assessment, Section 5 Switch 18 Structures

Table 6-76 highlights that each of the three options require a Type 5 Structure and so a score of 1 has been assigned to all three options.

Corridor Option	Structure Summary	Ranking
Cyan Corridor Option (P1 to S1)	Type 5	1
Yellow Alternative Corridor – Switch 19 and Green Corridor Option (Q1 to R1)	Three Type 1, Type 2, Type 5	1
Yellow Alternative Corridor – Switch 19 and Switch 20	Type 1, Type 2, Type 5	1

Table 6-76 Stage 1 Eng. Assessment, Section 5 Switch 19 Structures

Table 6-77 highlights that both options required a Type 5 Structure and so a score of 1 has been assigned to each.

Corridor Option	Structure Summary	Ranking
Green Corridor Option	Three Type 1, Type 5	1
Yellow Alternative Corridor – Switch 20	Type 1, Type 5	1

Table 6-77 Stage 1 Eng. Assessment, Section 5 Switch 20 Structures

6.4.5 Cost Estimates

The ‘Corridor Options Cost Estimate Methodology’ is contained in Appendix I. The methodology was developed with reference to TII’s PE-PMG-02044 Cost Management Manual and PE-PAG-02021 Unit 6.2 – Preparation of Cost Estimates ‘Outline Structure Assessment’ and submitted to TII for comment. In line with PE-PMG-02044 the project costs were assessed against the following principal cost headings:

- Main Construction Contract.
- Land and Property.
- Planning and Design.
- Archaeology.
- Advance Works and Other Contracts.
- Main Contract Supervision (Contracting Authority’s Costs)
- Walking / Cycling / PT Connectivity / Asset Renewal

For the purpose of the options appraisal, an indicative route was developed within each of the Option Corridors and Switches. These indicative routes were added to ArcGIS to produce an indicative cost estimate for each Corridor Option (and Switch). These indicative alignments have been developed for comparison purposes only and represents a route which could form part of a preferred route. These indicative routes will be subject to change as the project progresses.

The following sections summarise the overall score assigned to each of the Switches and their corresponding end-to-end Corridor Option to determine if the switch or the end-to-end corridor is preferred. At this stage in the assessment, the information available does not allow for a comprehensive quantitative assessment, and therefore a simplified 1-3 ranking system has been applied to each of the Corridors.

- Where both Corridor Options were either within €500k or 25% of each other both were assigned a neutral score of 2.
- Where a Corridor Option (or Switch) were greater than €500k or 25% more expensive relative to another, the less expensive of the Corridor Option was assigned a PAG score of 2 and the more expensive assigned a PAG score of 1.
- Where a Corridor Option (or Switch) were greater than €1M more expensive relative to another, the less expensive of the Corridor Option was assigned a PAG score of 3 and the more expensive assigned a PAG score of 1.

In a similar way to each of the section above the greater the score the more preferable the corridor option.

6.4.5.1 Section 1: Carraroe to Collooney (Node A to G)

Table 6-78 highlights that the cost estimates for the Orange Corridor Option and the Yellow Alternative Corridor - Switch 1 between Nodes A to B are broadly similar and a score of 2 has been assigned to both Corridor Options.

Nodes	Part	Corridor Option	Score
Nodes A-B	Carraroe to south of Drumaskibbole	Option B - Orange Corridor Option	2
		Option D – Yellow Alternative Corridor – Switch 1	2

Table 6-78 Cost Estimate - Yellow Alternative Corridor - Switch 1

Table 6-79 highlights that the cost estimates for the Blue Corridor Access to Ballysadare (Switch 2) is less preferable than the Green Corridor Option and Yellow Alternative Corridor – Switch 21 between Nodes C to D. As the difference in cost estimate between the Blue Corridor and both the Green and Yellow Alternative Corridor Options exceeded €1M a score of 1 has been assigned to the Blue Corridor and a score of 3 has been assigned to both the Green Corridor Option and the Yellow Alternative Corridor – Switch 21.

Nodes	Part	Corridor Option	Score
Nodes C-D	Access to Ballysadare	Option A – Green Corridor Option	3
		Option E – Blue Corridor Access to Ballysadare (Switch 2)	1
		Options C - Yellow Alternative Corridor - Switch 21	3

Table 6-79 Cost Estimate - Blue Corridor Access to Ballysadare (Switch 2)

Table 6-80 highlights that the cost estimates for the Option F – Magenta Corridor through Union Wood is more preferable than the Green Corridor Option between Nodes E to G and the Orange Corridor Option between Nodes F to G. As the difference in cost estimate exceeded €1M in both instance a score of 3 has been assigned to the Magenta Corridor through Union Wood and a score of 1 has been assigned to both the Green and Orange Corridor Options.

Nodes	Corridor Option	Score
Nodes E to G	Option A – Green Corridor Option (E to D and D to G)	1
	Option F – Magenta Corridor through Union Wood (Switch 3)	3
Nodes F to G	Option B - Orange Corridor Option	1
	Option F – Magenta Corridor through Union Wood (Switch 3)	3

Table 6-80 Cost Estimate - Magenta Corridor through Union Wood (Switch 3)

6.4.5.2 Section 2 – Collooney to Dromahair

Table 6-81 highlights that the cost estimates for the Yellow Alternative Corridor – Switch 4 is less preferable than the Green Corridor Option between Nodes C to D and a score of 1 and 2, respectively has been assigned to each Corridor Options.

Nodes	Corridor Option	Score
Nodes G-H	Option A – Green Corridor Option	2
	Option B - Orange Corridor Option	1
	Option D – Yellow Alternative Corridor – Switch 4	1

Table 6-81 Cost Estimate - Yellow Alternative Corridor - Switch 4

Table 6-82 highlights that the cost estimates for the Green Corridor Option and the Yellow Alternative Corridor - Switch 5 between Nodes J to K are broadly similar and a score of 2 has been assigned to both Corridor Options.

Nodes	Corridor Option	Score
Nodes J-K	Option A – Green Corridor Option	2
	Option D – Yellow Alternative Corridor Option – Switch 5	2

Table 6-82 Cost Estimate - Yellow Alternative Corridor - Switch 5

Section 3 – Dromahair to Manorhamilton (Node N to S)

Table 6-83 highlights that the cost estimates for the Yellow Alternative Corridor Option - Switch 6 is less preferable than the Green Corridor Option between Nodes O to P and a score of 1 and 2, respectively has been assigned to each Corridor Options.

Nodes	Corridor Option	Score
Nodes O-P	Option A – Green Corridor Option	2
	Option D – Yellow Alternative Corridor Option – Switch 6	1

Table 6-83 Cost Estimate - Yellow Alternative Corridor - Switch 6

Table 6-84 highlights that the cost estimates for the Yellow Alternative Corridor Option - Switch 7 is less preferable than the Green Corridor Option between Nodes P to Q and a score of 1 and 2, respectively has been assigned to each Corridor Options.

Nodes	Corridor Option	Score
Nodes P-Q	Option A – Green Corridor Option	2
	Option D – Yellow Alternative Corridor Option – Switch 7	1

Table 6-84 Cost Estimate - Yellow Alternative Corridor - Switch 7

Table 6-85 highlights that the cost estimates for the Green Corridor Option - Switch 8 is less preferable than the Yellow Alternative Corridor Option between Nodes Q to S. As the difference in cost estimate between the corridors exceeded €1M, a score of 3 has been assigned to the Yellow Corridor option and a score of 1 has been assigned to the Green Corridor Option.

Nodes	Corridor Option	Score
Nodes Q-S	Option A – Green Corridor Option	1
	Option D – Yellow Alternative Corridor Option – Switch 8	3

Table 6-85 Cost Estimate - Yellow Alternative Corridor - Switch 8

6.4.5.3 Section 4 – Manorhamilton to Blacklion (Node S to C1)

Table 6-86 highlights that the cost estimates for the Green Corridor Option and the Yellow Alternative Corridor - Switch 9 between Nodes U to V are broadly similar and a score of 2 has been assigned to both Corridor Options.

Nodes	Corridor Option	Score
Nodes U-V	Option A – Green Corridor Option	2
	Option D – Yellow Alternative Corridor Option – Switch 9	2

Table 6-86 Cost Estimate - Yellow Alternative Corridor - Switch 9

Table 6-87 highlights that the cost estimates for the Green Corridor Option and the Yellow Alternative Corridor - Switch 10 between Nodes X to Z are broadly similar and a score of 2 has been assigned to both Corridor Options.

Nodes	Corridor Option	Score
Nodes X-Z	Option A – Green Corridor Option (X to Y and Y to Z)	2
	Option D – Yellow Alternative Corridor Option – Switch 10	2

Table 6-87 Cost Estimate - Yellow Alternative Corridor - Switch 10

Table 6-88 highlights that the cost estimates for the Green Corridor Option - Switch 11 is less preferable than Yellow Alternative Corridor Option between Nodes X to Y and a score of 1 and 2, respectively has been assigned to each Corridor Options.

Nodes	Corridor Option	Score
Nodes X-Y	Option A – Green Corridor Option	1
	Option D – Yellow Alternative Corridor Option – Switch 11	2

Table 6-88 Cost Estimate - Yellow Alternative Corridor - Switch 11

Table 6-89 highlights that the cost estimates for the Green Corridor Option and the Yellow Alternative Corridor - Switch 12 between Nodes Y to A1 are broadly similar and a score of 2 has been assigned to both Corridor Options.

Nodes	Corridor Option	Score
Nodes Y-A1	Option A – Green Corridor Option (Y to Z and Z to A1)	2
	Option D – Yellow Alternative Corridor Option – Switch 12	2

Table 6-89 Cost Estimate - Yellow Alternative Corridor - Switch 12

Table 6-90 highlights that the cost estimates for the Green Corridor Option - Switch 13 is less preferable than Yellow Alternative Corridor Option between Nodes X to Y and a score of 1 and 2, respectively has been assigned to each Corridor Options.

Nodes	Corridor Option	Score
Nodes B1-D1	Option A – Green Corridor Option (B1 to E1 and E1 to D1)	1
	Option D – Yellow Alternative Corridor Option – Switch 13	2

Table 6-90 Cost Estimate - Yellow Alternative Corridor - Switch 13

6.4.5.4 Section 5 – Blacklion to Enniskillen (Node C1 to S1/R1)

Table 6-91 highlights that the cost estimates for the three Corridor Options: Green, Orange, and the Yellow Alternative Corridor - Switch 14 between Nodes C1 to F1 are broadly similar and a score of 2 has been assigned to all Corridor Options.

Nodes	Corridor Option	Score
Nodes C1-F1	Option A – Green Corridor Option (C1 to E1) and Cyan Corridor Option (E1 to F1)	2
	Orange Corridor Option (C1 to E1) and Cyan Corridor Option (E1 to F1)	2
	Option D – Yellow Alternative Corridor Option – Switch 14	2

Table 6-91 Cost Estimate - Yellow Alternative Corridor - Switch 14

Table 6-92 highlights that the cost estimates for the Green Corridor Option - Switch 15 is less preferable than Yellow Alternative Corridor Option between Nodes G1 to H1 and a score of 1 and 2, respectively has been assigned to each Corridor Options.

Nodes	Corridor Option	Score
Nodes G1-H1	Option A – Green Corridor Option	1
	Option D – Yellow Alternative Corridor Option – Switch 15	2

Table 6-92 Cost Estimate - Yellow Alternative Corridor - Switch 15

Table 6-93 highlights that the cost estimates for the Cyan Corridor Option - Switch 16 is less preferable than Yellow Alternative Corridor Option between Nodes I1 to J1 and a score of 1 and 2, respectively has been assigned to each Corridor Options.

Nodes	Corridor Option	Score
Nodes I1-J1	Option C – Cyan Corridor Option	1
	Option D – Yellow Alternative Corridor Option – Switch 16	2

Table 6-93 Cost Estimate - Yellow Alternative Corridor - Switch 16

Table 6-94 highlights that the cost estimates for the Green Corridor Option - Switch 17 is less preferable than Yellow Alternative Corridor Option between Nodes H1 to M1 via K1, and a score of 1 and 2, respectively has been assigned to each Corridor Options.

Nodes	Corridor Option	Score
Nodes H1-M1 via K1	Green Corridor Option (H1 to J1 and J1 to K1 and Ki to L1) and Cyan Corridor Option (L1 to M1)	1
	Yellow Alternative Corridor Option (H1 to K1) – Switch 17 and Green Corridor Option (K1 to L1) and Cyan Corridor Option (L1 to M1)	2

Table 6-94 Cost Estimate - Yellow Alternative Corridor - Switch 17

Table 6-95 highlights that the cost estimates for the Cyan Corridor Option - Switch 18 is less preferable than Yellow Alternative Corridor Option between Nodes M1 to N1, and a score of 1 and 2, respectively has been assigned to each Corridor Options.

Nodes	Corridor Option	Score
Nodes M1-N1	Option C - Cyan Corridor Option	1
	Option D – Yellow Alternative Corridor Option – Switch 18	2

Table 6-95 Cost Estimate - Yellow Alternative Corridor - Switch 18

Table 6-96 highlights that the cost estimates for the Cyan Corridor Option P1 to S1 is more preferable than the Yellow Alternative Corridor Option (Q1 to P1) – Switch 19 and Green Corridor Option (Q1 to R1) as well as the Yellow Alternative Corridor Option (P1 to Q1) – Switch 19 and Yellow Alternative Corridor (Q1 to R1) – Switch 20 . As the difference in cost estimate between the corridors exceeded €1M, a score of 3 has been assigned to the Cyan Corridor option and a score of 1 has been assigned to both of the Yellow Corridor Options.

Nodes	Corridor Option	Score
Nodes P1-Q1	Option C - Cyan Corridor Option (P1 to S1)	3
	Yellow Alternative Corridor Option (Q1 to P1) – Switch 19 and Green Corridor Option (Q1 to R1)	1
	Yellow Alternative Corridor – Switch 19 (P1 to Q1) and Yellow Alternative Corridor - Switch 20 (Q1 to R1)	1

Table 6-96 Cost Estimate - Yellow Alternative Corridor - Switch 19

Table 6-97 highlights that the cost estimates for the Green Corridor Option - Switch 20 is less preferable than Yellow Alternative Corridor Option between Nodes Q1 to R1, and a score of 1 and 2, respectively has been assigned to each Corridor Options.

Nodes	Corridor Option	Score
Nodes Q1-R1	Option A – Green Corridor Option	1
	Option D – Yellow Alternative Corridor Option – Switch 20	2

Table 6-97 Cost Estimate - Yellow Alternative Corridor - Switch 20

6.5 Environmental Assessment

The following sub-sections are a summary of the findings of the Environmental Evaluation Report (Constraints and Alternative Options) (see Appendix J), which comprises a Stage 1 – Preliminary Options Assessment of the TAF Criteria (Climate Change Impacts and Local Environmental Impacts) for the feasible Corridor Options and alternative Switch opportunities of Phase 2 – Options Selection.

The Corridor Options and corresponding alternative Switch opportunities were comparatively assessed based on the identified environmental constraints and/or receptors for each TAF criteria and sub-criteria and Scored on a scale of 1 to 7. The appraisal process for each sub-criteria was carried out in accordance with the TII Project Appraisal Guidelines (PAG) Unit 13.0 - Appraisal of Active Modes. The scoring (1 to 7) is broadly based on Table 13.0.9 of the TII PAG Unit 13.0. Each Corridor Option and corresponding Switch is also appraised as either Preferred, Intermediate, Least Preferred, or No Preference where none could be determined.

TAF criteria and sub-criteria for the assessment are set out in Table 6-98 TAF Appraisal Criteria and Relative Sub-Criteria (adapted from TII PAG Unit 13.0).

TAF Criteria	TAF / PAG Sub-criteria	Description
Climate Change Impacts	Climate Action Impact	Impact on greenhouse gas emissions from transport
Local Environmental Impacts	Land Use & Planning Policy	High-level alignment with relevant local and regional policy, including existing cycling facilities
	Population & Human Health	High-level impact on local populations and general user experience
	Biodiversity	Impact on biodiversity and habitats, particularly protected habitats and species.
	Soils & Geology	Impact on geological characteristics and integrity
	Hydrology	Impact on surface and ground waters, and coastal resources
	Air Quality	Impact on non-greenhouse gas emissions from transport that have a negative impact on human health, such as nitrous oxides and particulate matter
	Noise & Vibration	Impact on local noise levels from transport activities
	Archaeology & Cultural Heritage	Impact on areas or structures of cultural importance, including archaeological sites, historic buildings and structures, or culturally-significate landscapes
	Landscape & Visual Quality	Impact on local landscapes and viewpoints
	Material Assets - Agriculture	Impact of potential land take and severance where it relates to agricultural lands.

Table 6-98 TAF Appraisal Criteria and Relative Sub-Criteria (adapted from TII PAG Unit 13.0)

The TII PAG Unit 13.0 scoring (1 to 7) is represented in Table 6-99.

1	2	3	4	5	6	7
Major Negative	Moderate Negative	Minor Negative	Neutral	Minor Positive	Moderate Positive	Major Positive

Table 6-99 PAG Seven-point Qualitative Scale for Scoring Options (adapted from TII PAG Unit 13.0)

The results of the assessments as reported in the EER (Appendix J) were used to inform the appraisal of the Stage 1 Corridor Options.

6.5.1 Climate Action Impact

In accordance with TII *Climate Guidance for National Roads, Light Rail, and Rural Cycleways (Offline & Greenways) - Overarching Technical Document*, cycleways have the potential to result in changes in carbon emissions due to activities associated with the construction phase, Greenways with car parking facilities may generate additional trips as people drive to these facilities before commencing their trip/walk/cycle on the Greenway and Modal Shift with reductions in vehicular traffic with motorists taking up Active Travel as an alternative.

No significant operational impacts are likely to arise and, as such, effects during the operational phase are considered neutral throughout (PAG Score of 4). The greatest potential impact on sensitive receptors from a climate perspective is considered to be during the construction phase of the project. The Stage 1 – Preliminary Options Assessment considered the embodied carbon likely to be generated for each Corridor Option and Switch comparison, in the absence of traffic data. The assessments and preferences were primarily dependent upon the comparative length of each Corridor Option and Switch across the five geographical sections of the proposed SLNCR Greenway.

6.5.1.1 Section 1: Carraroe to Collooney (Node A to G)

The comparative lengths between the Orange Corridor Option and Yellow Alternative Corridor Option (Switch 1) was not considered to be significant from a Climate Action Impacts perspective. In both instances, a PAG Score of 3 – Minor Negative for potential Construction Impacts and the a PAG Score of 4 – Neutral was assigned for potential Operational Impacts.

Corridor Option	Length (km)	Score (7 to 1)
Orange Corridor Option	2.13	3
Yellow Alternative Corridor - Switch 1	2.78	3

Table 6-100 Stage 1 Enviro. Assessment, Section 1 Switch 1 Climate Action Impact

Between Nodes C to E, a PAG Score of 3 – Minor Negative for potential Construction Impacts and 4 – Neutral was assigned for potential Operational Impacts for all three Corridor Options. While the combined lengths of the western and eastern branches Blue Corridor Access to Ballysadare (Switch 2) could be considered the scale of the works proposed, re-surfacing and minor upgrades on the eastern branch (Bushy Park) and works within the existing road corridor on the western branch (N59) would have less of a Climate Action Impact than the new offline routes proposed in the other two Corridor Options. The comparative lengths between the Green Corridor Option and Yellow Alternative Corridor (Switch 21) was not considered to be significant from a Climate Action Impacts perspective.

Corridor Option	Length (km)	Score (7 to 1)
Green Corridor Option (Nodes C to E and E to D)	1.87	3
Blue Alternative Corridor – Ballysadare – Switch 2 (Western Branch)	2.20	3
Blue Alternative Corridor – Ballysadare – Switch 2 (Eastern Branch)	1.68	3
Yellow Alternative Corridor – Switch 21	2.11	3

Table 6-101 Stage 1 Enviro. Assessment, Section 1 Blue Alternative Corridor Climate Action Impact

While the Magenta Corridor through Union Wood (Switch 3) has a greater length than the corresponding Orange Corridor and Green Corridor Options, the potential to utilize existing paths along this Corridor Option was considered to lessen the potential impact from a climate perspective. Therefore, preference was given to the Magenta Corridor through Union Wood (Switch 3) with a PAG Score of 3 whereas A PAG Score of 2 was assigned to the Orange Corridor and Green Corridor Options.

Corridor Option	Length (km)	Score (7 to 1)
Green Corridor Option (Nodes E to D and D to G)	5.24	2
Magenta Alternative Corridor – Switch 3	2.89	3
Orange Corridor Option (Nodes D to G)	2.53	2
Magenta Alternative Corridor – Switch 3	3.70	3

Table 6-102 Stage 1 Enviro. Assessment, Section 1 Magenta Alternative Corridor Climate Action Impact

6.5.1.2 Section 2: Collooney to Dromahair (Node G to N)

In the comparison of the Green Corridor, Orange Corridor, and Yellow Alternative Corridor Options (Switch 4), scoring and preference were determined by the differences in length. The Green Corridor Option was shortest in length and therefore preferable from a climate perspective with a PAG Score of 3. The Yellow Alternative Corridor Option (Switch 4) was given intermediate preference, also a PAG Score of 3 as it was marginally greater in length. The Orange Corridor Option was considered least preferred as the longest of the three and was assigned a PAG Score of 2.

Corridor Option	Length (km)	Score (7 to 1)
Green Corridor Option	2.31	3
Orange Corridor Option	3.45	2
Yellow Alternative Corridor - Switch 4	2.90	3

Table 6-103 Stage 1 Enviro. Assessment, Section 2 Switch 4 Corridor Climate Action Impact

As the difference in length between the Green Corridor Option and the Yellow Alternative Corridor Option (Switch 5) were negligible, no preference was given. Both Corridor Options were assigned PAG Scores of 3.

Corridor Option	Length (km)	Score (7 to 1)
Green Corridor Option	2.38	3
Yellow Alternative Corridor - Switch 5	2.60	3

Table 6-104 Stage 1 Enviro. Assessment, Section 2 Switch 5 Corridor Climate Action Impact

6.5.1.3 Section 3: Dromahair to Manorhamilton (Node N to S)

The comparative assessment of the Green Corridor Option with the Yellow Alternative Corridor Option (Switch 6), and the Green Corridor Option with the Yellow Alternative Corridor Option (Switch 7) found differences in length to all be negligible. Therefore, no preference from a climate perspective was given to either Corridor Option in these instances and a PAG Score of 3 was assigned to all.

Corridor Option	Length (km)	Score (7 to 1)
Green Corridor Option (Nodes O to P)	4.41	3
Yellow Alternative Corridor - Switch 6	4.71	3
Green Corridor Option (Nodes P to Q)	3.34	3
Yellow Alternative Corridor - Switch 7	3.02	3

Table 6-105 Stage 1 Enviro. Assessment, Section 3 Switch 6 and 7 Corridor Climate Action Impact

Conversely, the Yellow Alternative Corridor Option (Switch 8) was shorter in length compared to the corresponding Green Corridor Option and therefore considered preferred from a climate perspective. The Yellow Alternative Corridor Option (Switch 8) was assigned a PAG Score of 3, and the Green Corridor Option a PAG Score of 2.

Corridor Option	Length (km)	Score (7 to 1)
Green Corridor Option (Nodes Q to R and R to S)	2.5	2
Yellow Alternative Corridor - Switch 8	1.6	3

Table 6-106 Stage 1 Enviro. Assessment, Section 3 Switch 8 Corridor Climate Action Impact

6.5.1.4 Section 4: Manorhamilton to Blacklion / Belcoo (Node S to CI)

Throughout Section 4, Corridor Option and Switch comparisons found negligible differences in length and therefore no preference from a climate perspective was given in all but one instance. In the comparison of the Green Corridor Option with the Yellow Alternative Corridor Option (Switch 13), preference was given to the Yellow Alternative Corridor Option (Switch 13) as it had a shorter length and was therefore considered to have less potential impact from a climate perspective. This Corridor Option was assigned a PAG Score of 3, while the corresponding Green Corridor Option was assigned a PAG Score of 2.

No preference was identified and PAG Scores of 3 were given for the following Corridor Option comparisons within Section 4:

- Green Corridor Option (Nodes U to V) versus Yellow Alternative Corridor Option (Switch 9)
- Green Corridor Option (Nodes X to Z) versus Yellow Alternative Corridor Option (Switch 10)
- Green Corridor Option (Nodes X to Y) versus Yellow Alternative Corridor Option (Switch11)
- Green Corridor Option (Nodes Y to A1) versus Yellow Alternative Corridor Option (Switch 12)

6.5.1.5 Section 5: Blacklion / Belcoo to Enniskillen (Node CI to SI / R1)

The comparisons between the combined Green Corridor and Cyan Corridor Options, with the combined Orange Corridor and Cyan Corridor Options, and with the Yellow Alternative Corridor Option (Switch 14) for Section 5 identified the latter as preferable from a climate perspective due to having the shortest length. This Corridor Option was assigned a PAG Score of 3, while the other Corridor Options were assigned a PAG Score of 2.

Corridor Option	Length (km)	Score (7 to 1)
Green Corridor Option (Nodes C1 to E1) and Cyan Corridor Option (Nodes E1 to F1)	4.23	2
Orange Corridor Option (Nodes C1 to E1) and Cyan Corridor Option (Nodes E1 to F1)	4.23	2
Yellow Alternative Corridor - Switch 14	3.23	3

Table 6-107 Stage 1 Enviro. Assessment, Section 5 Switch 14 Corridor Climate Action Impact

As in other instances along the SLNCR Greenway, no preference and a PAG Score of 3 was given for comparisons made with the Yellow Alternative Corridor Options (Switches 15, 16, and 17), based on negligible differences in length, as listed below:

- Green Corridor Option (Nodes G1 to H1) versus Yellow Alternative Corridor Option (Switch 15)
- Cyan Corridor Option (Nodes I1 to L1) versus Yellow Alternative Corridor Option (Switch 16) combined with Green Corridor Option (Nodes J1 to L1)
- Green Corridor Option (Nodes H1 to K1 to L1) combined with Cyan Corridor Options (Nodes L1 to M1) versus combined Yellow Alternative Corridor (Switch 17)

Preference was given for the Yellow Alternative Corridor Option (Switch 18) when compared to the corresponding Cyan Corridor Option, as it was shorter in length. PAG Scores assigned were 3 and 2 respectively.

Corridor Option	Length (km)	Score (7 to 1)
Cyan Corridor Option	2.05	2
Yellow Alternative Corridor - Switch 18	1.34	3

Table 6-108 Stage 1 Enviro. Assessment, Section 5 Switch 18 Corridor Climate Action Impact

The comparative appraisal of the Yellow Alternative Corridor Options (Switch 19) resulted in the following:

Corridor Option	Length (km)	Score (7 to 1)
Cyan Corridor Option (Nodes P1 to S1)	2.58	3
Yellow Alternative Corridor - Switch 19 and Green Corridor Option (Nodes Q1 to R1)	4.06	2
Yellow Alternative Corridor - Switch 19 and Yellow Alternative Corridor - Switch 20 (Q1 to R1)	3.76	2

Table 6-109 Stage 1 Enviro. Assessment, Section 5 Switch 19 Corridor Climate Action Impact

The Cyan Corridor Option was considered as preferred based on the shorter length when compared with the other Corridor Option arrangements. Finally, no preference was identified and PAG Scores of 3 was given to the Yellow Alternative Corridor Options (Switch 20) when compared to the Green Corridor Option.

Corridor Option	Length (km)	Score (7 to 1)
Green Corridor Option (Nodes Q1 to R1)	2.58	3
Yellow Alternative Corridor - Switch 20	2.28	3

Table 6-110 Stage 1 Enviro. Assessment, Section 5 Switch 20 Corridor Climate Action Impact

6.5.2 Land Use and Planning Policy

The Study Area of the proposed SLNCR Greenway crosses through the administrative area of a total of 4 no. Counties and 4 no. Local Planning Authorities: Sligo County Council (SCC), Leitrim County Council (LCC), Cavan County Council (CCC) and Fermanagh & Omagh District Council (F&ODC). As a result, their associated planning policy must be considered in the route selection and the preparation of any future planning applications.

The proposed SLNCR Greenway will require planning permission in both the Republic of Ireland and in Northern Ireland in a cross-boundary and transboundary related application process. It is considered that this application will be a Part 10 application to An Bord Pleanála in the Republic of Ireland and an application to F&ODC in Northern Ireland.

6.5.2.1 Section 1: Carraroe to Collooney (Node A to G)

In the comparative assessment of the Orange Corridor Option and the Yellow Alternative Corridor Option (Switch 1), no preference was identified. Neither Corridor Option presented any major impediments to planning considerations and are not within identified flood zones. Both Corridor Options were assigned a PAG Score of 4.

Corridor Option	Score (7 to 1)
Orange Corridor Option	4
Yellow Alternative Corridor - Switch 1	4

Table 6-111 Stage 1 Enviro. Assessment, Section 1 Switch 1 Land Use and Planning Policy

The comparative assessment between the Green Corridor Option, Yellow Alternative Corridor Option (Switch 21) and the Blue Corridor Access to Ballysadare (Switch 2) identified the Yellow Alternative Corridor Option (Switch 21) as preferred from a planning perspective with a PAG Score of 5. There was no preference between the Green Corridor Option and the Blue Corridor Access to Ballysadare (Switch 2) with an assigned PAG Score of 4.

No significant planning conflicts were identified in any of the three Corridor Options. All Corridor Options have the potential to enhance EuroVelo 1 facilities between Carraroe and Collooney and have the potential to impact on areas within the flood zones. The Blue Corridor Access to Ballysadare (Switch 2) does however present a more complex, planning environment due to interaction with Visually Vulnerable Areas, European Sites, flood zones, and the town of Ballysadare, and therefore would require careful design consideration and planning justification. This Corridor Option also passes through areas zoned as 'Open Space', 'Residential Uses', and 'Mixed Uses' in Ballysadare, which are designated as 'Open to Consideration' or 'Normally Permitted' for 'Recreational Facilities' in the Sligo County Development Plan (SCDP) 2017-2023. In the Draft SCDP 2024-2030, the 'Open Space' land is zoned as 'Green Belt' and is also 'Open to Consideration' for 'Recreational – leisure facilities'.

The Yellow Alternative Corridor - Switch 21 offers stronger connections to Ballysadare town than Green Corridor Option and a less physically constrained option than the Blue Corridor Option. As the Yellow Alternative Corridor – Switch 21 lies between the N4 and Sligo to Dublin railway line through agricultural land it offers greater scope for design and development opportunities.

Corridor Option	Score (7 to 1)
Green Corridor Option (Nodes C to E and E to D)	4
Blue Alternative Corridor – Ballysadare – Switch 2	4
Yellow Alternative Corridor Options (Switch 21)	5

Table 6-112 Stage 1 Enviro. Assessment, Section 1 Blue Alternative Corridor Land Use and Planning Policy

The comparative assessment between the Magenta Corridor through Union Wood (Switch 3), the Green Corridor Option, and the Orange Corridor Option identified the Orange Corridor Option as preferred from a planning perspective with a PAG Score of 4. While none of the Corridor Options had considerable zoning or planning constraints, and all three have interactions with Special Areas of Conservation (SAC), the Orange Corridor Option offered fewer constraints overall. The primary constraints for the Orange Corridor Option included overlap with woodland, and potential overlap with National Monument Service (NMS) structures. The impact of woodland overlap on planning justification could vary depending on environmental and ecological considerations and the preferences of the Local Authority for its preservation or use as a recreational amenity.

Comparatively, the Green Corridor Option included interaction with a scenic route with potential impacts (assessed under the LVIA sub-criteria), flood zones (classified as acceptable), overlap with NMS and National Inventory of Architectural Heritage (NIAH) structures with potential impacts (considered under the Archaeology and Cultural Heritage sub-criteria). The primary constraint assessed for the Magenta Corridor through Union Wood (Switch 3) included approximately 1.45 km of woodland overlap. Policy P-OR-23 of the development plan aims to protect access to forestry and woodlands for walking trails, while P-WTH-1 aims to safeguard trees, woodlands, and hedgerows from detrimental development. Both the Green Corridor Option and the Magenta Corridor through Union Wood (Switch 3) were assigned PAG Scores of 3 with no preference for either.

Corridor Option	Score (7 to 1)
Green Corridor Option (Nodes E to D and D to G)	2
Magenta Alternative Corridor – Switch 3	3
Orange Corridor Option (Nodes D to G)	4
Magenta Alternative Corridor – Switch 3	3

Table 6-113 Stage 1 Enviro. Assessment, Section 1 Magenta Alternative Corridor Land Use and Planning Policy

6.5.2.2 Section 2: Collooney to Dromahair (Node G to N)

The comparative assessment between the Green Corridor Option, Orange Corridor Option, and Yellow Alternative Corridor Option (Switch 4) within Section 2 indicated a preference for the Green Corridor Option

(PAG Score of 6), based primarily on the potential use of the historic railway line. This offers robust policy justification for the Green Corridor Option in the SLNCR Greenway design, as it aligns closely with Policy O-CW-6 of the SCDP.

In this instance, all three Corridor Options had similar constraints and receptors including overlap with residential planning applications, interactions with various land zoning types, flood zones, and NMS and NIAH structures. A key constraint for all Corridor Options was identified as interaction with proposed Natural Heritage Areas (pNHA) and SACs, which have been further evaluated under the Biodiversity sub-criteria for potential impacts. The Yellow Alternative and Orange Corridor Options were both assigned a PAG Score of 4, however the Yellow Alternative Corridor Option (Switch 4) was considered least preferred based on the overall number of constraints, the primary of which included interaction with the Unshin River Special Area of Conservation (SAC) and pNHA.

Corridor Option	Score (7 to 1)
Green Corridor Option	6
Orange Corridor Option	4
Yellow Alternative Corridor - Switch 4	4

Table 6-114 Stage 1 Enviro. Assessment. Section 2 Switch 4 Land Use and Planning Policy

Similarly, the comparative assessment between the Green Corridor Option and Yellow Alternative Corridor Option (Switch 5) identified the Green Corridor Option as preferred, with a PAG Score of 6, primarily due to the proposed use of the existing historic railway line. This again provides robust policy justification for its use in the SLNCR Greenway design, aligning closely with Policy O-CW-6 of the SCDP. Additionally, the Green Corridor Option had no adverse zoning, overlapping planning applications, landscape designations, or overlap with NIAH structures. The occurrence of several NMS structures within both Corridor Options has been identified as having potential constraints from a Planning Policy perspective and has been considered under the Archaeology and Cultural Heritage sub-criteria.

Corridor Option	Score (7 to 1)
Green Corridor Option	6
Yellow Alternative Corridor - Switch 5	4

Table 6-115 Stage 1 Enviro. Assessment. Section 2 Switch 5 Land Use and Planning Policy

6.5.2.3 Section 3: Dromahair to Manorhamilton - (Node N to S)

Within Section 3: Dromahair to Manorhamilton, all Corridor Options which proposed to utilize the existing historic railway line were considered preferred to the corresponding alternatives, as this supports the County Development Plan policy ‘BG OBJ1’, to “... facilitate and lead in the delivery and completion of the Sligo Leitrim Northern Counties Railway Greenway along/adjoining the former Sligo Leitrim Northern Counties Railway”.

The Green Corridor Option (PAG Score of 4) was preferred to the Yellow Alternative Corridor Option (Switch 6) (PAG Score of 3) for the potential use of the historic railway line, and the occurrence of fewer landscape designations.

Corridor Option	Score (7 to 1)
Green Corridor Option (Nodes O to P)	4
Yellow Alternative Corridor - Switch 6	3

Table 6-116 Stage 1 Enviro. Assessment. Section 3 Switch 6 Land Use and Planning Policy

The Yellow Alternative Corridor Option (Switch 7) (PAG Score of 5), was preferred to the Green Corridor Option (PAG Score of 4) as it also supports the ‘BG OBJ1’ policy, despite the presence of the existing Northwest Cycle Trail along the Green Corridor Option (PAG Score of 4).

Corridor Option	Score (7 to 1)
Green Corridor Option (Nodes P to Q)	4
Yellow Alternative Corridor - Switch 7	5

Table 6-117 Stage 1 Enviro. Assessment. Section 3 Switch 7 Land Use and Planning Policy

Similarly, the Yellow Alternative Corridor Option (Switch 8) (PAG Score of 5), has the potential to use the historic railway line and has fewer zoning constraints compared with the corresponding Green Corridor Option (PAG Score of 4).

Corridor Option	Score (7 to 1)
Green Corridor Option (Nodes Q to S)	4
Yellow Alternative Corridor - Switch 8	5

Table 6-118 Stage 1 Enviro. Assessment. Section 3 Switch 8 Land Use and Planning Policy

6.5.2.4 Section 4: Manorhamilton to Blacklion (Node S to C1)

The comparative appraisal of the Green Corridor Option and the Yellow Alternative Corridor Option (Switch 9) identified preference for the Green Corridor Option as it avails of the historic railway line, however both Corridor Options are similar in other respects and both assigned a PAG Score of 4. Both Corridor Options were absent of conflicting planning applications, included the presence of flood risk, and the presence of protected structures and National Monuments.

Corridor Option	Score (7 to 1)
Green Corridor Option (Nodes U to V)	4
Yellow Alternative Corridor - Switch 9	4

Table 6-119 Stage 1 Enviro. Assessment. Section 4 Switch 9 Land Use and Planning Policy

For comparisons with the Yellow Alternative Corridor Option (Switches 10, 11 and 12), the Green Corridor Option was preferred in all instances, primarily based on the potential use of the historic railway line, and thereby supporting the planning policy in Cavan (*CDP - CTH04: Support the extension of Cavan Greenway and disused railway lines*). The Green Corridor Options were assigned PAG Scores of 5, while the corresponding Yellow Alternative Corridor Options were assigned PAG Scores of 4.

Corridor Option	Score (7 to 1)
Green Corridor Option (Nodes X to Z)	5
Yellow Alternative Corridor - Switch 10	4
Green Corridor Option (Nodes X to Y)	5
Yellow Alternative Corridor - Switch 11	4
Green Corridor Option (Nodes Y to A1)	5
Yellow Alternative Corridor - Switch 12	4

Table 6-120 Stage 1 Enviro. Assessment. Section 4 Switch 10, 11 & 12 Land Use and Planning Policy

At Switch 13, the Yellow Alternative Corridor Option instead follows the historic railway line and has no notable constraints in terms of land use zoning. This Corridor Option was assigned a PAG Score 5 and preferred to the corresponding Green Corridor Option (PAG Score of 4), which also has constraints associated with existing buildings and non-compatible zoning.

Corridor Option	Score (7 to 1)
Green Corridor Option (Nodes B1 to D1)	4
Yellow Alternative Corridor - Switch 13	5

Table 6-121 Stage 1 Enviro. Assessment. Section 4 Switch 13 Land Use and Planning Policy

Section 5: Blacklion/Belcoo to Enniskillen (Node C1 to S1/R1)

In the comparative assessment between the combined Green, Orange, Cyan Corridor Options and the Yellow Alternative Corridor Option (Switch 14) no preference was identified. Each Corridor Option was assigned a PAG Score of 4. The Green, Orange, Cyan Corridor Option together have no significant constraints related to National Monuments or land use zoning. While the Yellow Alternative Corridor Option has partial flood risk constraints and the presence of National Monuments and White Lands, it also has no notable planning constraints.

Corridor Option	Score (7 to 1)
Orange / Green Corridor Option (Nodes C1 to D1) + Cyan Corridor Option (Nodes D1 to F1)	4
Yellow Alternative Corridor - Switch 14	4

Table 6-122 Stage 1 Enviro. Assessment. Section 5 Switch 14 Land Use and Planning Policy

In comparing the Green Corridor Option and the Yellow Alternative Corridor Option (Switch 15) (PAG Score of 4), the Green Corridor Option (PAG Score of 5) is preferred due to the policy supporting use of the historic railway line. Both Corridor Options lack notable constraints such as protected structures, National Monuments, Natura 2000 sites, or flood risks.

Corridor Option	Score (7 to 1)
Green Corridor Option (Nodes G1 to H1)	5
Yellow Alternative Corridor - Switch 15	4

Table 6-123 Stage 1 Enviro. Assessment. Section 5 Switch 15 Land Use and Planning Policy

The Yellow Alternative Corridor Option (Switch 16) (PAG Score of 5), provides a link to the Green Corridor Option, which includes the historic railway line, making this preferred over the use of the Cyan Corridor Option (PAG Score of 4). No constraints of concern are otherwise noted for these Corridor Options.

Corridor Option	Score (7 to 1)
Cyan Corridor Option (Nodes I1 to L1)	4
Yellow Alternative Corridor Option (Switch 16) + Green Corridor Option (Nodes J1 to L1)	5

Table 6-124 Stage 1 Enviro. Assessment. Section 5 Switch 16 Land Use and Planning Policy

Again, preference is given to the Green and Cyan Corridor Option (PAG Score of 5) over the corresponding Yellow Alternative Corridor Option (Switch 17) (PAG Score of 4), due to the use of the historic railway line, which supports the Fermanagh and Omagh LDP Policy Clarification 6.57.

Corridor Option	Score (7 to 1)
Green Corridor Option (Nodes H1 to K1 to L1) + Cyan Corridor Option (Nodes L1 to M1)	5
Yellow Alternative Corridor Option (Switch 17)	4

Table 6-125 Stage 1 Enviro. Assessment. Section 5 Switch 17 Land Use and Planning Policy

In the comparison of the Cyan Corridor Option and the Yellow Alternative Corridor Option (Switch 18) no preference is identified as both Corridor Options have no constraints or receptors. Both Corridor Options were assigned a PAG Score of 4.

Corridor Option	Score (7 to 1)
Cyan Corridor Option (Nodes M1 to N1)	4
Yellow Alternative Corridor - Switch 18	4

Table 6-126 Stage 1 Enviro. Assessment. Section 5 Switch 18 Land Use and Planning Policy

The Yellow Alternative Corridor Options, Switches 19 (Node P1 to Q1) and 20 (Node Q1 to R1), were assessed together and assigned a PAG Score of 4 as no constraints of concern were identified. The Yellow Alternative Corridor Option (Switch 19) (Node P1 to Q1), and the Green Corridor Option (Node Q1 to R1) were also assessed together and assigned a PAG Score of 5. The Green Corridor Option has the potential to utilize the historical railway line and is therefore supportive of the Fermanagh and Omagh LDP Policy Clarification 6.57. The corresponding Cyan Corridor (Node P1 to S1) was assessed as having no constraints of concern and assigned a PAG Score of 4. As in other instances the Yellow Alternative Corridor Option (Switch 19) (Node P1 to Q1) together with the Green Corridor Option (Node Q1 to R1) were considered preferred based on the potential utilization of the historic railway line.

Corridor Option	Score (7 to 1)
Cyan Corridor Option (Nodes P1 to S1)	4
Yellow Alternative Corridor - Switch 19 and Green Corridor Option (Nodes Q1 to R1)	5
Yellow Alternative Corridor - Switch 19 and Yellow Alternative Corridor - Switch 20 (Q1 to R1)	4

Table 6-127 Stage 1 Enviro. Assessment. Section 5 Switch 19 Land Use and Planning Policy

Finally, The Yellow Alternative Corridor Option Switch 20 were assessed assigned a PAG Score of 4 as no constraints of concern were identified and the Green Corridor Option was assigned a PAG Scores of 5 as it has the potential to utilize the historical railway line and is therefore supportive of the Fermanagh and Omagh LDP Policy Clarification 6.57.

Corridor Option	Score (7 to 1)
Green Corridor Option (Nodes Q1 to R1)	5
Yellow Alternative Corridor - Switch 20	4

Table 6-128 Stage 1 Enviro. Assessment. Section 5 Switch 20 Land Use and Planning Policy

6.5.3 Population and Human Health

Of principal concern in the provision of transport infrastructure is that human beings, as individuals or communities, are in receipt of benefits and opportunities associated with such developments. The relative benefits and potential disadvantages to local populations and prospective visitors in the vicinity of the SLNCR Greenway Corridor Options and Switches, including overall wellbeing in terms of accessibility, land-use, residential amenity, and health and safety were considered in the Stage 1 Preliminary Assessment following the qualitative appraisal process as per the TII PAG Unit 13.0, in combination with the Environmental Protection Agency (EPA) Guidelines on the Information to be Contained in Environmental Impact Assessment Reports (EPA 2022).

The key features in relation to Population and Human Health throughout each of the Stage 1 Corridor Options are set out in Figure 6-32, Figure 6-33, Figure 6-34, and Figure 6-35 below.

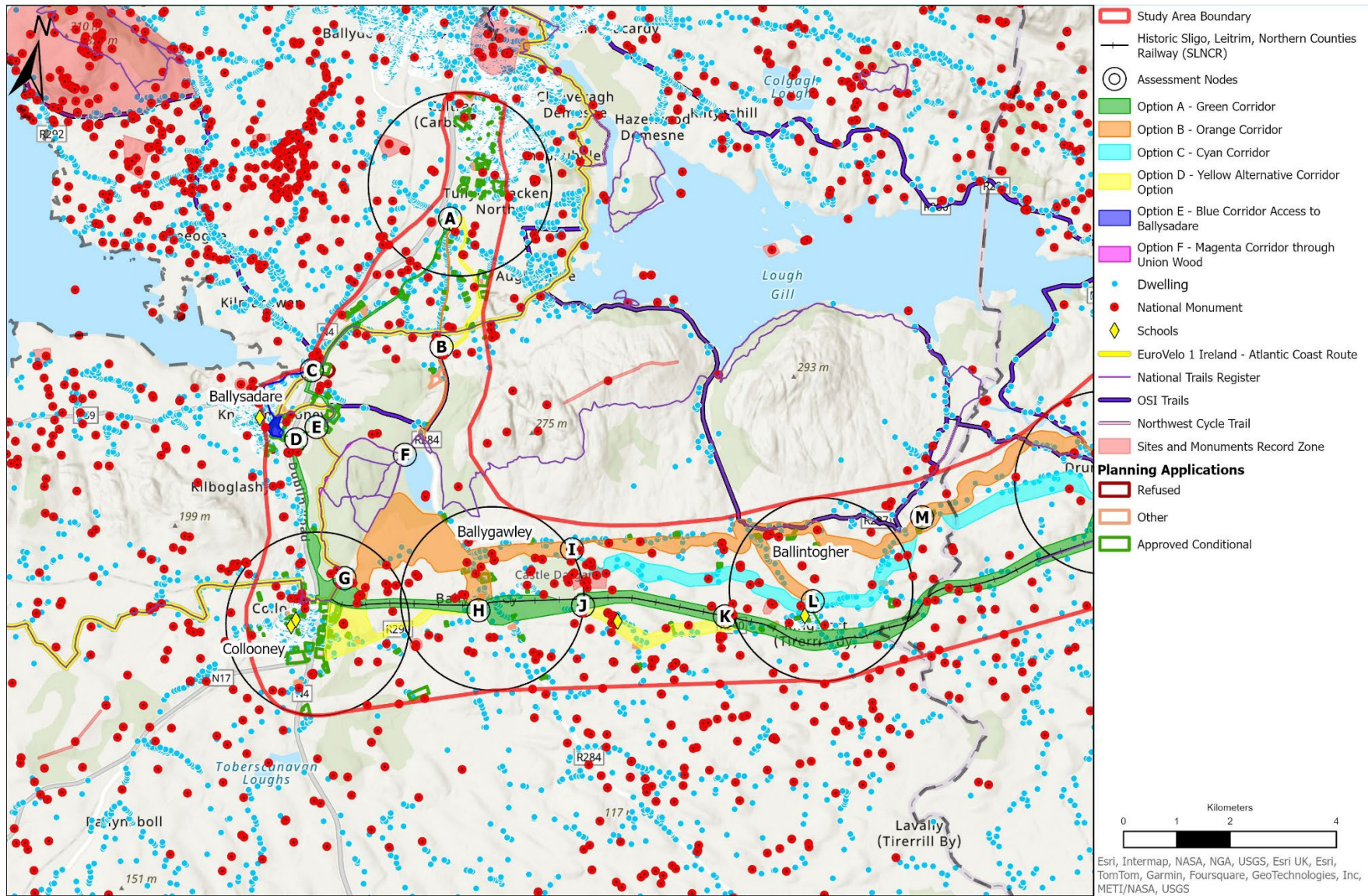


Figure 6-32 Stage 1 Corridor Options - Population and Human Health - Carraroe to Dromahair

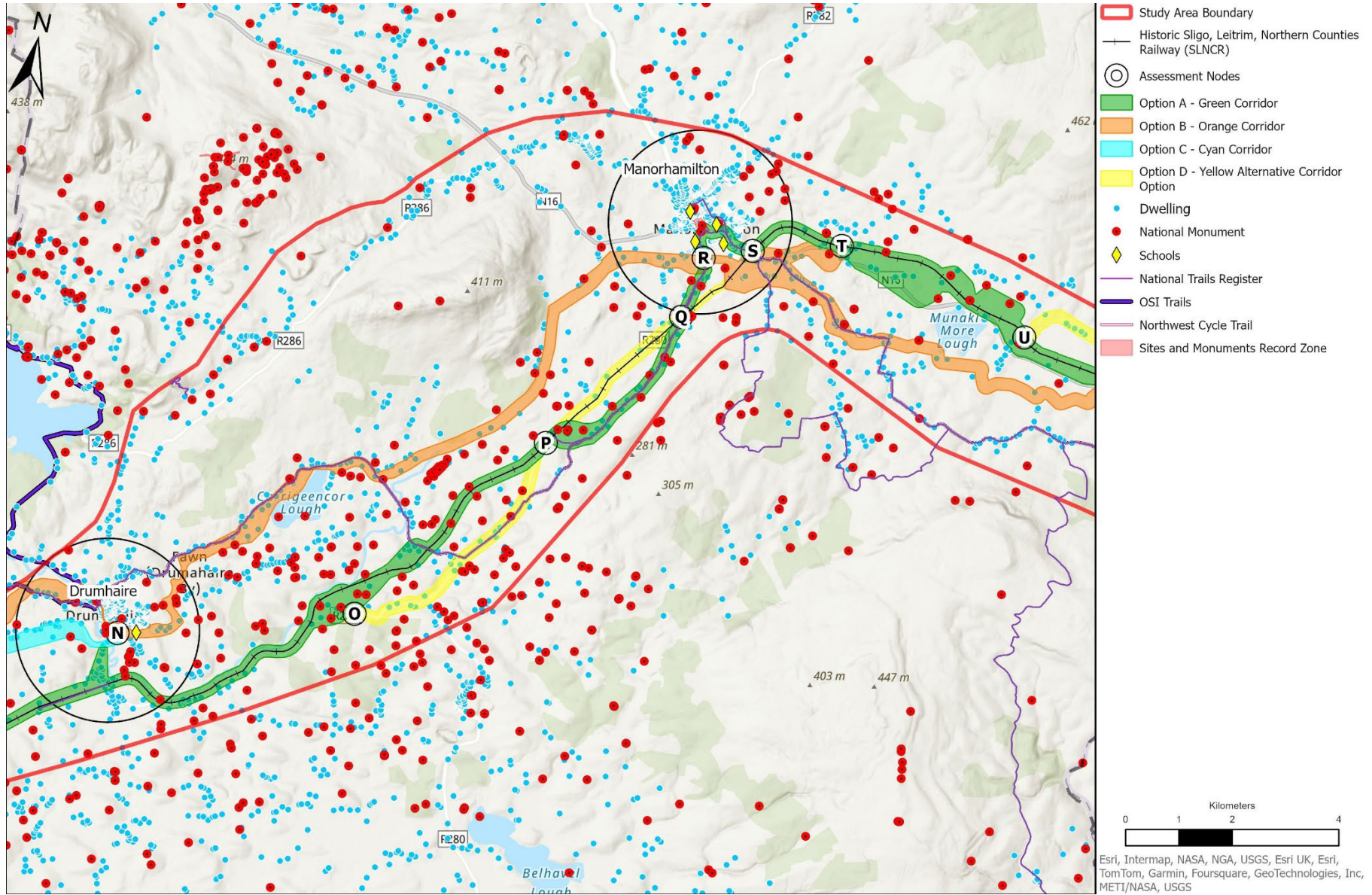


Figure 6-33 Stage 1 Corridor Options - Population and Human Health - Dromahair to Manorhamilton

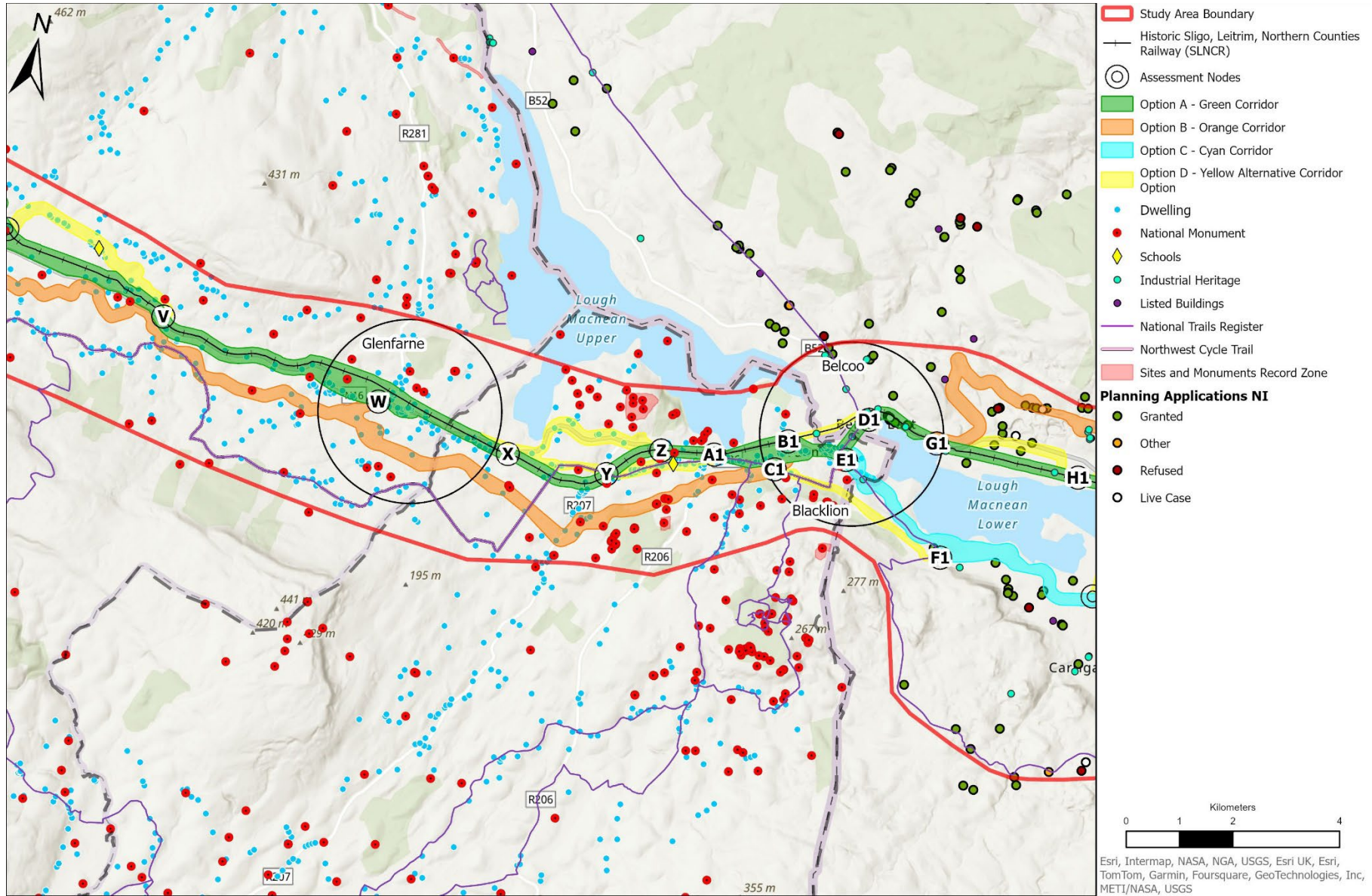


Figure 6-34 Stage 1 Corridor Options - Population and Human Health - Manorhamilton to Blacklion/Belcoo

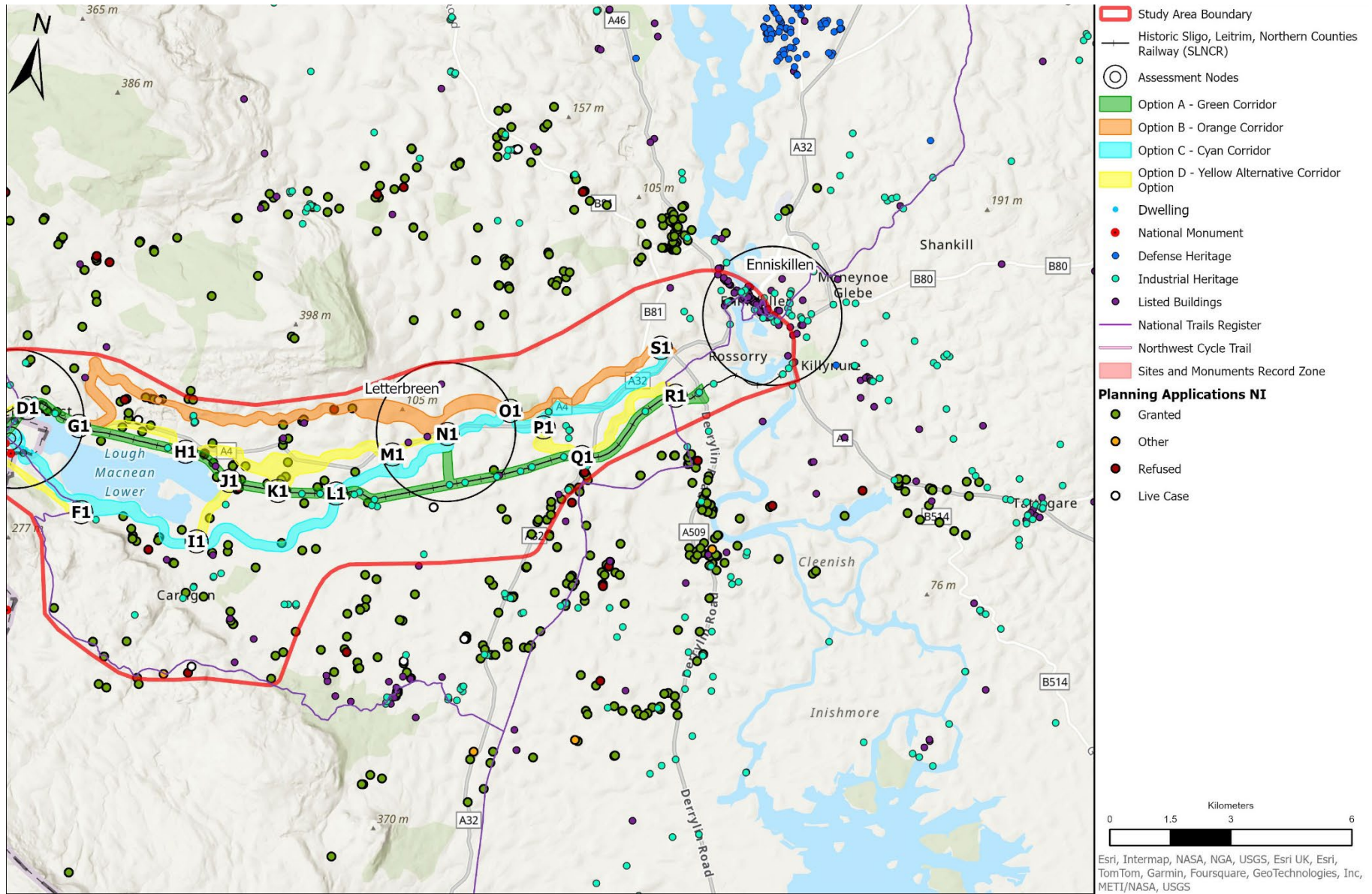


Figure 6-35 Stage 1 Corridor Options - Population and Human Health - Blacklion/Belcoo to Enniskillen

6.5.3.1 Section 1: Carraroe to Collooney (Node A to G)

Within Section 1: Carraroe to Collooney (Node A to G), the Yellow Alternative Corridor Option (Switch 1), the Blue Corridor Access to Ballysadare (Switch 2) and the Magenta Corridor through Union Wood (Switch 3) were each considered preferred to the relative corresponding Corridor Options, with PAG Scores of 5, 5, and 6, respectively.

The relative benefits and opportunities for these Corridor Options included avoidance of the R284 Regional Road, greater exposure to natural features and scenery, fewer interferences with residences, direct connection to recreational (i.e. the St. John’s GAA Club) and cultural heritage amenities, potential use of an existing cycle route, and accessibility for Ballysadare and the town amenities.

Corridor Option	Score (7 to 1)
Orange Corridor Option	3
Yellow Alternative Corridor - Switch 1	5

Table 6-129 Stage 1 Enviro. Assessment, Section 1 Switch 1 Population and Human Health

Corridor Option	Score (7 to 1)
Green Corridor Option (Nodes C to E and E to D)	3
Blue Alternative Corridor – Ballysadare – Switch 2	5
Yellow Alternative Corridor – Switch 21	4

Table 6-130 Stage 1 Enviro. Assessment, Section 1 Switch 2 Population and Human Health

Corridor Option	Score (7 to 1)
Green Corridor Option (Nodes E to D and D to G)	3
Magenta Alternative Corridor – Switch 3	6
Orange Corridor Option (Nodes D to G)	3

Table 6-131 Stage 1 Enviro. Assessment, Section 1 Switch 3 Population and Human Health

6.5.3.2 Section 2: Collooney to Dromahair (Node G to N)

Within Section 2: Collooney to Dromahair (Node G to N) comparisons between the Green Corridor Option, Orange Corridor Option, and the Yellow Alternative Corridor Option (Switch 4) identified the Green Corridor Option as preferred with a PAG Score of 6.

Corridor Option	Score (7 to 1)
Green Corridor Option	6
Orange Corridor Option	3
Yellow Alternative Corridor - Switch 4	3

Table 6-132 Stage 1 Enviro. Assessment, Section 2 Switch 4 Population and Human Health

Similarly, the Green Corridor Option was preferred to the corresponding Yellow Alternative Corridor Option (Switch 5) with a PAG Score of 6. Other Corridor Options were assigned PAG Scores of 3.

Corridor Option	Score (7 to 1)
Green Corridor Option	6
Yellow Alternative Corridor - Switch 5	3

Table 6-133 Stage 1 Enviro. Assessment. Section 2 Switch 5 Population and Human Health

From Collooney to Dromahair, the proposed use of the existing historic railway line (Green Corridor Option) along agricultural field boundaries offers greater scenic opportunities and reduced exposure to busier roadways and associated traffic noise and air pollution. Numerous cultural heritage sites may be experienced along these Corridor Options while imposition to residential properties and agricultural land is less than the respective alternative Corridor Options.

6.5.3.3 Section 3: Dromahair to Manorhamilton (Node N to S)

Within Section 3: Dromahair to Manorhamilton (Node N to S) the Green Corridor Option was preferred in comparison the Yellow Alternative Corridor Options (Switches 6, 7, and 8), and assigned PAG Scores of 5. The Yellow Alternative Corridor Options were assigned PAG Scores of 3.

Corridor Option	Score (7 to 1)
Green Corridor Option (Nodes O to P)	5
Yellow Alternative Corridor - Switch 6	3
Green Corridor Option (Nodes P to Q)	5
Yellow Alternative Corridor - Switch 7	3
Green Corridor Option (Nodes Q to S)	5
Yellow Alternative Corridor - Switch 8	3

Table 6-134 Stage 1 Enviro. Assessment. Section 3 Switch 6, 7 & 8 Population and Human Health

Continuance with the historic railway line (Green Corridor Option) offers gentle gradients and avoidance of busier roadways leading to a safer user experience with less exposure to traffic noise and air pollution. Scenic opportunities may be realised as the historic railway line runs adjacent to the Bonet River, numerous cultural heritage sites, and agricultural field boundaries. Additionally, the Green Corridor Option optimises accessibility to the community of Manorhamilton and its local amenities, providing potential tourism and economic benefits.

6.5.3.4 Section 4: Manorhamilton to Blacklion (Node S to C1)

Within Section 4: Manorhamilton to Blacklion (Node S to C1) the Green Corridor Option and Yellow Alternative Corridor Options (Switches 9 and 11) all were assigned PAG Scores of 4, with no preference identified for either. While the Green Corridor Option follows the historic railway line along a gentle gradient, both the Green Corridor Option and Yellow Alternative Corridor Option (Switch 9) may make use of existing Greenway infrastructure, intersect with a relatively low number of residences, and offer scenic opportunity including woodland. The Green Corridor Option and Yellow Alternative Corridor Option (Switch 11) both pass a relatively low number of private residences and generally avoid busier roadways thereby offering a safer route with less exposure to traffic noise and air pollution.

Corridor Option	Score (7 to 1)
Green Corridor Option (Nodes U to V)	4
Yellow Alternative Corridor - Switch 9	4
Green Corridor Option (Nodes X to Y)	4
Yellow Alternative Corridor - Switch 11	4

Table 6-135 Stage 1 Enviro. Assessment. Section 4 Switch 9 and 11 Population and Human Health

In the comparative assessment of the Green Corridor Option with the Yellow Alternative Corridor Options (Switches 10 and 12), the Green Corridor Options are preferred with a PAG Score of 5. The gentle gradient of the historic railway line, a relatively low number of private residences, and avoidance of busier roadways make these Corridor Options preferable in both instances. Scenic opportunities and access to local recreational,

cultural, and commercial amenities were also considered. The Yellow Alternative Corridor Options (Switches 10 and 12) were each assigned PAG Scores of 3.

Corridor Option	Score (7 to 1)
Green Corridor Option (Nodes X to Z)	5
Yellow Alternative Corridor - Switch 10	3
Green Corridor Option (Nodes Y to A1)	5
Yellow Alternative Corridor - Switch 12	3

Table 6-136 Stage 1 Enviro. Assessment. Section 4 Switch 10 and 12 Population and Human Health

In contrast, the preference is for the Yellow Alternative Corridor Option (Switch 13) (PAG Score of 5) when compared to the corresponding Green Corridor Option (PAG Score of 3) due to the provision of more scenic opportunities, avoidance of the A4/N16 National Road, and less interception with private residences. At this location, the Yellow Alternative Corridor Option follows the historic railway line and thus also takes advantage of a gentle gradient.

Corridor Option	Score (7 to 1)
Green Corridor Option (Nodes B1 to D1)	3
Yellow Alternative Corridor - Switch 13	5

Table 6-137 Stage 1 Enviro. Assessment. Section 4 Switch 13 Population and Human Health

6.5.3.5 Section 5: Blacklion / Belcoo to Enniskillen (Node C1 to S1/R1)

Within Section 5: Blacklion / Belcoo to Enniskillen (Node C1 to S1/R1), the combined Green, Orange, and Cyan Corridor Option was preferred to the corresponding Yellow Alternative Corridor Option (Switch 14) and assigned a PAG Score of 5.

Corridor Option	Score (7 to 1)
Orange / Green Corridor Option (Nodes C1 to D1) + Cyan Corridor Option (Nodes D1 to F1)	5
Yellow Alternative Corridor - Switch 14	3

Table 6-138 Stage 1 Enviro. Assessment. Section 5 Switch 14 Population and Human Health

Similarly, the Green Corridor Options were both preferred to the corresponding Yellow Alternative Corridor Options (Switches 15 and 17), with PAG Scores of 6 and 5, respectively. The preferable Corridor Options in these instances avail of the historic railway line and associated gentle gradient. Additionally, scenic views and access to the Blacklion town centre offer potential for tourism, recreational and economic benefits with relatively few impositions with private residences.

Corridor Option	Score (7 to 1)
Green Corridor Option (Nodes G1 to H1)	6
Yellow Alternative Corridor - Switch 15	2
Green Corridor Option (Nodes H1 to K1 to L1) + Cyan Corridor Option (Nodes L1 to M1)	5
Yellow Alternative Corridor Option (Switch 17)	3

Table 6-139 Stage 1 Enviro. Assessment. Section 5 Switch 15 and 17 Population and Human Health

The Yellow Alternative Corridor Option (Switch 16) offers a connection between the Cyan Corridor Option and the Green Corridor Option to the east of Lough Macnean Lower, while the Cyan Corridor Option continues further east before also connecting with the Green Corridor Option. The Yellow Alternative Corridor Option (Switch 16) (PAG Score of 5), was considered preferred to the Cyan Corridor Option. The proximity to the

Lough Macnean Lower offers scenic and tourism potential, with recreational opportunities granted by accessibility to the lake. This Corridor Option also avoids busier roadways with less exposure to traffic noise and air pollution and fewer interactions with private residences.

Corridor Option	Score (7 to 1)
Cyan Corridor Option (Nodes I1 to L1)	3
Yellow Alternative Corridor Option (Switch 16) + Green Corridor Option (Nodes J1 to L1)	5

Table 6-140 Stage 1 Enviro. Assessment. Section 5 Switch 16 Population and Human Health

The Yellow Alternative Corridor Option (Switch 18) and the Cyan Corridor Option were assigned PAG Scores of 3 and 2, respectively. The Cyan Corridor Option was considered preferred due to the avoidance of busier roadways and fewer residential properties. The overall negative Scores were attributable to a general lack of potential benefits, while the Corridor Options also propose to traverse privately owned agricultural fields or impose upon private dwellings.

Corridor Option	Score (7 to 1)
Cyan Corridor Option (Nodes M1 to N1)	3
Yellow Alternative Corridor - Switch 18	2

Table 6-141 Stage 1 Enviro. Assessment. Section 5 Switch 18 Population and Human Health

The Yellow Alternative Corridor Option (Switch 19) together with the Green Corridor Option (Node Q1 to R1) was considered preferred (assigned a PAG Score of 4) as it avails of the historic railway gentle gradient, provides a safer user experience along less busy roadways with reduced exposure to traffic noise and air pollution, is relatively less imposing to private residences, and offers scenic and recreational opportunities in proximity to Lankill Lough and a woodland. The Yellow Alternative Corridor Options (Switches 19 (Node P1 to Q1) and 20 (Node Q1 to R1)), were considered in combination and assigned a PAG Score of 3. The corresponding Cyan Corridor Option (Node P1 to S1) was assigned a PAG Score of 3.

Corridor Option	Score (7 to 1)
Cyan Corridor Option (Nodes P1 to S1)	3
Yellow Alternative Corridor - Switch 19 and Green Corridor Option (Nodes Q1 to R1)	4
Yellow Alternative Corridor - Switch 19 and Yellow Alternative Corridor - Switch 20 (Q1 to R1)	3

Table 6-142 Stage 1 Enviro. Assessment. Section 5 Switch 19 Population and Human Health

Finally, The Yellow Alternative Corridor Option Switch 20 was assigned a PAG Score of 4 as no constraints of concern were identified and the Green Corridor Option was assigned a PAG Scores of 5 as it avails of the historic railway gentle gradient.

Corridor Option	Score (7 to 1)
Green Corridor Option (Nodes Q1 to R1)	5
Yellow Alternative Corridor - Switch 20	4

Table 6-143 Stage 1 Enviro. Assessment. Section 5 Switch 20 Population and Human Health

6.5.4 Air Quality

Appraisal of the potential for air quality impacts associated with the proposed SLNCR Greenway project were carried out with respect to the Corridor Options and Switches. In accordance with TII Air Quality Assessment of Specified Infrastructure Projects – Overarching December 2022, rural cycleways (offline & greenways) have the potential to result in changes in traffic and air quality due to:

- Greenways with car parking facilities may have limited additional trips.
- Cycleways that affect available road space could also affect air quality.
- Modal shift, encouraging car users to shift mode to active transport may improve air quality.

The document also states that cycleways have the potential to impact on air quality during the construction phase. Sensitive receptors are defined as residential properties, hospitals, schools, amenity areas and ecological sensitive sites.

For the preliminary appraisal of the Corridor Options and Switches, in the absence of traffic data associated with each Corridor Option, the assessments were completed based on an estimation of the number of sensitive receptors located in proximity to each corridor to allow for the consideration of potential construction impacts. Corridor Options and Switch were appraised for the Construction and Operation Phases.

In all instances across the five geographical sections, no operational impacts were considered likely to arise and effects during the operational phase are considered neutral throughout (PAG Scores of 4).

6.5.4.1 Section 1: Carraroe to Collooney (Node A to G)

Within Section 1: Carraroe to Collooney, the Yellow Alternative Corridor Option (Switch 1) (PAG Score of 3), has a greater separation from sensitive receptors than the corresponding Orange Corridor Option (PAG Score of 2) and is therefore preferable from an air quality perspective.

The Blue Corridor Access to Ballysadare (Switch 2) (PAG Score of 2) has less separation from sensitive receptors than the Green Corridor Option and/or the Yellow Alternative Corridor (Switch 21) (PAG Score of 3) and is therefore less preferable.

The Magenta Corridor through Union Wood (Switch 3) (PAG Score of 3) has a greater separation from sensitive receptors than both the Green Corridor Option (PAG Score of 2) the Orange Corridor Option (PAG Score of 2). It is therefore preferable from an air quality perspective.

6.5.4.2 Section 2: Collooney to Dromahair (Node G to N)

Within Section 2: Collooney to Dromahair, the Orange Corridor Option (PAG Score of 2) has a smaller separation from a larger number of sensitive receptors compared with the Green Corridor Option (PAG Score of 3) or Yellow Alternative Corridor Option (Switch 4) (PAG Score of 3). The number and distance of sensitive receptors to the Green Corridor and Yellow Alternative Corridor (Switch 4) Options are very similar and therefore either Corridor Option is preferable from an air quality perspective.

Lastly in this Section, the Green Corridor Option (PAG Score of 3) has fewer sensitive receptors than the corresponding Yellow Alternative Corridor Option (Switch 5) (PAG Score of 2) and is therefore preferred from an air quality perspective.

6.5.4.3 Section 3: Dromahair to Manorhamilton (Node N to S)

Within Section 3: Dromahair to Manorhamilton (Node N to S), the Green Corridor Option (PAG Score of 3) has fewer sensitive receptors within the corridor boundary than the Yellow Alternative Corridor Option (Switch 6) (PAG Score of 2) and is therefore preferred from an air quality perspective.

The Yellow Alternative Corridor Option (Switch 7) (PAG Score of 3) has fewer sensitive receptors within the corridor boundary than the Green Corridor Option (PAG Score of 2) and is therefore preferred from an air quality perspective.

Similarly, the Yellow Alternative Corridor (Switch 8) (PAG Score of 3) has fewer sensitive receptors within the corridor boundary than the corresponding Green Corridor Option (PAG Score of 2) and is preferred from an air quality perspective.

6.5.4.4 Section 4: Manorhamilton to Blacklion (Node S to C1)

Within Section 4: Manorhamilton to Blacklion (Node S to C1), the Green Corridor Options had fewer sensitive receptors within the corridor boundaries than the corresponding Yellow Alternative Corridor Options (Switches 9 to 12) and were therefore all considered preferable from an air quality perspective. The Green Corridor Options were assigned a PAG Score of 3 and the Yellow Alternative Corridor Options (Switches 9 to 12) were assigned PAG Scores of 2 for each appraisal.

Conversely, the Yellow Alternative Corridor Option (Switch 13) (PAG Score of 3), had fewer sensitive receptors within the corridor boundary than the Green Corridor Option (PAG Score of 2) and was therefore preferred from an air quality perspective.

6.5.4.5 Section 5: Blacklion / Belcoo to Enniskillen (Node C1 to S1/R1)

Within Section 5: Blacklion / Belcoo to Enniskillen (Node C1 to S1/R1), the Yellow Alternative Corridor Option (Switch 14) (PAG Score of 3) had fewer sensitive receptors within the corridor boundary than the combined Green, Orange, and Cyan Corridor Option (PAG Score of 2). It was therefore preferred from an air quality perspective.

In the comparison between the Yellow Alternative Corridor Option (Switch 15) (PAG Score of 2) and the Green Corridor Option (PAG Score of 3), the latter had fewer sensitive receptors and was therefore preferable from an air quality perspective.

There was very little difference from an air quality impact perspective between the Cyan Corridor Option and the combined Yellow Alternative Corridor (Switch 16) and Green Corridor Options; both were assigned a PAG Score of 2. As the number of sensitive receptors within the corridor boundaries was similar for both, no preference was identified between these Corridor Options.

The combined Green Corridor and Cyan Corridor Option (PAG Score of 3) was considered preferable to the corresponding Yellow Alternative Corridor Option (Switch 17) from an air quality perspective as there were fewer sensitive receptors within the corridor boundaries. Similarly, the Cyan Corridor Option (PAG Score of 3) was preferable to the corresponding Yellow Alternative Corridor Option (Switch 18) as there were fewer sensitive receptors within the corridor boundaries. Both the Yellow Alternative Corridor Options were assigned PAG Scores of 2.

Finally, the comparative appraisal of the Yellow Alternative Corridor Options (Switches 19 and 20) were made in combination as follows:

- The Yellow Alternative Corridor Options (Switches 19 (Node P1 to Q1) and 20 (Node Q1 to R1)), were considered in combination and assigned a PAG Score of 2.
- The Yellow Alternative Corridor Option (Switch 19 (Node P1 to Q1)) was considered in combination with the Green Corridor Option (Node Q1 to R1) and assigned a PAG Score of 2
- The corresponding Cyan Corridor Option (Node P1 to S1) was assigned a PAG Score of 2.

There was little difference from an air quality impact perspective for the different Corridor Options as the number of sensitive receptors in the vicinity of the corridors is similar in each instance. Additionally, the distances of sensitive receptors to the corridors are also similar. Therefore, no preference for either Corridor Option was given.

6.5.5 Noise and Vibration

Appraisal of potential noise and vibration impacts for the proposed SLNCR Greenway project was carried out to allow a comparison of the Corridor Options and alternative Switches across the five geographical areas. For the appraisal, the following assumptions were made:

- The Greenway construction will involve surface treatment of the existing topography and minimal earthworks (embankments or cuttings of up to 1m in height) and would be similar along all corridor options.

- The construction phase will likely lead to an increase in noise and vibration levels above the existing levels (and thus a negative effect) for all corridor options. This increase would be temporary in nature, and the potential impact to the surrounding community would be decreased with appropriate mitigation measures.
- The Greenway, once operational, will be used by pedestrians and non-motorised vehicles that do not have the potential to cause significant noise or vibration impacts. For this reason, operational impacts are considered neutral for all corridor options.

Potential noise and vibration impacts were assessed based on a desktop study using publicly available information and open-source mapping. The scoring was determined by considering the relative number of sensitive receptors identified in the vicinity of a Corridor Option or Switch as well as the proximity of the receptors to a Corridor Option or Switch, where increasing numbers and proximity corresponded to increasing impact ratings. Furthermore, sensitive receptors that are vulnerable to noise and vibration, such as residential dwellings, or places where normal operations could be disturbed by excessive noise or vibration (e.g., hospitals, schools, offices, churches, etc.) were also considered in the appraisal.

There were no expected noise or vibration impacts identified for the operational phase of the project, therefore all options are neutral across all geographical sections.

6.5.5.1 Section 1: Carraroe to Collooney (Node A to G)

Within Section 1: Carraroe to Collooney (Node A to G), the Yellow Alternative Corridor Option (Switch 1) (PAG Score of 3) had a greater separation from sensitive receptors than the corresponding Orange Corridor Option (PAG Score of 2) and was therefore preferred from a noise and vibration perspective.

The Blue Corridor Access to Ballysadare (Switch 2) (PAG Score of 2) has less separation from sensitive receptors than the Green Corridor Option and/or the Yellow Alternative Corridor (Switch 21) (PAG Score of 3) and is therefore less preferable. Similarly, the Magenta Corridor through Union Wood Corridor (Switch 3) (PAG Score of 3) had a greater separation from sensitive receptors compared with the Green Corridor Option (PAG Score of 2) and Orange Corridor Option (PAG Score of 2) and was therefore also preferred from a noise and vibration perspective.

6.5.5.2 Section 2: Collooney to Dromahair (Node G to N)

Within Section 2: Collooney to Dromahair (Node G to N), the Orange Corridor Option (PAG Score of 2) had a smaller separation from a larger number of sensitive receptors than the Green Corridor Option (PAG Score of 3) or the Yellow Alternative Corridor Option (Switch 4) (PAG Score of 3). The number and distance of sensitive receptors to the Green Corridor and Yellow Alternative Corridor (Switch 4) Options were similar and thus neither had an advantage over the other. Both are preferable from a noise and vibration perspective.

Lastly in this Section, the Green Corridor Option (PAG Score of 3) had fewer sensitive receptors within the corridor boundary compared with the Yellow Alternative Corridor Option (Switch 5) (PAG Score of 2) and was therefore preferable from a noise and vibration perspective.

6.5.5.3 Section 3: Dromahair to Manorhamilton (Node N to S)

Within Section 3: Dromahair to Manorhamilton (Node N to S), the Green Corridor Option (PAG Score of 3) had fewer sensitive receptors within the corridor boundary than the corresponding Yellow Alternative Corridor Option (Switch 6) (PAG Score of 2). It was therefore preferable from a noise and vibration perspective.

The Yellow Alternative Corridor Options (Switches 7 and 8) (PAG Scores of 3) had fewer sensitive receptors within the corridor boundary than both the corresponding Green Corridor Options (PAG Scores of 2) and were therefore preferable from a noise and vibration perspective.

6.5.5.4 Section 4: Manorhamilton to Blacklion (Node S to C1)

Within Section 4: Manorhamilton to Blacklion (Node S to C1), all of the Green Corridor Options (PAG Scores of 3) had fewer sensitive receptors within the corridor boundaries compared with the corresponding Yellow

Alternative Corridor Options (Switches 9 to 12) (PAG Scores of 2) and were therefore preferable from a noise and vibration perspective.

Conversely, the Yellow Alternative Corridor Option (Switch 13) (PAG Score of 3), had fewer sensitive receptors within the corridor boundary than the Green Corridor Option (PAG Score of 2) and was therefore preferable from a noise and vibration perspective.

6.5.5.5 Section 5: Blacklion / Belcoo to Enniskillen (Node C1 to S1/R1)

Within Section 5: Blacklion / Belcoo to Enniskillen (Node C1 to S1/R1), the Yellow Alternative Corridor Option (Switch 14) (PAG Score of 3), had fewer sensitive receptors within the corridor boundary than the combined Green, Orange and Cyan Corridor Option (PAG Score of 2) and was therefore preferable from a noise and vibration perspective.

The Green Corridor Option (PAG Score of 3) had fewer sensitive receptors within the corridor boundary than the Yellow Alternative Corridor Option (Switch 15) (PAG Score of 2) and was therefore preferable from a noise and vibration perspective.

There is very little difference from a noise and vibration impact perspective between the Cyan Corridor Option and the combined Yellow Alternative and Green Corridor Options as the number of sensitive receptors within the corridor boundaries was similar for both options. Both options were assigned a PAG Score of 2 with no preference identified for either.

When compared to the Yellow Alternative Corridor Option (Switch 17) (PAG Score of 2), the combined Green and Cyan Corridor Option (PAG Score of 3) had fewer sensitive receptors within the corridor boundary and was therefore preferable from a noise and vibration perspective. Similarly, when compared to the Yellow Alternative Corridor Option (Switch 18) (PAG Score of 2), the Cyan Corridor Option (PAG Score of 3) had fewer sensitive receptors within the corridor boundary and was therefore preferable from a noise and vibration perspective.

Finally, the comparative appraisal of the Yellow Alternative Corridor Options (Switches 19 and 20) were made in combination as follows:

The Yellow Alternative Corridor Options (Switches 19 (Node P1 to Q1) and 20 (Node Q1 to R1)), were considered in combination and assigned a PAG Score of 2.

The Yellow Alternative Corridor Option (Switch 19 (Node P1 to Q1)) was considered in combination with the Green Corridor Option (Node Q1 to R1) and assigned a PAG Score of 2

The corresponding Cyan Corridor Option (Node P1 to S1) was assigned a PAG Score of 2.

There is very little difference from a noise and vibration impact perspective for the different Corridor Options as the number of sensitive receptors in the vicinity of the Corridor Options is similar. The distances of sensitive receptors to the Corridor Options are also similar. Therefore, no preference for either Corridor Option was given.

6.5.6 Landscape and Visual Quality

The potential for the SLNCR Greenway to impact landscape and visual receptors was considered with respect to Corridor Options and alternative Switch opportunities for the Phase 2 Options Selection, in accordance the PAG for qualitative appraisal in combination with the Environmental Protection Agency (EPA) Guidelines on the information to be contained in Environmental Impact Assessment Reports (EPA 2022). Of principal concern is how the character of the landscape will be altered with the introduction of this linear development, and how household vistas and designated views may be affected.

The key Landscape and Visual features of the site in relation to the Stage 1 Corridor Options are outlined in Figure 6-36, Figure 6-37, Figure 6-38, and Figure 6-39 below.

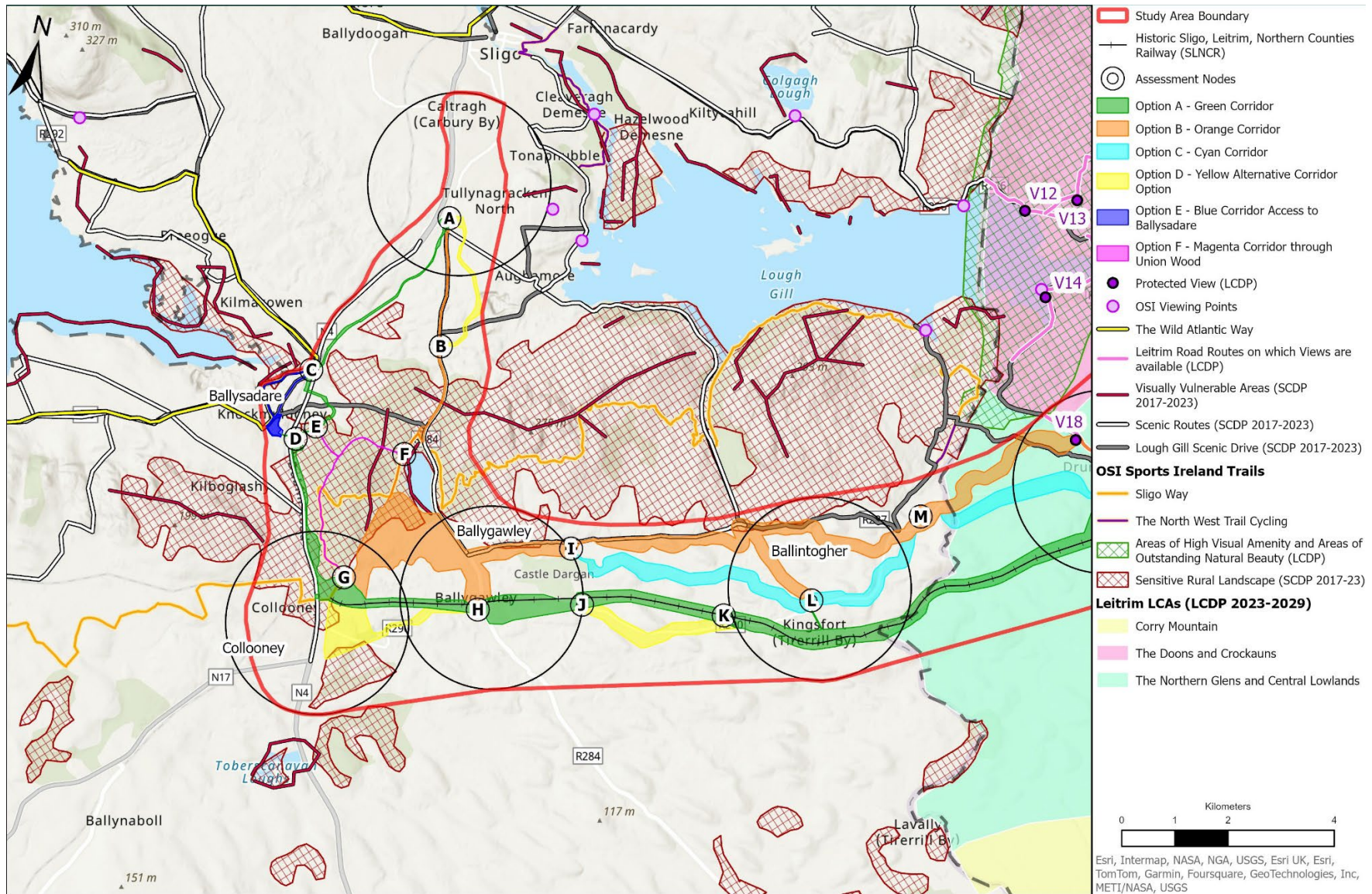


Figure 6-36 Stage 1 Corridor Options - Landscape and Visual - Carraroe to Dromahair

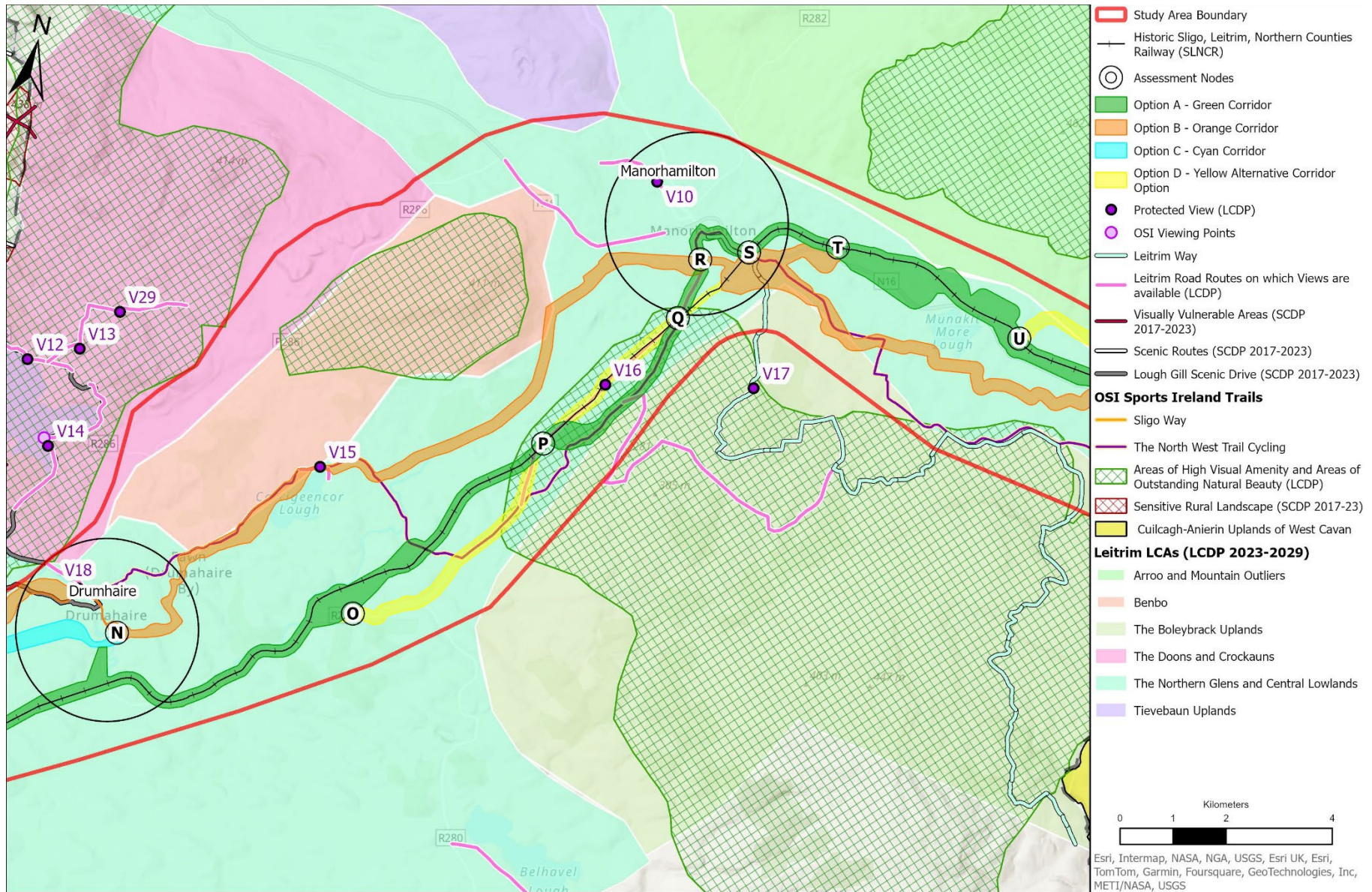


Figure 6-37 Stage 1 Corridor Options - Landscape and Visual - Dromahaire to Manorhamilton

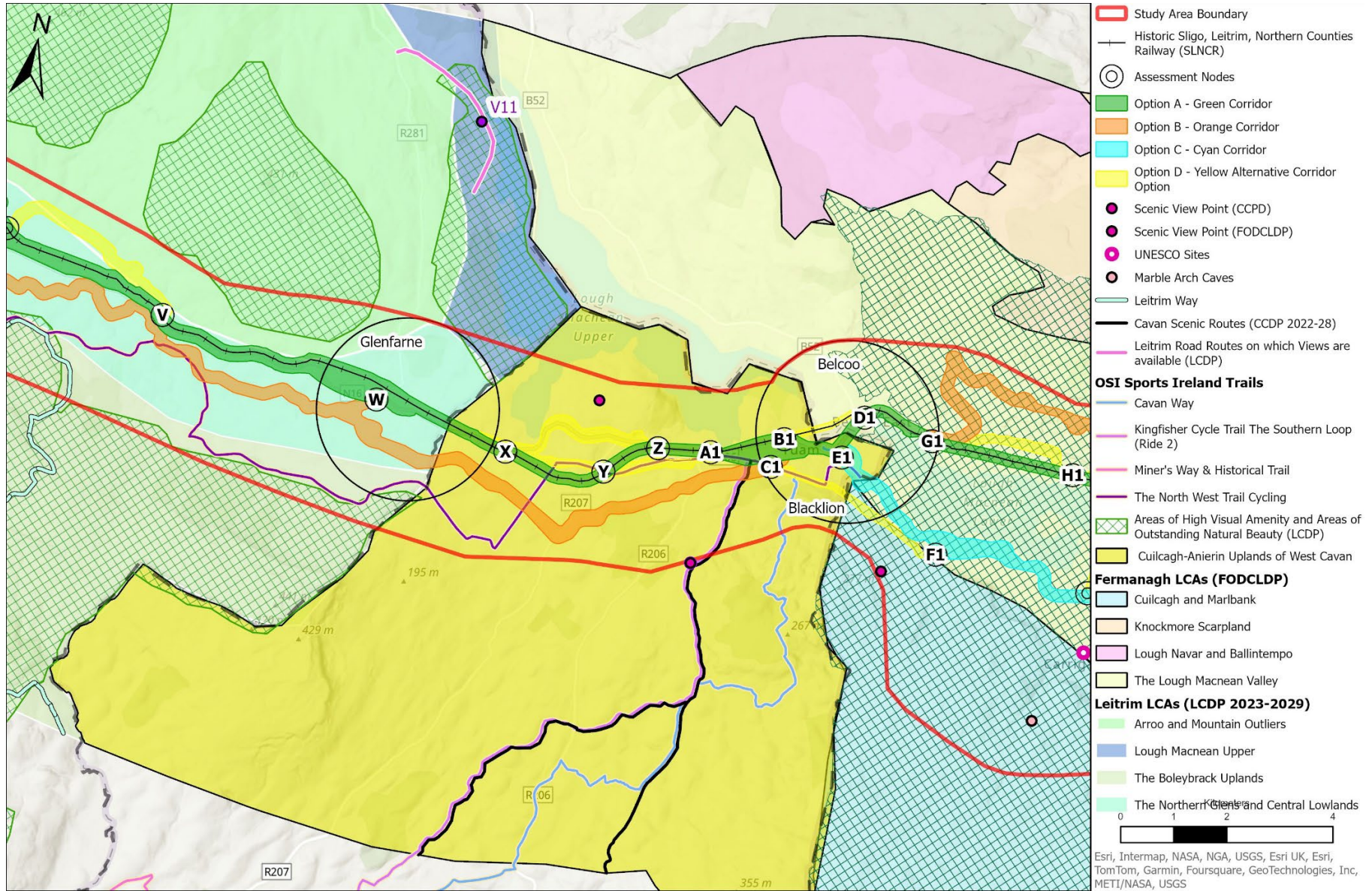


Figure 6-38 Stage 1 Corridor Options - Landscape and Visual - Manorhamilton to Blacklion/Belcoo

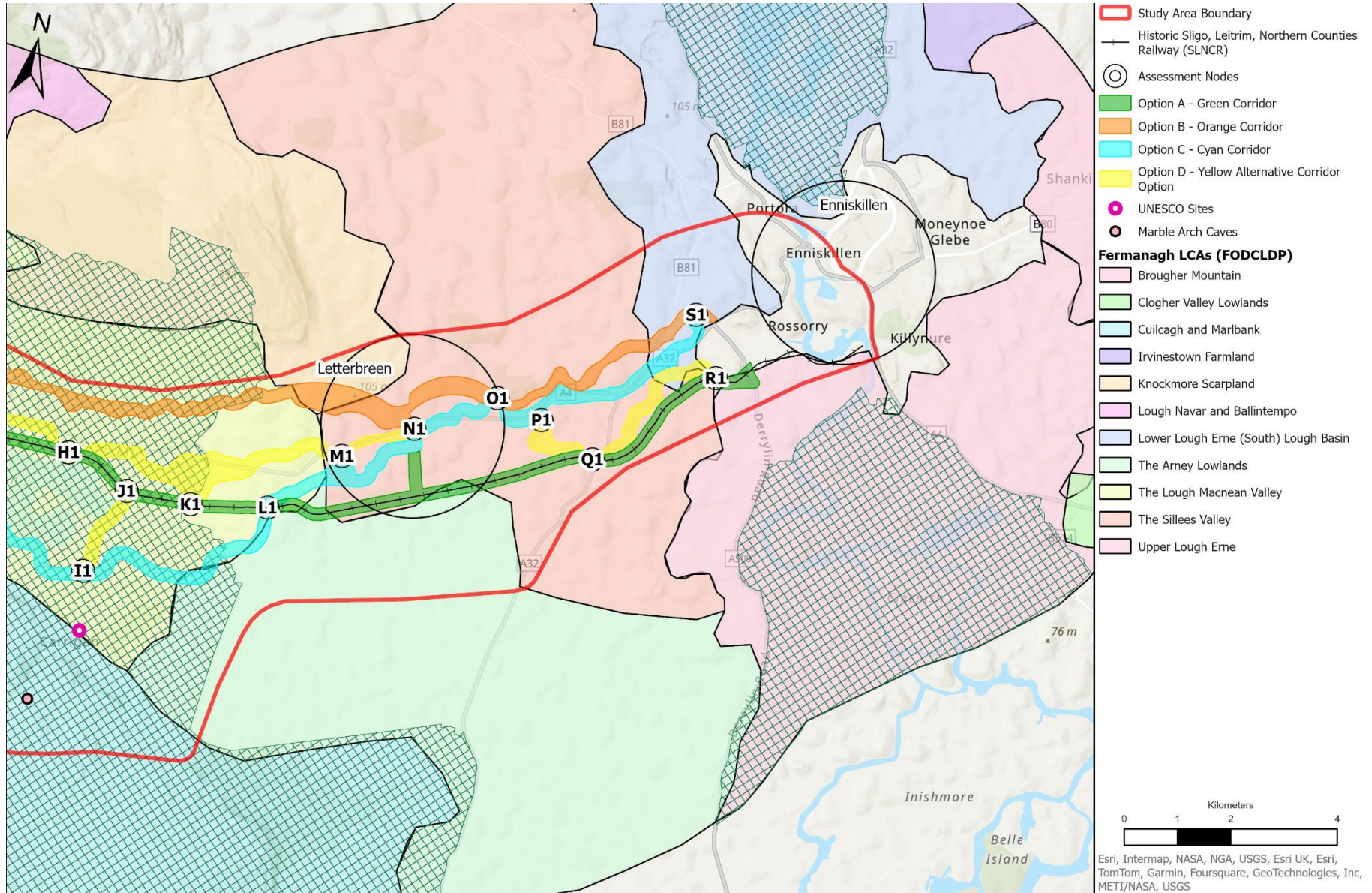


Figure 6-39 Stage 1 Corridor Options - Landscape and Visual - Blacklion/Belcoo to Enniskillen

6.5.6.1 Section 1: Carraroe to Collooney (Node A to G)

Within Section 1: Carraroe to Collooney (Node A to G), the Orange Corridor Option was considered preferred and assigned a PAG Score of 2. The Orange Corridor Option is situated to result in less use of greenfield sites and pose less potential impact on the UNESCO nominated Sligo Passage Tomb Landscape (SPTL) compared with the Yellow Alternative Corridor Option (Switch 1) (PAG Score of 2). However, it is noted that the orange Corridor Option has a greater potential to effect residential receptors.

The Green Corridor Option and Yellow Alternative Corridor (Switch 21) (PAG Score of 3) are both preferable to the Blue Corridor Access to Ballysadare (PAG Score of 2) primarily for their avoidance of SCDP 'Visually Vulnerable Areas' (VVA) and potential to impact on fewer household vistas.

There was no preference given between the Orange Corridor Option and Magenta Corridor through Union Wood (Switch 3), and both were assigned a PAG Score of 3. Both Corridor Options have potential to negatively affect the VVAs and SCDP Rural Landscape around the Union Wood forested area, while the Green Corridor Option passes through greenfield sites and a greater potential to effect household vistas. It is noted that a Corridor Option passing through the forested area of Union Wood has the potential to use/follow existing routes.

6.5.6.2 Section 2: Collooney to Dromahair (Node G to N)

Within Section 2: Collooney to Dromahair (Node G to N) the Green Corridor Options were both assigned PAG Scores of 4 and considered preferred to the Yellow Alternative Corridor Options (Switches 4 and 5) and the Orange Corridor Option.

From Collooney to Dromahair, use of the existing historic railway line (Green Corridor Option) offers access to a rural landscape setting with limited effects on landscape character and greenfield areas. By comparison, the Yellow Alternative Corridor Option (Switch 4) (PAG Score of 3) has greater potential to impact landscape character where it passes through mature woodland and requires a watercourse crossing. The Orange Corridor Option (PAG Score of 3) has a greater potential for effects on household vistas and the Yellow Alternative Corridor Option (Switch 5) (PAG Score of 2), has an unavoidable effect on household vistas.

6.5.6.3 Section 3: Dromahair to Manorhamilton (node N to S)

Within Section 3: Dromahair to Manorhamilton (Node N to S) the Green Corridor Option (PAG Score of 3) was preferred to the Yellow Alternative Corridor Option (Switch 6) (PAG Score of 3), as it offers access to rural landscape settings with limited effects on landscape character and greenfield areas should the historic railway line be utilised. Conversely, the Yellow Alternative Corridor Option (Switch 6) may negatively impact the visual amenity on a LCDP Scenic Road Route and Areas of High Visual Amenity (AHVA) and Areas of Outstanding Natural Beauty (AONB).

In comparison to the Yellow Alternative Corridor Option (Switch 7) (PAG Score of 2), the Green Corridor Option (PAG Score of 3) was considered preferred as it has greater potential to effect household vistas. The Yellow Alternative Corridor Option (Switch 7) has potential to affect a LCDP Scenic Road Route, LCDP Protected View 16, and the landscape character.

The Yellow Alternative Corridor Option (Switch 8) (PAG Score of 4) was considered preferred to the Green Corridor Option (PAG Score of 3) as it proposes to utilize the historic railway line. This would provide access to a rural landscape setting with limited effects on landscape character and greenfield areas. There are also fewer potential impacts on household vistas compared to the Green Corridor Option, which passes through the residential centre of Manorhamilton.

6.5.6.4 Section 4: Manorhamilton to Blacklion (Node S to C1)

Within Section 4: Manorhamilton to Blacklion (Node S to C1) the Green Corridor Option (PAG Score of 3) was considered preferred to the Yellow Alternative Corridor Option (Switch 9) (PAG Score of 3), due to the potential use of the historic railway line, fewer household vistas, and fewer watercourse crossings, which have the potential to alter the character of the landscape.

Similarly, while both the Green Corridor Option (PAG Score of 3) and Yellow Alternative Corridor Option (Switch 10) (PAG Score of 3) have potential to effect household vistas, preference was for the Green Corridor Option as it would avail of the historic railway line. This would create access to a rural landscape setting with limited effects on landscape character and greenfield areas. The Yellow Alternative Corridor Option (Switch 10) has potential to affect the visual amenity of the banks of Lough Macnean Upper.

No preference was given between the Green Corridor Option (PAG Score of 3) and the Yellow Alternative Corridor Option (Switch 11) (PAG Score of 3). The Green Corridor Option would avail of the historic railway line, while the Yellow Alternative Corridor Option (Switch 11) would have impact on fewer household vistas.

The Green Corridor Option (PAG Score of 3) was considered preferred to the Yellow Alternative Corridor Option (Switch 12) (PAG Score of 3) as it would avail of the historic railway line with access to rural landscape and limited effects on greenfield areas. Conversely, the Yellow Alternative Corridor Option (Switch 12) has potential to impact a greater number of household vistas, as well as the setting of a church and graveyard.

Conversely, the Yellow Alternative Corridor Option (Switch 13) (PAG Score of 3) was considered preferable to the Green Corridor Option (PAG Score of 3) due to the potential to utilize the historic railway line, as this would limit potential effects on the rural landscape setting. Although a bridge would need to be introduced, the Green Corridor Option has a greater potential to impact on visual amenities of Belcoo River and Park.

6.5.6.5 Section 5: Blacklion / Belcoo to Enniskillen (Node C1 to S1/R1)

Within Section 5: Blacklion / Belcoo to Enniskillen (Node C1 to S1/R1), the Yellow Alternative Corridor Option (Switch 14) (PAG Score of 3) was preferred to the combined Green, Orange, and Cyan Corridor Option (PAG Score of 2) as there are fewer residential receptors and therefore less potential impact to visual amenity. Additionally, there are fewer potential landscape and visual impacts associated with the protected banks and scenic amenity of Lough Macnean.

The Green Corridor Option (PAG Score of 3) was considered preferred over the Yellow Alternative Corridor Option (Switch 15) (PAG Score of 3), as use of the historic railway offers rural access with limited impact of landscape character.

No preference was given between the Cyan Corridor Option (PAG Score of 3) and Yellow Alternative Corridor Option (Switch 16) (PAG Score of 3). The Cyan Corridor Option passes through a greater area of greenfield sites and has close proximity to the banks of Lough Macnean Lower. While the Yellow Alternative Corridor Option (Switch 16) also has close proximity to the banks of Lough Macnean Lower it would also require a watercourse crossing, with potential impacts for the visual amenity of this landscape feature.

The Green Corridor Option (PAG Score of 3) was considered preferred to the Yellow Alternative Corridor Option (Switch 17) due to proposed utilization of the existing historic railway line. The Yellow Alternative Corridor Option (Switch 17) (PAG Score of 3), passes through greater areas of greenfield with no established route and greater potential to impact household vistas.

There was no preference between the Yellow Alternative Corridor Option (Switch 18) (PAG Score of 3), and the Cyan Corridor Option (PAG Score of 3) as both have potential for negative impacts the landscape character and residential receptors. Finally, the comparative appraisal of the Yellow Alternative Corridor Options (Switches 19 and 20) were made in combination as follows:

- The Yellow Alternative Corridor Options (Switches 19 (Node P1 to Q1) and 20 (Node Q1 to R1)), were considered in combination and assigned a PAG Score of 3.
- The Yellow Alternative Corridor Option (Switch 19 (Node P1 to Q1)) was considered in combination with the Green Corridor Option (Node Q1 to R1) and assigned a PAG Score of 4.
- The corresponding Cyan Corridor Option (Node P1 to S1) was assigned a PAG Score of 3.

The Cyan Corridor Option and the combined Yellow Alternative Corridor Options (Switch 19) (Node P1 to Q1 and (Switch 20) (Node Q1 to R1), pass through greater areas of greenfield with no established route and thereby pose greater potential to impact household vistas. In contrast, the combined Yellow Alternative Corridor Option (Switch 19) (Node P1 to Q1) and the Green Corridor Option (Node Q1 and R1) was considered preferred based on the potential use of the historic railway line, which poses less potential impact on landscape character and household vistas.

6.5.7 Biodiversity

The potential for the SLNCR Greenway to impact local biodiversity and protected sites was considered with respect to the Stage 1 Corridor Options and alternative Switch opportunities, in accordance with Article 6(4) of the Habitats Directive, and following the appraisal process as described in the TAF and the TII PAG Unit 13.0.

Desk studies and high-level ecological walkover surveys of targeted areas informed the appraisal process. Key Ecological Receptors (KERs), including Designated and National Sites as well as known distributions of various protected species and habitats, were categorised by importance, as per Chapter 3 of the 'Guidelines for Assessment of Ecological Impacts of National Roads Schemes' (NRA, 2009). The scale of importance includes International Importance, National Importance, County Importance, Local Importance (Higher Value), and Local Importance (Lower Value). Taking a precautionary approach for the purpose of this appraisal, constraints above Local Importance (Higher Value) (i.e. County Importance) were categorised as National Importance.

PAG Scores (1 to 7) were aligned with the NRA scale of importance as well as the assessment guidelines set out in the EPA Guidelines on the information to be contained in Environmental Impact Assessment Reports (EPA, 2022) and used to score the Corridor Options and corresponding Switches.

The key features of the Natural Environment, including Special Areas of Conservation and Special Protection Areas, are outlined in Figure 6-40, Figure 6-41, Figure 6-42, and Figure 6-43 below.

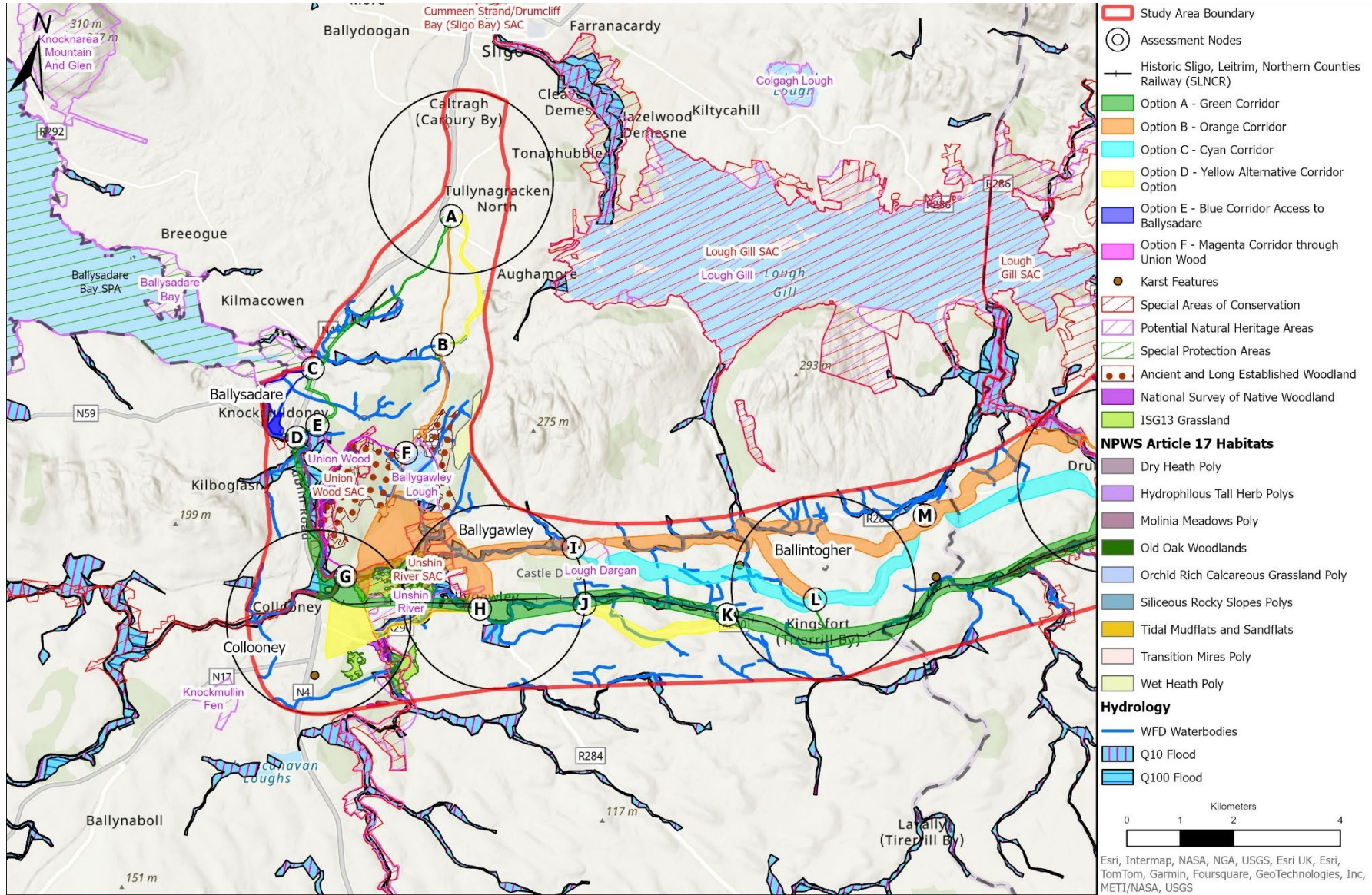


Figure 6-40 Stage 1 Corridor Options - Biodiversity - Carraroe to Dromahair

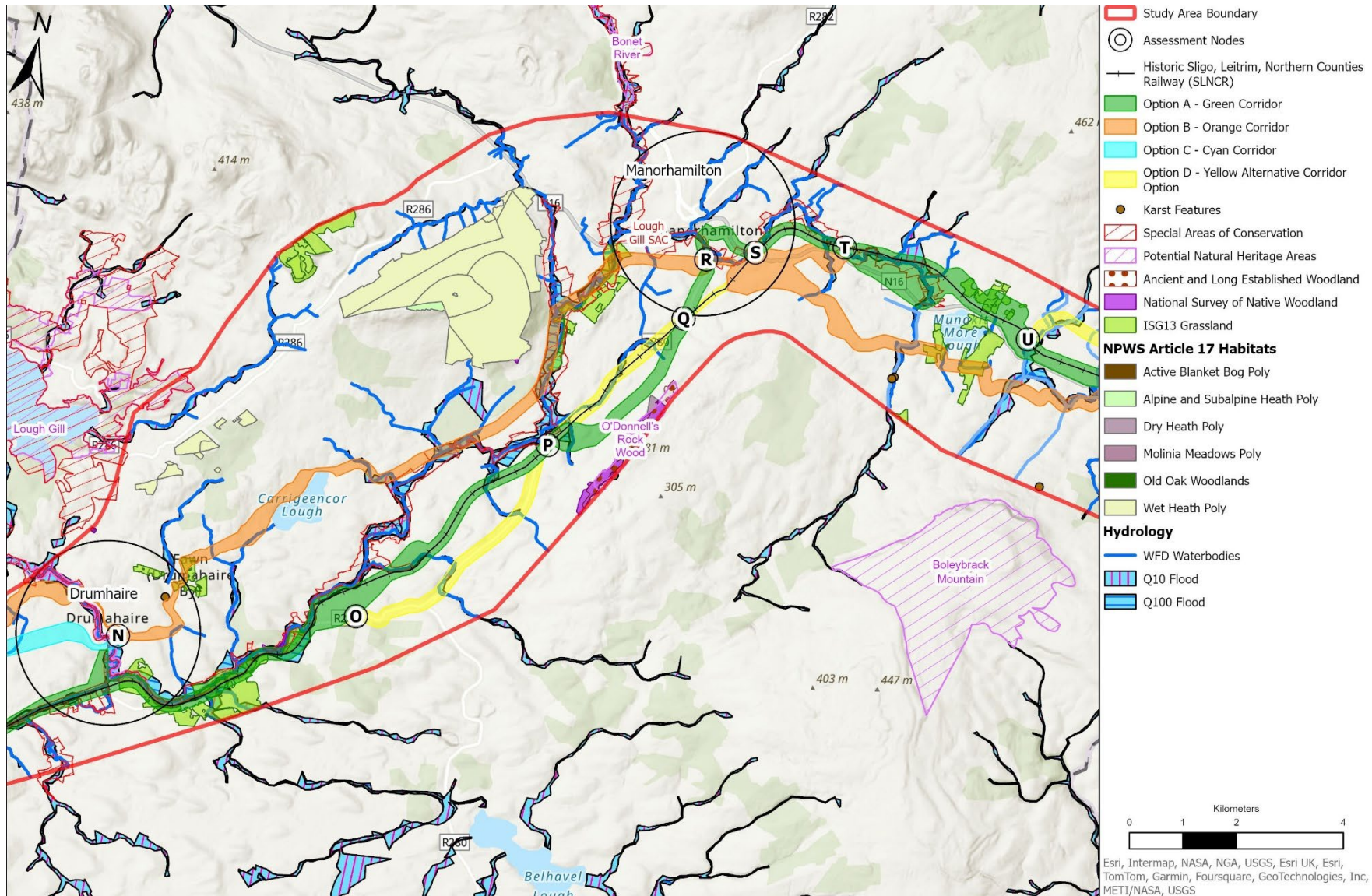


Figure 6-41 Stage 1 Corridor Options - Biodiversity – Dromahair to Manorhamilton

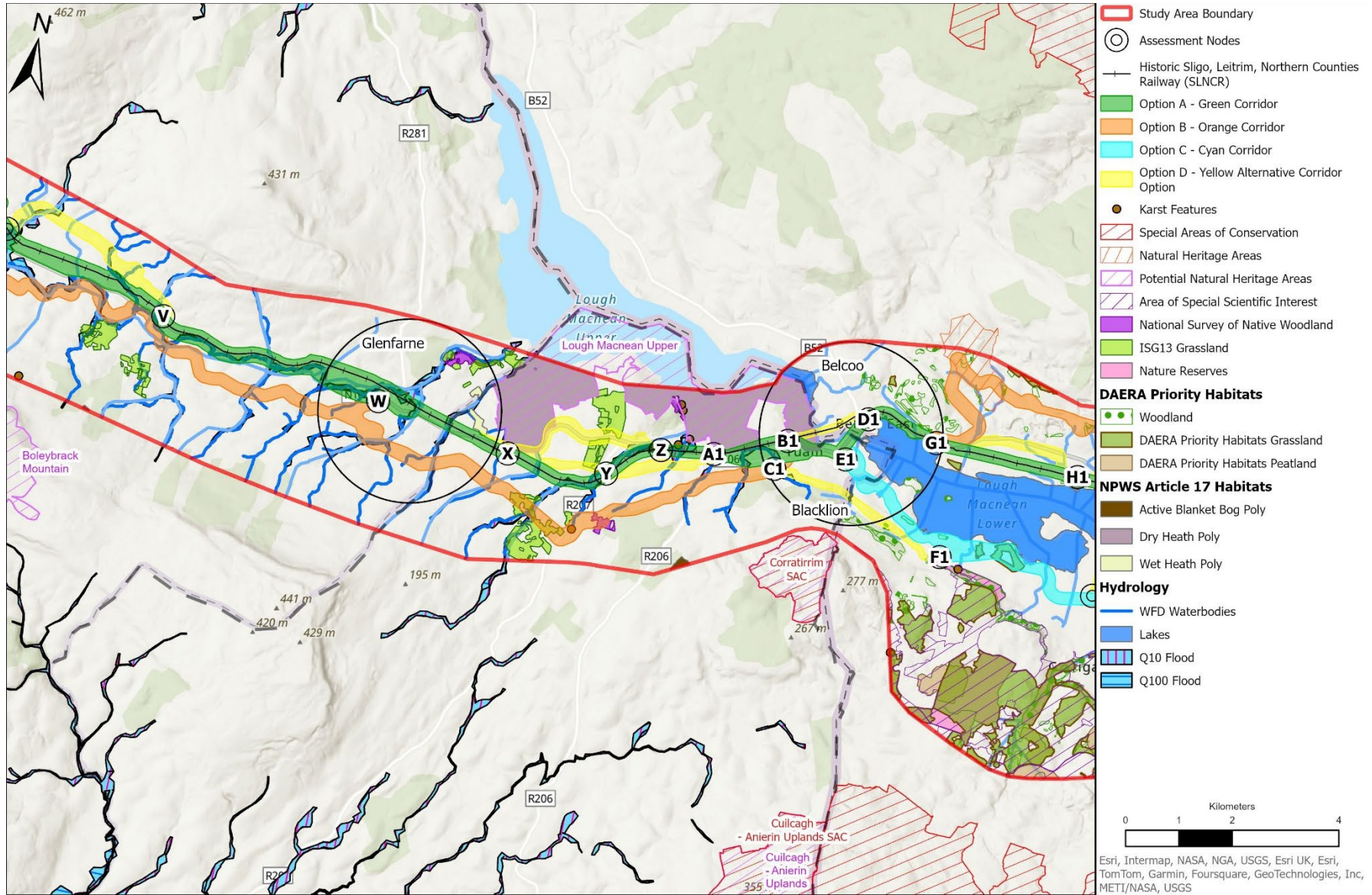


Figure 6-42 Stage 1 Corridor Options - Biodiversity- Manorhamilton to Blacklion/Belcoo

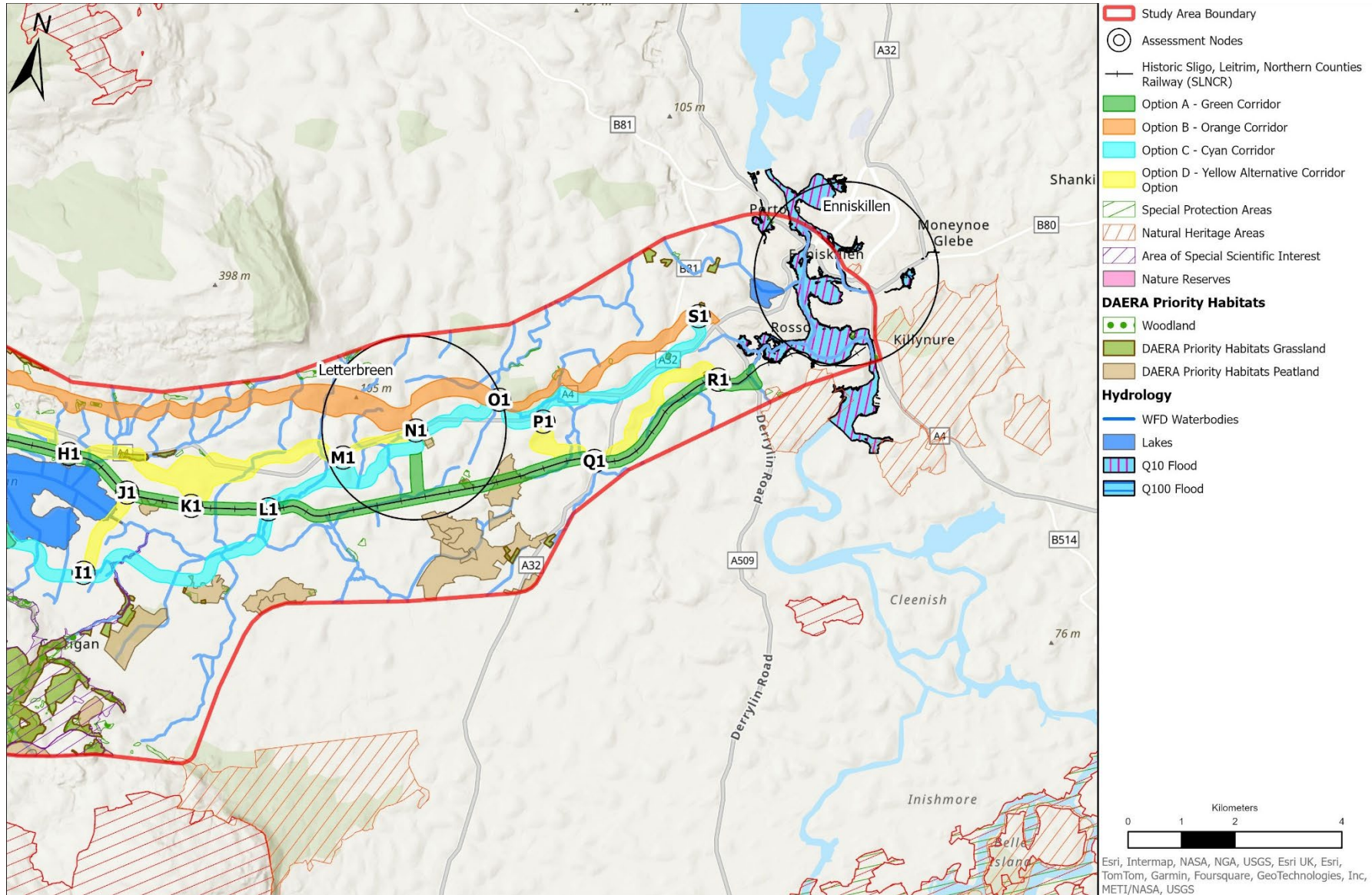


Figure 6-43 Stage 1 Corridor Options - Biodiversity – Blacklion/Belcoo to Enniskillen

6.5.7.1 Section 1- Carraroe to Collooney (Node A to G)

Between Nodes A to B the Orange Corridor Option was considered preferred when compared with the Yellow Alternative Corridor Option (Switch 1). As shown in Table 6-144 below, both Corridor Options were assigned PAG Scores of 3, however, the Orange Corridor Option is situated to result in less use of agricultural grassland and has fewer ecological constraints compared with the Yellow Alternative Corridor Option (Switch 1). This difference did not impact on Scores assigned, however the potential for less habitat loss by comparison deemed the Orange Corridor Option marginally preferable.

Corridor Option	Score (7 to 1)
Orange Corridor Option	3
Yellow Alternative Corridor - Switch 1	3

Table 6-144 Stage 1 Enviro. Assessment, Section 1 Switch 1 Biodiversity

The Blue Corridor Access to Ballysadare (Switch 2) and Yellow Alternative Corridor (Switch 21) (PAG Score of 3) are both preferred to the corresponding Green Corridor Option (PAG Score of 2) due to the availability of existing road infrastructure in the case of the Blue Corridor Access to Ballysadare, thereby reducing potential habitat loss, by comparison and the Green Corridor Option having an unavoidable overlap with the Unshin River SAC, which has International Importance.

Corridor Option	Score (7 to 1)
Green Corridor Option (Nodes C to E and E to D)	2
Blue Alternative Corridor – Ballysadare – Switch 2	3
Yellow Alternative Corridor – Switch 21	3

Table 6-145 Stage 1 Enviro. Assessment, Section 1 Switch 2 Biodiversity

Lastly in this Section, the Orange Corridor Option (PAG Score of 3) was preferred over the Green Corridor Option (PAG Score of 1) and Magenta Corridor through Union Wood (PAG Score of 2) based on the potential to avoid overlap with the Unshin River SAC while also making use of existing forestry tracks and road infrastructure, thereby allowing potential for less habitat loss.

Corridor Option	Score (7 to 1)
Green Corridor Option (Nodes E to D and D to G)	1
Magenta Alternative Corridor – Switch 3	2
Orange Corridor Option (Nodes D to G)	3

Table 6-146 Stage 1 Enviro. Assessment, Section 1 Switch 3 Biodiversity

6.5.7.2 Section 2: Collooney to Dromahair (Node G to N)

As shown in Table 6-147 the Orange Corridor Option (PAG Score of 3) was preferred to both the Yellow Alternative Corridor Option (Switch 4) and the Green Corridor Option (both assigned PAG Scores of 1). The Orange Corridor Option provides an opportunity to avoid intersecting the Unshin River SAC if there is utilization of existing forestry tracks and road infrastructure along the northern boundary of the corridor. In addition to overlapping with the Unshin River SAC, both the Yellow Alternative and Green Corridor Options require watercourse crossings, while intersection with Annex 1 and Article 17 habitats were identified as ecological constraints for the Green Corridor Option.

Corridor Option	Score (7 to 1)
Green Corridor Option	1
Orange Corridor Option	3
Yellow Alternative Corridor - Switch 4	1

Table 6-147 Stage 1 Enviro. Assessment, Section 2 Switch 4 Biodiversity

The Yellow Alternative Corridor Option (Switch 5) and corresponding Green Corridor Option were both assigned a PAG Score of 3, see Table 6-148. Both Corridor Options would result in watercourse crossings, and the loss of minor portions of agricultural fields and hedgerows (classified as being of Local Importance of (Lower Value) and Local Importance (Higher Value), respectively), which are common habitats within the surrounding area. However, the Yellow Alternative Corridor Option (Switch 5) crosses fewer watercourses and would likely be associated with existing road infrastructure. This difference did not impact on Scores assigned, however the potential for less habitat loss by comparison deemed the Yellow Alternative Corridor Option (Switch 5) marginally preferable.

Corridor Option	Score (7 to 1)
Green Corridor Option	3
Yellow Alternative Corridor - Switch 5	3

Table 6-148 Stage 1 Enviro. Assessment, Section 2 Switch 5 Biodiversity

6.5.7.3 Section 3: Dromahair to Manorhamilton (Node N to S)

As shown in Table 6-149 the Yellow Alternative Corridor Option (Switch 6) (PAG Score of 3) was preferred over the Green Corridor Option (PAG Score of 2) as it does not overlap with Lough Gill SAC or other sites of International or National Importance. The Green Corridor Option, on the other hand, overlaps with Lough Gill SAC and an Annex II species. Furthermore, the Yellow Alternative Corridor Option (Switch 6) has the opportunity to use existing road infrastructure, thereby potentially minimizing the loss of minor portions of agricultural fields and hedgerows, which are classified as being of Local Importance (Lower Value) and Local Importance (Higher Value), respectively, and are common habitats of the surrounding area.

Corridor Option	Score (7 to 1)
Green Corridor Option (Nodes O to P)	2
Yellow Alternative Corridor - Switch 6	3

Table 6-149 Stage 1 Enviro. Assessment, Section 3 Switch 6 Biodiversity

The Green Corridor Option and corresponding Yellow Alternative Corridor Option (Switch 7) were both assigned a PAG Score of 3. Both Corridor Options would result in minor loss of agricultural field and hedgerow portions (classified as being of Local Importance (Lower Value) and Local Importance (Higher Value), respectively), which are common habitats in the surrounding area. However, the Green Corridor Option requires fewer watercourse crossings and occurs along an existing road infrastructure. This difference did not impact on Scores assigned; however, the Green Corridor Option is marginally preferable due to the potential for less habitat loss by comparison.

Corridor Option	Score (7 to 1)
Green Corridor Option (Nodes P to Q)	3
Yellow Alternative Corridor - Switch 7	3

Table 6-150 Stage 1 Enviro. Assessment, Section 3 Switch 7 Biodiversity

The Yellow Alternative Corridor Option (Switch 8) (PAG Score of 3), was preferred over the corresponding Green Corridor Option (PAG Score of 2) as it did not have ecological constraints of National And International Importance, and also occurs along the historic railway line offering potential for less habitat loss. In contrast, the Green Corridor Option overlaps with Lough Gill SAC and an Annex II species occurrence.

Corridor Option	Score (7 to 1)
Green Corridor Option (Nodes Q to S)	2
Yellow Alternative Corridor - Switch 8	3

Table 6-151 Stage 1 Enviro. Assessment, Section 3 Switch 8 Biodiversity

6.5.7.4 Section 4: Manorhamilton to Blacklion (Node S to C1)

As shown in Table 6-152 the Green Corridor Option and Yellow Alternative Corridor Option (Switch 9) were both assigned a PAG Score of 3. Both Corridor Options would result in the loss of minor portions of agricultural fields and hedgerows (classified as being of Local Importance (Lower Value) and Local Importance (Higher Value), respectively), which are common habitats in the surrounding area. However, the Green Corridor Option it is shorter and therefore may result in less habitat loss by comparison. It also requires fewer watercourse crossings compared with the Yellow Alternative Corridor Option (Switch 9). This difference did not impact on Scores assigned; however, the Green Corridor Option is marginally preferred for these reasons.

Corridor Option	Score (7 to 1)
Green Corridor Option (Nodes U to V)	3
Yellow Alternative Corridor - Switch 9	3

Table 6-152 Stage 1 Enviro. Assessment, Section 4 Switch 9 Biodiversity

The Green Corridor Option was preferred (PAG Score of 3) compared with the corresponding Yellow Alternative Corridor Option (Switch 10) (PAG Score of 2) primarily due to the unavoidable overlap of the latter with Article 17 dry heath habitat and Lough Macnean pNHA. By comparison, the Green Corridor Option occurs along the historic railway line and can avoid Article 17 dry heath habitat and the Lough Macnean pNHA.

Corridor Option	Score (7 to 1)
Green Corridor Option (Nodes X to Z)	3
Yellow Alternative Corridor - Switch 10	2

Table 6-153 Stage 1 Enviro. Assessment, Section 4 Switch 10 Biodiversity

The Green Corridor Option (PAG Score of 3) when compared with the Yellow Alternative Corridor Option (Switch 11) (PAG Score of 2), was again preferred based on the same rationale as for Switch 10.

Corridor Option	Score (7 to 1)
Green Corridor Option (Nodes X to Y)	3
Yellow Alternative Corridor - Switch 11	2

Table 6-154 Stage 1 Enviro. Assessment, Section 4 Switch 11 Biodiversity

The Yellow Alternative Corridor Option (Switch 12) and Green Corridor Option were both assigned a PAG Score of 3. Both Corridor Options would result in watercourse crossings and the loss of minor portions of agricultural fields and hedgerows (classified as being of Local Importance (Lower Value) and Local Importance (Higher Value), respectively), which are common habitats in the surrounding area. However, the Yellow Alternative Corridor Option (Switch 12) required fewer watercourse crossings and would likely be associated with existing road infrastructure, thereby potentially minimizing habitat loss. This difference did not impact on Scores assigned; however, the Yellow Alternative Corridor Option (Switch 12) is marginally preferable due to the potential for less habitat loss by comparison.

Corridor Option	Score (7 to 1)
Green Corridor Option (Nodes Y to A1)	3
Yellow Alternative Corridor - Switch 12	3

Table 6-155 Stage 1 Enviro. Assessment, Section 4 Switch 12 Biodiversity

As shown in Table 6-156 the Green Corridor Option was preferred when compared with the Yellow Alternative Corridor Option (Switch 13) due to less overlap with Article 17 dry heath habitat and the Lough Macnean upper pNHA. These Corridor Options were assigned PAG Scores of 2 and 1, respectively.

Corridor Option	Score (7 to 1)
Green Corridor Option (Nodes B1 to D1)	2
Yellow Alternative Corridor - Switch 13	1

Table 6-156 Stage 1 Enviro. Assessment, Section 4 Switch 13 Biodiversity

6.5.7.5 Section 5: Blacklion / Belcoo to Enniskillen (Node C1 to S1/R1)

As shown in Table 6-157 both the Yellow Alternative Corridor Option (Switch 14) and corresponding Green, Orange and Cyan Corridor Option (Nodes C1 to D1 to F1) were assigned a PAG Scores of 3. Both Corridor Options would result in watercourse crossings and the loss of minor portions of agricultural fields and hedgerows (classified as being of Local Importance (Lower Value) and Local Importance (Higher Value), respectively), which are common habitats in the surrounding area). However, the Yellow Alternative Corridor Option (Switch 14) would require fewer watercourse crossings and is located further from Lough Macnean Lower. This difference did not impact on Scores assigned; however, the Yellow Alternative Corridor Option (Switch 14) is marginally preferable due to the potential for less adverse habitat effects by comparison.

Corridor Option	Score (7 to 1)
Orange / Green Corridor Option (Nodes C1 to D1) + Cyan Corridor Option (Nodes D1 to F1)	3
Yellow Alternative Corridor - Switch 14	3

Table 6-157 Stage 1 Enviro. Assessment, Section 5 Switch 14 Biodiversity

Similarly, both the Yellow Alternative Corridor Option (Switch 15) and the Green Corridor Option were assigned a PAG Score of 3. Both require overlap with habitats of Local Importance (Higher Value) and watercourse crossings. However, the Yellow Alternative Corridor Option (Switch 15) would likely be associated with existing road infrastructure, thereby allowing potential for less habitat loss by comparison. This difference did not impact on Scores assigned; however, the Yellow Alternative Corridor Option (Switch 15) is marginally preferable for this reason.

Corridor Option	Score (7 to 1)
Green Corridor Option (Nodes G1 to H1)	3
Yellow Alternative Corridor - Switch 15	3

Table 6-158 Stage 1 Enviro. Assessment, Section 5 Switch 15 Biodiversity

As shown in Table 6-159 the Yellow Alternative Corridor Option (Switch 16) was assigned a PAG Score of 3 and preferred over the corresponding Cyan Corridor Option (PAG Score of 2), as the Cyan Corridor Option has overlap with the Marlbank Areas of Special Scientific Interest (ASSI), which is considered to be of National Importance. The Marlbank ASSI is declared under the Environment Order (Northern Ireland) 2002. Following a consultation with the Northern Ireland Environment Agency (NIEA), construction works and operations could potentially have adverse impacts on this Designated Site.

Corridor Option	Score (7 to 1)
Cyan Corridor Option (Nodes I1 to L1)	2
Yellow Alternative Corridor Option (Switch 16) + Green Corridor Option (Nodes J1 to L1)	3

Table 6-159 Stage 1 Enviro. Assessment, Section 5 Switch 16 Biodiversity

As shown in Table 6-160 the Green Corridor Option (PAG Score of 3) was preferred over the corresponding Yellow Alternative Corridor Option (Switch 17) (PAG Score of 2), due to the unavoidable overlap of the Yellow Alternative Corridor Option (Switch 17) with mapped DAERA priority habitat of National Importance. Additionally, the Green Corridor Option would require fewer watercourse crossings, is shorter in length, and would likely be associated with use of the existing historic railway line, thereby having potential for less habitat loss by comparison.

Corridor Option	Score (7 to 1)
Green Corridor Option (Nodes H1 to K1 to L1) + Cyan Corridor Option (Nodes L1 to M1)	3
Yellow Alternative Corridor Option (Switch 17)	2

Table 6-160 Stage 1 Enviro. Assessment, Section 5 Switch 17 Biodiversity

The Yellow Alternative Corridor Option (Switch 18) and the corresponding Cyan Corridor Option were both assigned a PAG Score of 3. Both Corridor Options would result in the loss of minor portions of agricultural fields and hedgerows (classified as being of Local Importance (Lower Value) and Local Importance (Higher Value), respectively), which are common habitats in the surrounding area). However, the Yellow Alternative Corridor Option (Switch 18) would likely be associated with existing road infrastructure, thereby potentially minimizing habitat loss in comparison to the Cyan Corridor Option. This difference did not impact on Scores assigned; however, the Yellow Alternative Corridor Option (Switch 18) is marginally preferable due to this potential.

Corridor Option	Score (7 to 1)
Cyan Corridor Option (Nodes M1 to N1)	3
Yellow Alternative Corridor - Switch 18	3

Table 6-161 Stage 1 Enviro. Assessment, Section 5 Switch 18 Biodiversity

The Yellow Alternative Corridor Options (Switch 19) (Node P1 to Q1) and (Switch 20) (Node Q1 to R1), were appraised in combination and assigned a PAG Score of 3. The Yellow Alternative Corridor Option (Switch 19) (Node P1 to Q1) was again assessed in combination with the Green Corridor Option (Node Q1 to R1) and also assigned a PAG Score of 3. These combined Corridor Options were compared together and against the corresponding Cyan Corridor Option, which was also assigned a PAG Score of 3. Due to the predominant association with the existing historic railway line, the combined Yellow Alternative Corridor Option (Switch 19) (Node P1 to Q1) and Green Corridor Option (Node Q1 to R1) was identified as having the greatest potential to minimize habitat loss of minor portions of agricultural fields and hedgerows (classified as being of Local Importance of (Lower Value) and Local Importance (Higher Value), respectively). This difference did not impact on Scores assigned; however, the combined Yellow Alternative Corridor Option (Switch 19) (Node P1 to Q1) and Green Corridor Option (Node Q1 to R1) was considered marginally preferable on this basis.

Corridor Option	Score (7 to 1)
Cyan Corridor Option (Nodes P1 to S1)	3
Yellow Alternative Corridor - Switch 19 and Green Corridor Option (Nodes Q1 to R1)	3
Yellow Alternative Corridor - Switch 19 and Yellow Alternative Corridor - Switch 20 (Q1 to R1)	3

Table 6-162 Stage 1 Enviro. Assessment, Section 5 Switch 19 Biodiversity

As shown in Table 6-163 both the Green Corridor Option and Yellow Alternative Corridor - Switch 20 have been assigned a PAG Score of 3. was identified as preferable to the Yellow Alternative Corridor - Switch 20. While the Green Corridor Option (Node Q1 to R1) was identified as having the greatest potential to minimize habitat loss of minor portions of agricultural fields and hedgerows (classified as being of Local Importance of (Lower Value) and Local Importance (Higher Value), respectively this difference did not impact on Scores assigned.

Corridor Option	Score (7 to 1)
Green Corridor Option	3
Yellow Alternative Corridor - Switch 20 (Q1 to R1)	3

Table 6-163 Stage 1 Enviro. Assessment, Section 5 Switch 20 Biodiversity

6.5.8 Surface Water

This section sets out the Hydrological Appraisal of the Stage 1 Corridor Option and Switches, see drawings ARP-ENV-P2-D-251 to 254 in Appendix C.

The hydrological constraints have been assessed based on publicly available flood risk and protected area maps listed below:

- OPW’s national flood hazard map (www.floodinfo.ie),
- Flood Maps NI (dfi-ni.maps.arcgis.com), and
- EPA online GIS Maps ([gis.epa.ie/EPA Maps](http://gis.epa.ie/EPA%20Maps)).

The Corridor Options were assessed based on TII’s “Guidelines for the Assessment and Treatment of Geology, Hydrology and Hydrogeology for National Road Schemes.”

To review the hydrological constraints, Annual Exceedance Probability (AEP) has been used. Definitions of the AEP events are as follows:

- 1% AEP – This flood event has a 1% probability of occurring or being exceeded in any given year.
- 10% AEP – This flood event has a 10% probability of occurring or being exceeded in any given year.

It is important to note that even with an illustrated floodplain, some areas are more likely to flood than others. For example, an area located on the extreme outer edge of the 1% AEP floodplain is estimated to have a 1% chance of flooding in any year, however there are other areas that may be situated closer to the river that have the potential to have a greater than 1% chance of flooding in any year.

To allow a comparison of the Corridor Options, the rankings given have considered both construction and operational phases of development, as flooding will impact waterbodies, the greenway, and its users in both of these cases. While operational, the greenway may be allowed to flood however precautions must be taken to avoid adverse impacts during construction and maintenance as construction of new infrastructure within floodplain can also have impact on the surrounding area.

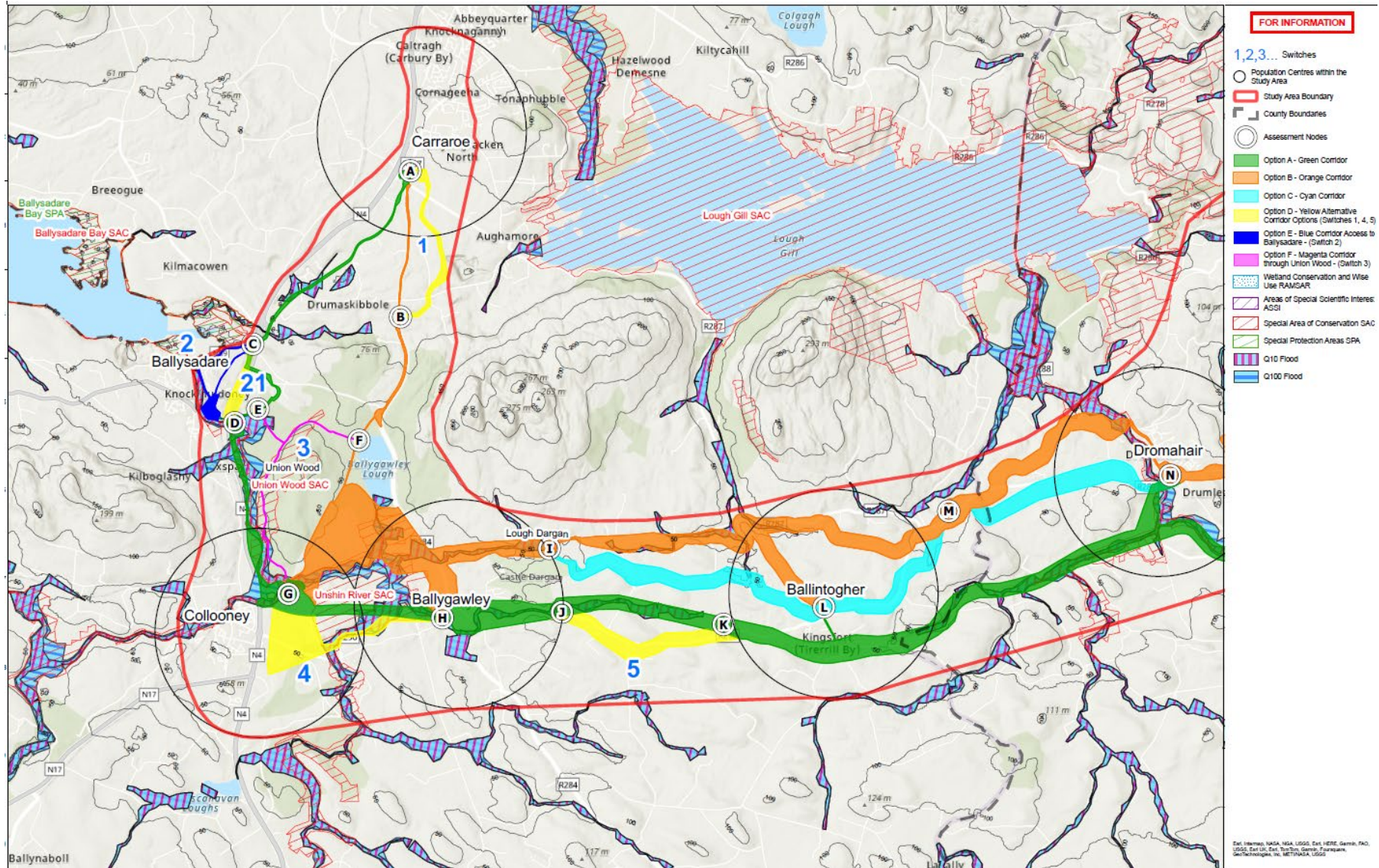
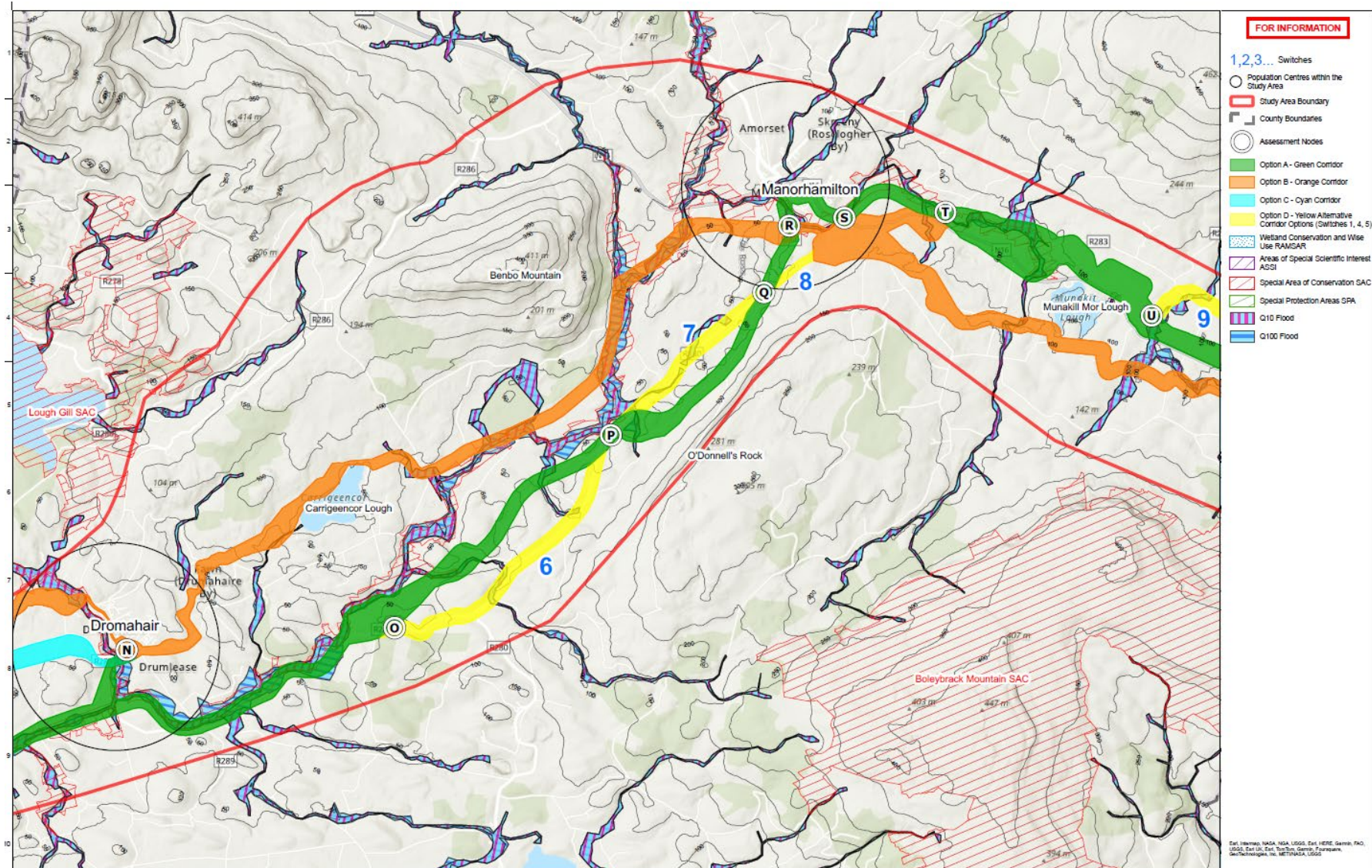


Figure 6-44 Stage 1 Corridor Options – Hydrological Appraisal Carraroe to Dromahair



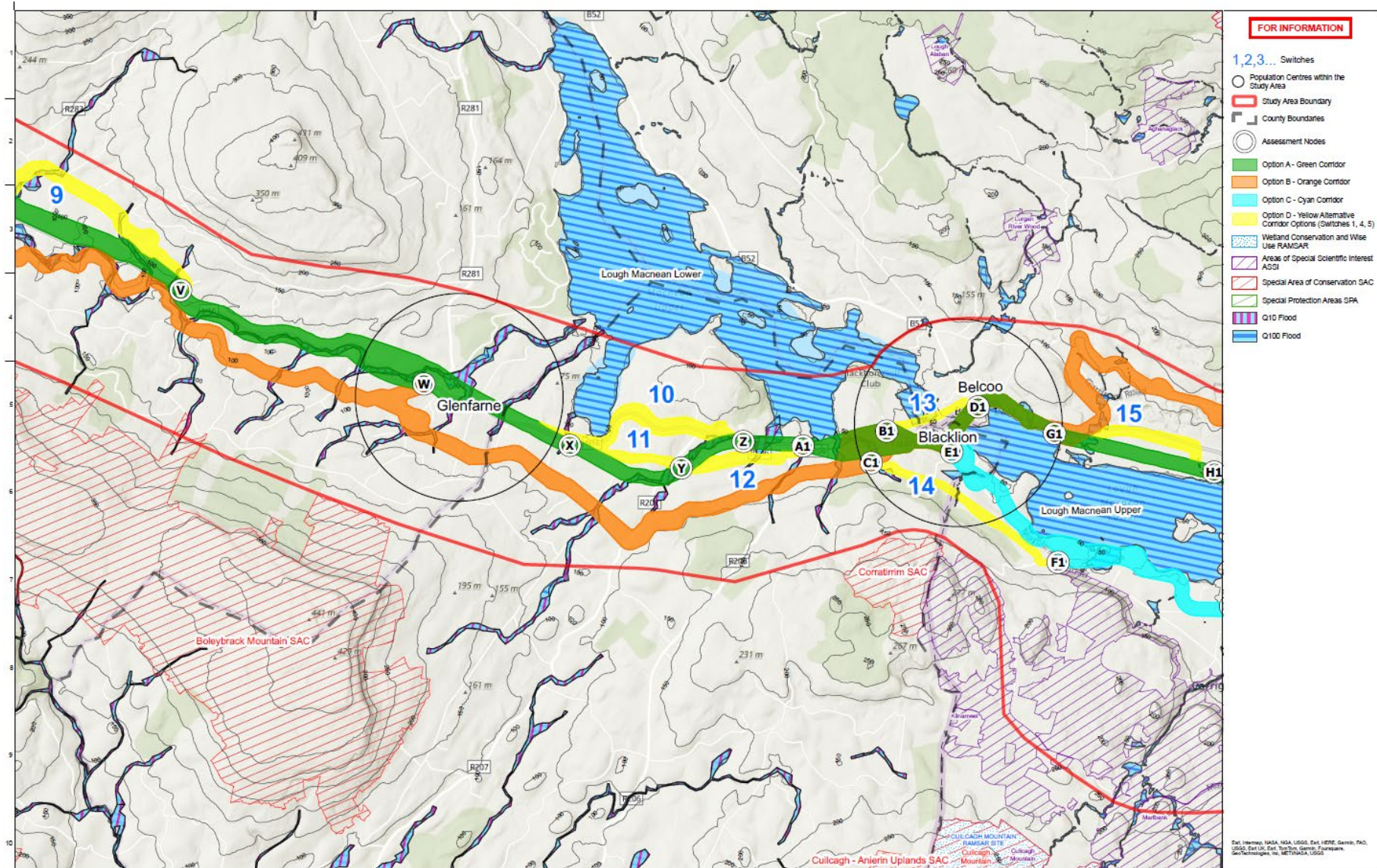


Figure 6-46 Stage 1 Corridor Options – Hydrological Appraisal Manorhamilton to Blacklion/Belcoo

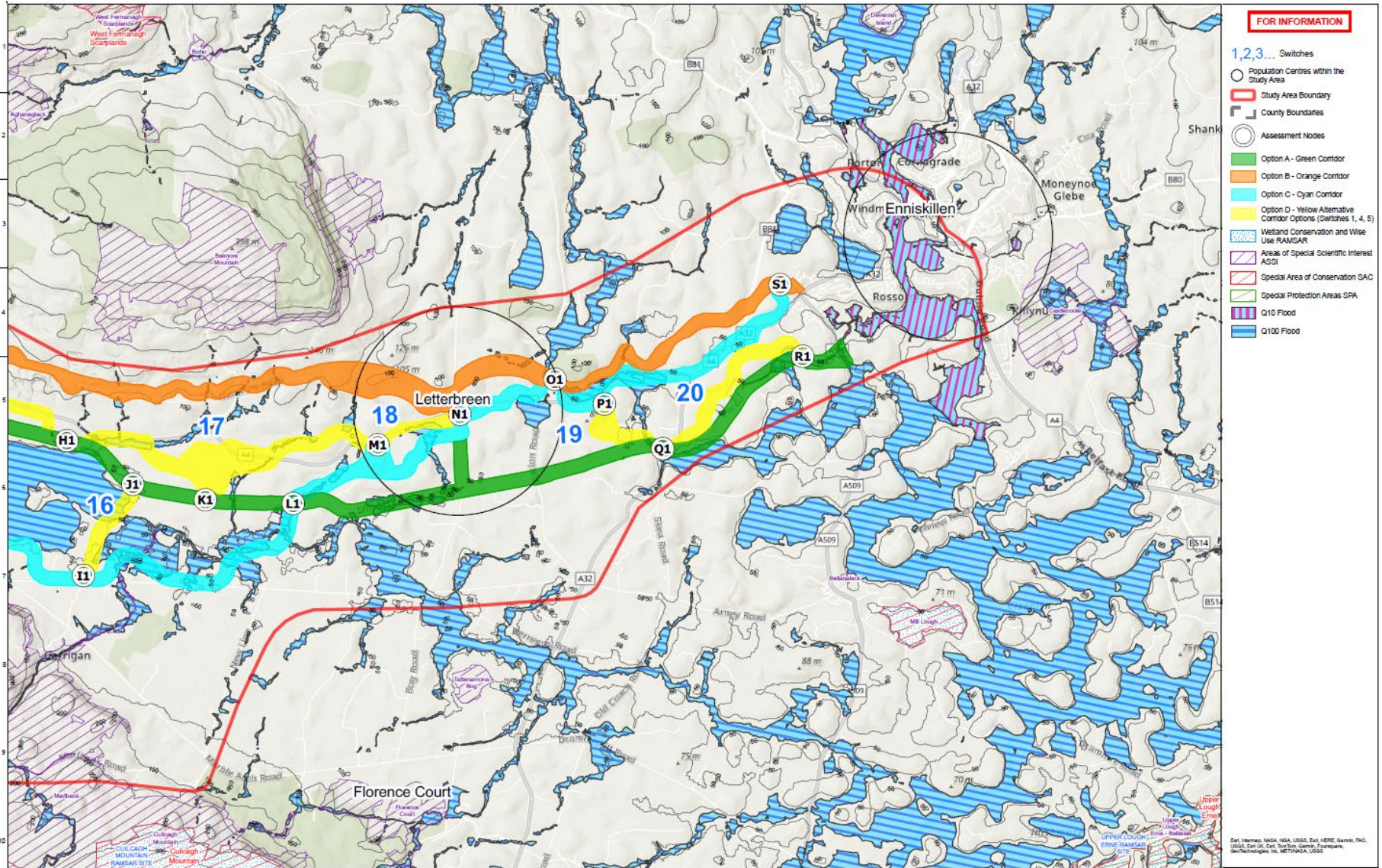


Figure 6-47 Stage 1 Corridor Options – Hydrological Appraisal – Blacklion/Belcoo to Enniskillen

6.5.8.1 Section 1: Carraroe to Collooney (Node A to G)

Table 6-164 sets out the key hydrological considerations in the appraisal of the Stage 1 Corridor Options between Nodes A to B.

Corridor Option (Nodes A to B)	Hydrological Considerations	PAG Score
Orange Corridor Option (Nodes A to B)	Not located within the 1% or 10% AEP floodplain.	4
Yellow Alternative Corridor– Switch 1	Not located within the 1% or 10% AEP floodplain.	4

Table 6-164 Stage 1 Surface Water - Section 1 Node A to B PAG Scores

Between Nodes A to B both the Orange Corridor Option and Yellow Alternative Corridor – Switch 1 avoid both the 1% and 10% AEP floodplain. As a result both the Orange Corridor Option and Yellow Alternative Corridor – Switch 1 have a neutral PAG score between these Nodes as neither of them sit within a floodplain and have risk of flooding.

Table 6-165 sets out the key hydrological considerations in the appraisal of the Stage 1 Corridor Options between Nodes C to D.

Corridor Option	Hydrological Considerations	PAG Score
Green Corridor Option (Nodes C to D)	Located within the 1% AEP floodplain. Located within the 10% AEP floodplain.	2
Blue Corridor Access to Ballysadare – Switch 2	Located within the 1% AEP floodplain. Located within the 10% AEP floodplain.	2
Yellow Alternative Corridor– Switch 21	Not located within the 1% AEP floodplain. Not located within the 10% AEP floodplain	4

Table 6-165 Stage 1 Surface Water - Section 1 Node C to D PAG Scores

The Green Corridor Option and Blue Corridor Access to Ballysadare both encroach into both the 1% AEP and 10% AEP floodplain and therefore have a similar likelihood of flooding. The Yellow Alternative Corridor - Switch 21 does not encroach on either the 1% AEP and 10% AEP floodplain and is therefore preferable to the other Corridor Options between Nodes C to D.

Table 6-166 sets out the key hydrological considerations in the appraisal of the Stage 1 Corridor Options between Nodes E to F.

Corridor Option	Hydrological Considerations	PAG Score
Green Corridor Option (Nodes E to F)	Located within the 1% AEP floodplain. A significant proportion of this Corridor Option is located within the 1% AEP floodplain and therefore is at major risk of flooding.	1
Magenta Corridor through Union Wood – Switch 3	Located within the 1% AEP floodplain of the Ballysadare River. This is less significant than that of the Green Corridor Option.	2

Table 6-166 Stage 1 Surface Water – Section 1 Node E to F PAG Scores

The Preferred Option between Nodes E to G is the Magenta Corridor through Union Wood as this is located in less of the 1% AEP floodplain when compared with the Green Corridor Option and therefore has a lesser likelihood of flooding.

Table 6-167 sets out the key hydrological considerations in the appraisal of the Stage 1 Corridor Options between Nodes F to G.

Corridor Option	Hydrological Considerations	PAG Score
Orange Corridor Option (Nodes F to G)	Located within the 1% AEP floodplain. Located within the 10% AEP floodplain. Interaction with Union Wood SAC	1
Magenta Corridor through Union Wood – Switch 3	Located within the 1% AEP floodplain. Located within the 10% AEP floodplain. Interaction with Union Wood SAC.	1

Table 6-167 Stage 1 Surface Water - Section 1 Node F to G PAG Scores

Between Nodes F to G both the Magenta Corridor through Union Wood (Switch 3) and Orange Corridor Option are located within both the 1% AEP and 10% AEP floodplain and interact with the Union Wood SAC. A PAG Score of 1 Major Negative has been assigned to both Corridor Options.

6.5.8.2 Section 2 – Collooney to Dromahair (Node G to N)

Table 6-168 sets out the key hydrological considerations in the appraisal of the Stage 1 Corridor Options between Nodes G to H.

Corridor Option	Hydrological Considerations	PAG Score
Green Corridor Option (Nodes G to N)	Located within the 1% AEP floodplain. Located within the 10% AEP floodplain. Interaction with Unshin River SAC which is classified by the Water Framework Directive (WFD) as a sensitive water body.	1
Orange Corridor Option (Nodes G to N)	Located within the 1% AEP floodplain. Located within the 10% AEP floodplain. Interaction with Unshin River SAC which is classified by the Water Framework Directive (WFD) as a sensitive water body.	1
Yellow Alternative Corridor – Switch 4	Located within the 1% AEP floodplain. Located within the 10% AEP floodplain. Interaction with Unshin River SAC which is classified by the Water Framework Directive (WFD) as a sensitive water body.	1

Table 6-168 Stage 1 Surface Water - Section 2 Nodes G to H PAG Scores

Between Nodes G to H each of the Orange Corridor Options are located within both the 1% AEP and 10% AEP floodplain and interact with the Unshin River SAC which is classified by the Water Framework Directive (WFD) as a sensitive water body. A PAG Score of 1 Major Negative has been assigned to all three Corridor Options with no one Option considered preferable to the others.

Table 6-169 sets out the key hydrological considerations in the appraisal of the Stage 1 Corridor Options between Nodes J to K.

Corridor Option	Hydrological Considerations	PAG Score
Green Corridor Option (Nodes J to K)	Located within the 1% AEP floodplain. Significant portion of this Corridor Option is located within this floodplain. Located within the 10% AEP floodplain. No interaction with SACs.	2
Yellow Alternative Corridor – Switch 5	Not located within the 10% AEP or 1% AEP floodplain. No interaction with SACs.	4

Table 6-169 Stage 1 Surface Water - Section 2 Nodes J to K PAG Scores

The Preferred Option between Nodes J to K is the Yellow Alternative Corridor – Switch 5 as it does not interact with either the 10% AEP or 1% AEP floodplain or an SAC.

6.5.8.3 Section 3 –Dromahair to Manorhamilton – (Node N to S)

Table 6-170 sets out the key hydrological considerations in the appraisal of the Stage 1 Corridor Options between Nodes O to P.

Corridor Option	Hydrological Considerations	PAG Score
Green Corridor Option (Nodes N to S)	Located within the 1% AEP floodplain. Located within the 10% AEP floodplain. Interacts with Lough Gill SAC.	1
Yellow Alternative Corridor – Switch 6	Located within the 1% AEP floodplain. Located within the 10% AEP floodplain. No interaction with SACs.	3

Table 6-170 Stage 1 Surface Water - Section 3 Node O to P PAG Scores

The Preferred Option between Nodes O to P is the Yellow Alternative Corridor – Switch 6. Whilst the Yellow Alternative Corridor (Switch 6) intersects with both the 10% AEP and 1% AEP floodplain, it does so to a lesser extent than the Green Corridor Option (Switch 6) and does not interact with an SAC.

Table 6-171 sets out the key hydrological considerations in the appraisal of the Stage 1 Corridor Options between Nodes P to Q.

Corridor Option	Hydrological Considerations	PAG Score
Green Corridor Option (Nodes P to Q)	Located within the 1% AEP floodplain. Minor intersection. Located within the 10% AEP floodplain. Interacts with Lough Gill SAC. Very minor towards node P.	2
Yellow Alternative Corridor – Switch 7	Located within the 1% AEP floodplain. Larger proportion within the floodplain when compared with the Green Corridor Option – Switch 7. Located within the 10% AEP floodplain. Interacts with Lough Gill SAC. Very minor towards node P.	1

Table 6-171 Stage 1 Surface Water - Section 3 Nodes P to Q PAG Scores

The Preferred Option between Nodes P to Q is the Green Corridor Option – Switch 7. Whilst both Corridor Options intersect with the 1% AEP and 10% AEP floodplain, the Green Corridor Option (Switch 7) intersects with the floodplain to a lesser extent than the Yellow Alternative Corridor (Switch 7) and therefore has a reduced likelihood of flooding.

Table 6-172 sets out the key hydrological considerations in the appraisal of the Stage 1 Corridor Options between Nodes Q to S.

Corridor Option	Hydrological Considerations	PAG Score
Green Corridor Option (Nodes Q to S)	Located within the 1% AEP floodplain. Minor intersection. Located within the 10% AEP floodplain. Interacts slightly with Lough Gill SAC.	1
Yellow Alternative Corridor – Switch 8	Not located within the 1% AEP floodplain Not located within the 10% AEP floodplain.	4

Table 6-172 Stage 1 Surface Water - Section 3 Nodes Q to S PAG Scores

The Preferred Option between Nodes Q to S is the Yellow Alternative Corridor Switch 8 as it is not located within either the 1% or 10% AEP floodplain when compared with the Green Corridor Option (Switch 8). Therefore the Yellow Alternative Corridor Switch 8 has a lesser likelihood of flooding.

6.5.8.4 Section 4 – Manorhamilton to Blacklion – (Node S to D1)

Table 6-173 sets out the key hydrological considerations in the appraisal of the Stage 1 Corridor Options between Nodes U to V.

Corridor Option	Hydrological Considerations	PAG Score
Green Corridor Option (Nodes S to D1)	Located within the 1% AEP floodplain. Minor intersection. Located within the 10% AEP floodplain.	3
Yellow Alternative Corridor – Switch 9	Located within the 1% AEP floodplain. Minor intersection however more significant when compared with the Green Corridor Option – Switch 9. Located within the 10% AEP floodplain.	2

Table 6-173 Stage 1 Surface Water - Section 4 Nodes U to V PAG Scores

The Preferred Option between Nodes U to V is the Green Corridor Option - Switch 9. Whilst both the Green Corridor Option and the Yellow Alternative Corridor (Switch 9) are located within both the 1% AEP and 10% ARP floodplain, the Green Corridor Option intersects to a lesser extent and therefore has less likelihood of flooding.

Table 6-174 sets out the key hydrological considerations in the appraisal of the Stage 1 Corridor Options between Nodes X to Z.

Corridor Option	Hydrological Considerations	PAG Score
Green Corridor Option (Nodes X to Z)	Located within the 1% AEP floodplain. Located within the 10% AEP floodplain.	2
Yellow Alternative Corridor – Switch 10	Located within the 1% AEP floodplain. Located within the 10% AEP floodplain of Lough Macnean Upper. This encroachment into the floodplain is only slight however still should be avoided if possible.	3

Table 6-174 Stage 1 Surface Water - Section 4 Nodes X to Z PAG Scores

The Preferred Option between Nodes X to Z is the Yellow Alternative Corridor – Switch 10. Whilst both the Green Corridor Option and the Yellow Alternative Corridor (Switch 10) are located within the 1% AEP and 10% AEP floodplains, the Yellow Alternative Corridor intersects to a lesser extent and therefore has less likelihood of flooding.

Table 6-175 sets out the key hydrological considerations in the appraisal of the Stage 1 Corridor Options between Nodes X to Y.

Corridor Option	Hydrological Considerations	PAG Score
Green Corridor Option (Nodes X to Y)	Located within the 1% AEP floodplain. Located within the 10% AEP floodplain.	2
Yellow Alternative Corridor – Switch 11	Located within the 1% AEP floodplain. Less significant of a crossing than that of the Green Corridor Option – Switch 11. Located within the 10% AEP floodplain.	3

Table 6-175 Stage 1 Surface Water - Section 4 Nodes X to Y PAG Scores

The Preferred Option between Nodes X to Y is Yellow Alternative Corridor - Switch 11. Both Corridor Options cross the 1% AEP and 10% AEP floodplains however the Yellow Alternative Corridor – Switch 11 crosses the floodplain to a lesser extent and therefore has a lesser likelihood of flooding.

Table 6-176 sets out the key hydrological considerations in the appraisal of the Stage 1 Corridor Options between Nodes Y to A1.

Corridor Option	Hydrological Considerations	PAG Score
Green Corridor Option (Nodes Y to A1)	Located within the 1% AEP floodplain. Located within the 10% AEP floodplain of Lough Macnean Lower. This encroachment into the floodplain is only slight however still should be avoided if possible.	2
Yellow Alternative Corridor – Switch 12	Located within the 1% AEP floodplain. Less proportion within the 1% AEP floodplain when compared with the Green Corridor Option – Switch 12. Located within the 10% AEP floodplain of Lough Macnean Lower. This encroachment into the floodplain is only slight however still should be avoided if possible.	3

Table 6-176 Stage 1 Surface Water - Section 4 Nodes Y to A1 PAG Scores

The Preferred Option between Nodes Y to A1 is Yellow Alternative Corridor - Switch 12. Both Corridor Options cross the 1% AEP floodplain and encroach slightly into the 10% AEP floodplain however the Yellow Alternative Corridor – Switch 12 interacts with the floodplain to a lesser extent and therefore has a lesser likelihood of flooding.

Table 6-177 sets out the key hydrological considerations in the appraisal of the Stage 1 Corridor Options between Nodes B1 to D1.

Corridor Option	Hydrological Considerations	PAG Score
Green Corridor Option (Nodes B1 to D1)	Located within the 1% AEP floodplain. Located within the 10% AEP floodplain of Lough Macnean Upper. This encroachment into the floodplain is only slight however still should be avoided if possible.	2
Yellow Alternative Corridor – Switch 13	Not located within the 1% AEP floodplain. Not located within the 10% AEP floodplain.	4

Table 6-177 Stage 1 Surface Water - Section 4 Nodes B1 to D1 PAG Scores

The Preferred Option between Nodes B1 to D1 is Yellow Alternative Corridor - Switch 13 as it has no interaction with the 1% or 10% AEP floodplain and therefore less likelihood of flooding.

6.5.8.5 Section 5 –Blacklion / Belcoo to Enniskillen (Node C1 to SI / R1)

Table 6-178 sets out the key hydrological considerations in the appraisal of the Stage 1 Corridor Options between Nodes C1 to F1.

Corridor Option	Hydrological Considerations	PAG Score
Green Corridor Option (Nodes C1 to F1)	Located within the 1% AEP floodplain. Located within the 10% AEP floodplain. Minor and could be avoided.	2
Cyan Corridor Option (Nodes C1 to F1)	Located within the 1% AEP floodplain. Located within the 10% AEP floodplain. Minor and could be avoided.	2
Yellow Alternative Corridor Option – Switch 14	Not located within the 1% AEP floodplain. Not located within the 10% AEP floodplain.	4

Table 6-178 Stage 1 Surface Water - Section 5 Nodes C1 to F1 PAG Scores

The Preferred Option between Nodes C1-F1 is Yellow Alternative Corridor - Switch 14 as it has no interaction with the 1% or 10% AEP floodplain and therefore less likelihood of flooding when compared with the others.

Table 6-179 sets out the key hydrological considerations in the appraisal of the Stage 1 Corridor Options between Nodes G1 to H1.

Corridor Option	Hydrological Considerations	PAG Score
Green Corridor Option (Nodes G1 to H1)	Located within the 1% AEP floodplain. Not located within the 10% AEP floodplain.	3
Yellow Alternative Corridor Option – Switch 15	Located within the 1% AEP floodplain. Not located within the 10% AEP floodplain.	3

Table 6-179 Stage 1 Surface Water - Section 5 Nodes G1 to H1 PAG Scores

Both the Green Corridor Option and the Yellow Alternative Corridor – Switch 15 are located within the 1% AEP floodplain and not within the 10% AEP floodplain. They are therefore both scored equally and neither preferable over the other as there is no significant indication that either route is in more of the floodplain than the other.

Table 6-180 sets out the key hydrological considerations in the appraisal of the Stage 1 Corridor Options between Nodes I1 to J1/L1.

Corridor Option	Hydrological Considerations	PAG Score
Cyan Corridor Option (Nodes I1 to J1/L1)	Located within the 1% AEP floodplain. Not located within the 10% AEP floodplain.	3
Yellow Alternative Corridor Option – Switch 16	Located within the 1% AEP floodplain. Not located within the 10% AEP floodplain.	3

Table 6-180 Stage 1 Surface Water - Section 5 Nodes I1 to J1/L1 PAG Scores

Both Corridor Options between Nodes I1 to J1/L1 interact with the 1% AEP floodplain and are equally preferable.

Table 6-181 sets out the key hydrological considerations in the appraisal of the Stage 1 Corridor Options of Yellow Alternative Corridor – Switch 17.

Corridor Option	Hydrological Considerations	PAG Score
Green Corridor Option (Nodes H1 to J1 and Nodes K1 to Ki to L1) & Cyan Corridor Option (Nodes L1-M1)	Located within the 1% AEP floodplain. Not located within the 10% AEP floodplain.	3
Yellow Alternative Corridor Option – Switch 17 (Nodes H1 to K1), Green Corridor Option (Nodes K1 to L1) & Cyan Corridor Option (Nodes L1-M1)	Located within the 1% AEP floodplain. Not located within the 10% AEP floodplain.	3

Table 6-181 Stage 1 Surface Water - Section 5 Switch 17 PAG Scores

Both Corridor Options between Nodes H1 to M1 interact with the 1% AEP floodplain and are equally preferable.

Table 6-182 sets out the key hydrological considerations in the appraisal of the Stage 1 Corridor Options between Nodes M1 to N1.

Corridor Option	Hydrological Considerations	PAG Score
Cyan Corridor Option (Nodes M1 to N1)	Located within the 1% AEP floodplain. Not located within the 10% AEP floodplain.	2
Yellow Alternative Corridor Option – Switch 18	Located within the 1% AEP floodplain. Not located within the 10% AEP floodplain.	3

Table 6-182 Stage 1 Surface Water - Section 5 Nodes M1 to N1 PAG Scores

The Preferred Option between Nodes M1 to N1 is the Yellow Alternative Corridor Option – Switch 18 as it interacts least with the 1% AEP floodplain when compared with the Cyan Corridor Option and therefore is less likely to flood as frequently.

Table 6-183 sets out the key hydrological considerations in the appraisal of the Stage 1 Corridor Options of Yellow Alternative Corridor – Switch 19.

Corridor Option	Hydrological Considerations	PAG Score
Cyan Corridor Option (Node P1 to R1)	Located within the 1% AEP floodplain. Not located within the 10% AEP floodplain.	3
Yellow Alternative Corridor Option – Switch 19 (Nodes P1 to S1) & Green Corridor Option (Q1-R1)	Located within the 1% AEP floodplain. Not located within the 10% AEP floodplain.	3
Yellow Alternative Corridor Switch 19 (Nodes P1 to Q1) and Yellow Alternative Corridor Switch 20 (Nodes Q1 to R1)	Located within the 1% AEP floodplain. Very minor interactions and therefore least likely to flood when compared with other options. Not located within the 10% AEP floodplain.	3

Table 6-183 Stage 1 Surface Water - Section 5 Switch 19 PAG Scores

All Corridor Options in this Section are scored equally and no one is preferable over the other as all are located within the 1% AEP floodplain.

Table 6-184 sets out the key hydrological considerations in the appraisal of the Stage 1 Corridor Options between Nodes Q1 to R1.

Corridor Option	Hydrological Considerations	PAG Score
Green Corridor Option (Nodes Q1 to R1)	Located within the 1% AEP floodplain. Towards Node R1. Not located within the 10% AEP floodplain.	3
Yellow Alternative Corridor – Switch 20	Little/No interaction with 1% AEP floodplain. Not located within the 10% AEP floodplain.	4

Table 6-184 Stage 1 Surface Water - Section 5 Nodes Q1 to R1 PAG Scores

The Preferred Option between Nodes Q1 to R1 is the Yellow Alternative Corridor Option – Switch 20 as there is little-no interaction between this Corridor and the floodplain and therefore is less likely to flood when compared with the Green Corridor Option.

6.5.9 Archaeology and Cultural Heritage

It is important to note that the Corridor Options and Switches are not based on a ‘centre line’, although there may be existing transport infrastructure present that a Corridor Options may follow (for example, existing roads or historic railways).

This assessment has reviewed all known cultural heritage receptors within each Corridor Option and Switch. This will include all recorded archaeological and architectural sites, along with Zones of Archaeological Potential and Zones of Notification and demesne landscapes. This is a desktop exercise and builds from the information gathered for the Phase 1 Concept and Feasibility (see Appendix B).

The cultural heritage receptors has been assigned an importance as per the following included in Table 6-185:

Importance	Criteria
Very High	<ul style="list-style-type: none"> Sites of International Importance: UNESCO World Heritage Properties (including tentative list) Any cultural heritage site of designated International Importance National Monuments Monuments subject to Preservation Orders Schedule of Historic Monuments in State Care (NI)
High	<ul style="list-style-type: none"> Record of Monuments and Places (RMP) Proposed RMP Record of Protected Structures (RPS) Schedule of Historic Monuments (NI) Architectural Conservation Area (ACA) Well-preserved demesne landscapes The Register of Historic Parks, Gardens and Demesnes (NI) Register of Listed Buildings (NI)
Medium	<ul style="list-style-type: none"> Sites and Monuments Record (SMR) Sites listed on the National Inventory of Architectural Heritage (NIAH) Moderately well-preserved demesne landscapes Defence Heritage Record (NI) Industrial Heritage Record (NI)
Low	<ul style="list-style-type: none"> Poorly preserved demesne landscapes
Negligible	<ul style="list-style-type: none"> SMR/RMP – Record only

Importance	Criteria
	<ul style="list-style-type: none"> Any designated structure – demolished Fully developed demesne landscapes

Table 6-185 Designation of Importance: Cultural Heritage Sites

A narrative on opportunities relating to the Cultural Heritage resource has also been included, where new opportunities for users to engage with Cultural Heritage will be explored (e.g. designing Greenways that allow users to passively engage with historic infrastructure such as disused railway lines, bridges, etc.) (TII 2024).

Dr Stephen Carter, who is an expert in World Heritage Properties, has been appointed by TII for the SLNCR Greenway project. Dr. Carter has prepared a report to describe the cultural significance of the ‘The Passage Tomb Landscape of County Sligo’ and an assessment of the predicted impact of the various Corridor Options and/or Switches on that cultural significance. The analysis contained in Dr Carter’s report has informed the overall assessment of the potential impacts of the proposed Corridor Options and Switches at the western end of the scheme.

Due to the fact that the exact location of the Greenway within each Corridor Option or Switch remains unknown at this stage, professional judgement has been employed to determine how the level of potential negative effects and potential positive effects may (or may not) affect the overall assessment and the resultant scoring.

The Corridor Options and Switches have been assigned a PAG Score (as required under the TII’s Project Manager’s Manual for Greenway Projects 2022 and as per the TII PAG Unit 13.0), which will inform the Stage 1 Preliminary Option Assessment Multi Criteria Assessment. The Archaeological and Cultural Heritage constraints and/or sensitive receptors for each Corridor Option and Switch appraisal are set out in the Environmental Evaluation Report in Appendix J and are summarised in Figure 6-44, Figure 6-45, Figure 6-46, and Figure 6-47 below

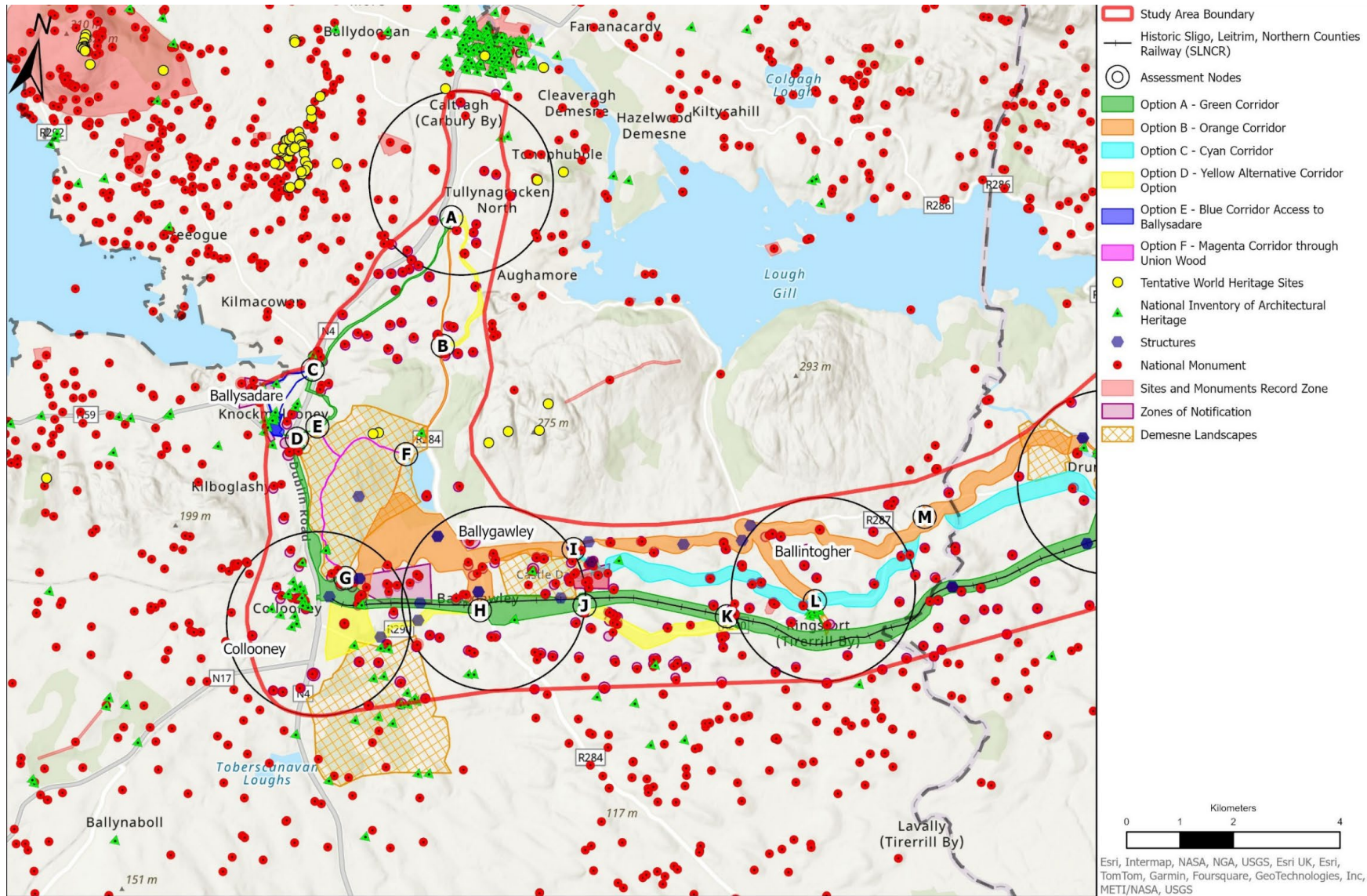


Figure 6-48 Stage 1 Corridor Options - Cultural Heritage - Carraroe to Dromahair

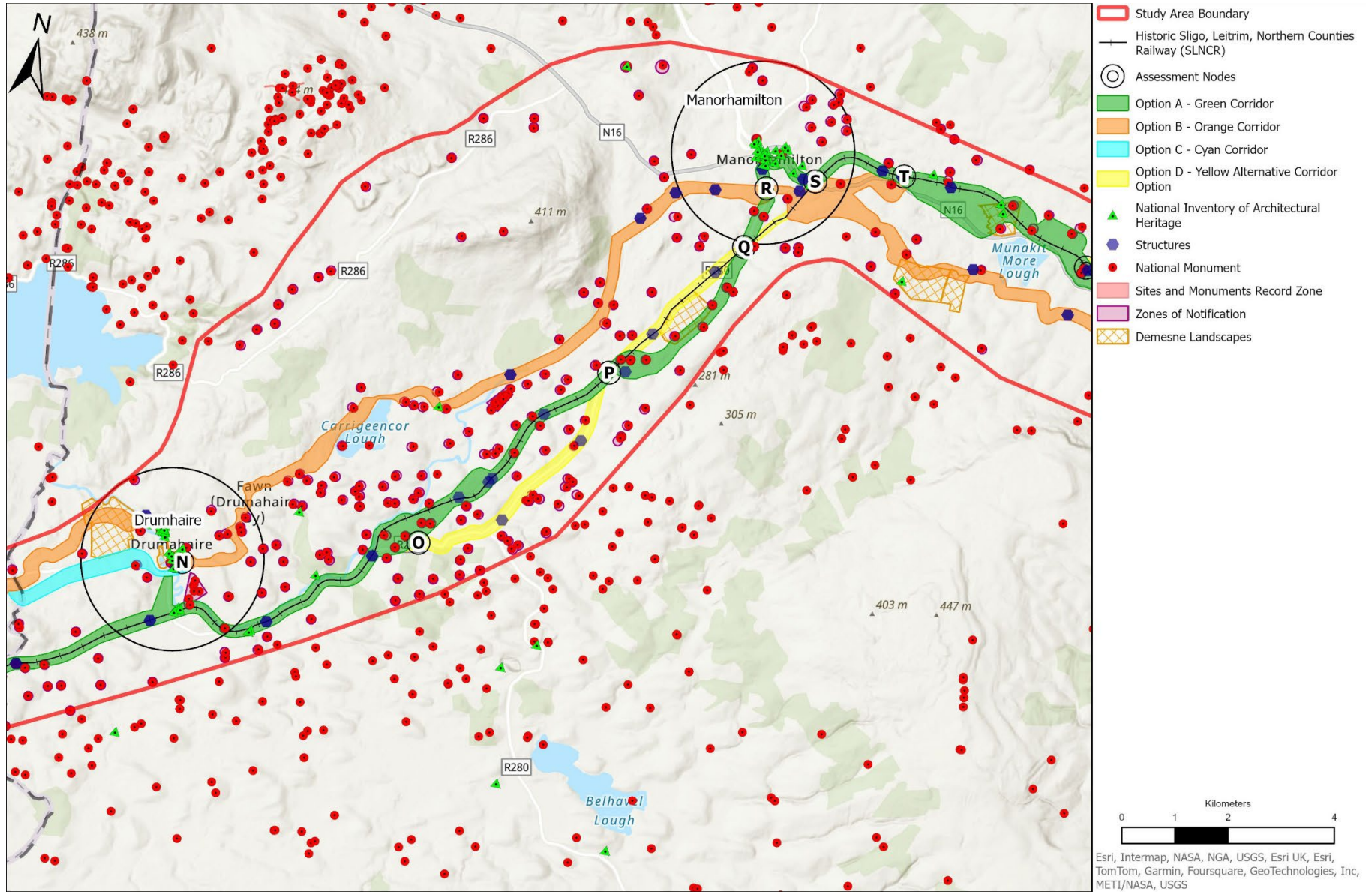


Figure 6-49 Stage 1 Corridor Options - Cultural Heritage - Dromahair to Manorhamilton

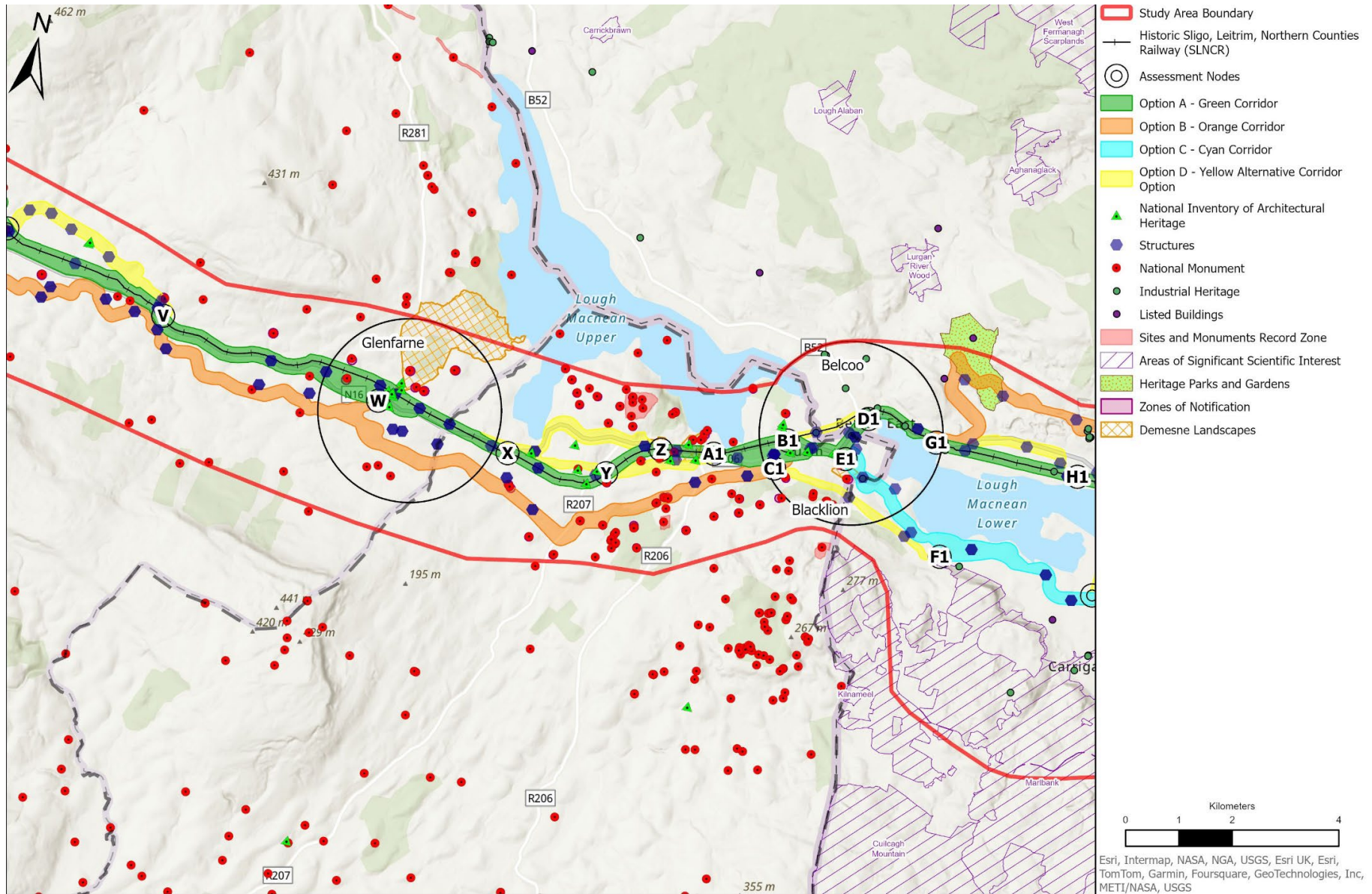


Figure 6-50 Stage 1 Corridor Options - Cultural Heritage - Manorhamilton to Blacklion/Belcoo

6.5.9.1 Section 1: Carraroe to Collooney (Node A to G)

The Orange Corridor Option (PAG Score of 4) is preferred to the Yellow Alternative Corridor Option (Switch 1) (PAG Score of 2), due to a lack of predicted impacts on recorded archaeological, architectural, or cultural heritage sites, and its utilization of an existing road, which minimizes the potential impact on unrecorded archaeological remains. However, the Orange Corridor Option may affect existing vernacular stone-built field boundaries and runs through the wider landscape surrounding the Tentative World Heritage Site, although it is not expected to have impacts on the landscape character. In contrast, Yellow Alternative Corridor Option (Switch 1) directly impacts recorded archaeological sites, including ringforts, and is situated in previously undisturbed greenfield, thereby potentially increasing the risk of impacting unrecorded archaeological remains. Both Corridor Options have potential impacts on the surrounding landscape near the Tentative World Heritage Site, but early assessments indicate minimal impact on the landscape character.

The Green Corridor Option (PAG Score of 4) offers the advantage of avoiding impacts on recorded archaeological, architectural, or cultural heritage sites, as well as utilizing an existing road to minimize potential impacts on unrecorded archaeological remains. This Corridor Option enables future access to heritage sites like the historic graveyard at Ballysadare. However, road widening may directly impact stone-built field boundaries and passes through the wider landscape of the Tentative World Heritage Site, potentially affecting its surroundings. In comparison, the Blue Corridor Access to Ballysadare (Switch 2) (PAG Score of 4), also avoids impacts on recorded heritage sites and utilizes an existing road, providing access to heritage locations. It passes through an area of archaeological potential, raising concerns about potential impacts on unrecorded archaeological remains. The majority Yellow Alternative Corridor Option (Switch 21) (PAG Score of 3) is located within previously undisturbed greenfield and therefore possesses a higher possibility of directly impacting previously unrecorded archaeological remains. Switch 21 will pass to the east of Ballysadare and whilst the town will be accessible from the option, it does not bring users through the heritage settlement. All three options are noted to have no significant impact on the landscape character of the Tentative World Heritage Site.

The Green Corridor Option, Orange Corridor Option, and Magenta Corridor through Union Wood (Switch 3) all pose potential impacts on archaeological and cultural heritage sites. The Green Corridor Option (PAG Score of 2) poses impacts for recorded burial grounds, earthworks, and a castle site, with high potential for unrecorded archaeological finds in undisturbed greenfield areas. While the Orange Corridor Option (PAG Score of 3) avoids impacts on recorded sites and offers future access to heritage locations, it still poses some risk to unrecorded archaeological features. The Magenta Corridor Option through Union Wood (Switch 3) (PAG Score of 5), is preferred, with no predicted impacts on recorded sites, minimal risk to unrecorded remains due to its alignment with an existing woodland footpath, and the added benefit of providing access to heritage sites.

6.5.9.2 Section 2: Collooney to Dromahair (Node G to N)

In the comparison between the Green Corridor Option, Orange Corridor Option, and Yellow Alternative Corridor Option (Switch 4), it is the Green Corridor Option (PAG Score of 5) which leverages the historic railway line to potentially reduce impacts on greenfield areas and create a positive heritage narrative but with potential impact based on proximity to recorded monuments and the tentative World Heritage Site. The Green Corridor Option is preferred.

The Yellow Alternative Corridor Option (Switch 4) (PAG Score of 2) also connects historic landscapes but poses potential risks to archaeological sites in untouched greenfield areas and requires a new river crossing. The Orange Corridor Option (PAG Score of 4) lacks predicted impacts on recorded architectural or cultural heritage sites and limited impact on a ringfort within the corridor boundary. However, it shares concerns with the other Corridor Options regarding potential impacts on previously unrecorded archaeological sites and its passage through the wider landscape surrounding the Tentative World Heritage Site.

The Green Corridor Option (PAG Score of 5) is preferred to the Yellow Alternative Corridor Option (Switch 5) (PAG Score of 2) as utilization of the historic railway line creates a positive heritage narrative in the landscape and potentially reduces impacts on greenfield areas. However, there is potential risk of impacting previously unrecorded archaeological remains if undisturbed ground is needed. Conversely, the Yellow Alternative Corridor Option (Switch 5) could minimize ground disturbances in greenfield areas by following

existing roads. However, this option contains numerous recorded monuments, including a cross, bullaun stone, pillar stone, church, graveyard, megalithic tomb, enclosure, and trackway, which could be directly impacted by any off-line route through the area. As with the Green Corridor Option, there is a possibility of impacting previously unrecorded archaeological remains in this Corridor Option.

6.5.9.3 Section 3 – Dromahair to Manorhamilton - (Node N to S)

While the Green Corridor Option (PAG Score of 3) utilizes the historic railway line, potentially creating a positive heritage narrative and reducing impacts of greenfield areas, there is presence of recorded archaeological monuments, ringforts and an enclosure, and thus risk of potential impacts on these features. The Yellow Alternative Corridor Option (Switch 6) (PAG Score of 4), utilizes an existing roadway, avoiding the need to disturb greenfield areas, but also raises concerns due to the presence of recorded monuments within its corridor. While both options have potential impacts on archaeological sites, the Yellow Alternative Corridor Option (Switch 6) is preferred as there appears to be less likely impact.

In comparison to the Yellow Alternative Corridor Option (Switch 7) (PAG Score 4), the Green Corridor Option (PAG Score 3) primarily utilizes an existing local road, minimizing the need for new development on existing greenfield areas. However, several recorded archaeological monuments are located within this Corridor Option including ringforts, burnt mounds, and a megalithic tomb. The impact on these sites is deemed unlikely but remains a concern. Conversely, the Yellow Alternative Corridor Option (Switch 7) follows an established roadway that aligns with the historic railway line. This potentially reduces the need for extensive new construction on greenfield areas and also has fewer recorded archaeological sites, with only one ringfort within its corridor and is therefore preferred.

The Green Corridor Option (PAG Score of 4) focuses on an existing road with minimal impact on greenfield areas, however, includes several protected structures, architectural conservation areas, and archaeological sites. By comparison, the Yellow Alternative Corridor Option (Switch 8) (PAG Score of 4), utilizes the historic railway route, promoting a positive heritage narrative and potentially reducing the need for disturbing greenfield areas. However, it includes two protected structures that could face indirect impacts on their settings. Overall, there is no preference between the Green and Yellow Alternative Corridor Options.

6.5.9.4 Section 4: Manorhamilton to Blacklion (Node S to C1)

The Green Corridor Option (PAG Score of 4) focuses on utilizing the historic railway route, creating a positive heritage narrative, and potentially reducing impacts on undisturbed greenfield areas. There are no recorded architectural or cultural heritage sites present, although there is a group of recorded monuments comprising a church and graveyard that could potentially be impacted. By comparison, the Yellow Alternative Corridor Option (Switch 9) (PAG Score of 3), crosses through undisturbed greenfield areas, posing a potential risk to unrecorded archaeological remains. Additionally, it includes a recorded monument (a ringfort) and three protected structures (a church, arch, and farmhouse) that could potentially be impacted. While impacts in both instances are considered unlikely, the Green Corridor Option is considered preferred.

The Green Corridor Option (PAG Score of 5) focuses on utilizing the historic railway line, creating a positive heritage narrative, and potentially reducing impacts on undisturbed greenfield areas. There are no recorded archaeological, architectural, or cultural heritage sites. By comparison, the Yellow Alternative Corridor Option (Switch 10) (PAG Score of 4), centres around an established road, potentially minimizing the impact on greenfield areas. While this option also lacks recorded archaeological or cultural heritage sites, there is a protected structure (a thatched house) within the corridor, which poses a potential risk despite the likelihood of impact being low. The Green Corridor Option is preferred.

The Green Corridor Option (PAG Score of 4) focuses on utilizing the historic railway line, creating a positive heritage narrative, and potentially reducing impacts on undisturbed greenfield areas. □ There is one cultural heritage site within the Corridor Option, which comprises a worker's house (NIAH 40400103), which has unlikely potential for impact. The Yellow Alternative Corridor Option (Switch 11) (PAG Score of 4), centres around an established road, potentially minimizing the impact on greenfield areas. While this option also lacks recorded archaeological or cultural heritage sites, there is one structure listed in the NIAH within the Corridor Option, which comprises a post box (NIAH 40400104). Whilst impacts on this structure is unlikely, the potential remains due to its inclusion in the corridor. There is no preference between the Green and Yellow Alternative (Switch 11) Corridor Options.

The Green Corridor Option (PAG Score of 4) focuses on utilizing the route of a historic railway, which has been partially transformed into a road, to preserve heritage and minimize impacts on untouched greenfield areas. While there are no significant architectural or cultural heritage sites in this option, there is a risk to a ringfort monument and a demesne landscape associated with Killinagh Glebe. By comparison, the Yellow Alternative Corridor Option (Switch 12) (PAG Score of 3), centres around an existing local road, potentially avoiding the need to disturb large greenfield areas. This option also lacks recorded archaeological or cultural heritage sites, but it does involve a church structure listed in the NIAH. However, the potential impact on unrecorded archaeological remains due to residential development along the road is a concern. The Green Corridor Option is preferred.

The Green Corridor Option (PAG Score of 4) focuses on an existing well-established road, minimizing the need for new greenfield areas and avoiding significant impacts on archaeological or cultural heritage sites. However, there are potential impacts on listed structures and the possibility of disturbing greenfield areas with archaeological remains. In contrast, the Yellow Alternative Corridor Option (Switch 13) (PAG Score of 3), utilizes the historic railway line, offering a positive heritage narrative and potentially reducing the impact on greenfield areas. While there are no recorded architectural heritage sites here, there is potential for impact to recorded archaeological sites as well as the need for a river crossing, potentially affecting buried archaeological deposits or artifacts. The Green Corridor Option is preferred.

6.5.9.5 Section 5: Blacklion / Belcoo to Enniskillen (Node C1 to S1/R1)

The Cyan Corridor Option (PAG Score of 3) focuses on existing route ways, potentially reducing the need for disturbing greenfield areas. However, there is an archaeological monument (ringfort) and several protected structures and listed buildings, with low potential for impact. The Yellow Alternative Corridor Option (Switch 14) (PAG Score of 4), also utilizes existing small routeways to minimize disturbance to greenfield areas and lacks recorded archaeological or cultural heritage sites within its corridor, although there is potential for impact on previously unrecorded archaeological remains during construction in undisturbed greenfield areas. The Yellow Alternative Corridor Option (Switch 14) is preferred.

The Green Corridor Option (PAG Score of 5) focuses on the historic railway route, creating a positive heritage narrative and potentially reducing impacts on untouched greenfield areas. It lacks recorded archaeological, architectural, or cultural heritage sites, with no identified disadvantages. The Yellow Alternative Corridor Option (Switch 15) (PAG Score of 3), partially follows an existing road, potentially minimizing the impact on greenfield areas. It also lacks recorded architectural or cultural heritage sites but contains a recorded archaeological monument (a burnt mound) that may be impacted. There is also potential to impact undiscovered archaeological remains in previously untouched greenfield areas. The preferred route is the Green Corridor Option.

The Yellow Alternative Corridor Option (Switch 16) and Green Corridor Option (PAG Score of 4), occurs in previously undisturbed areas of greenfield, where there is potential to impact on previously unrecorded archaeological remains. There are no recorded architectural heritage sites within this Corridor Option. Part of this Corridor Option follows the route of the historic railway. The utilisation of same will create a positive heritage narrative in the landscape and potentially reduce the need for impacts on previously undisturbed greenfield areas. The site of the railway line is listed in the Industrial Heritage Record (IHR 01009:009). However, there is one recorded archaeological monument listed within the SMR within the Corridor Option which comprises a ringfort (FER228:039) Whilst impacts on this site is unlikely, the potential remains due to its inclusion in the Corridor Option. The Cyan Corridor Option (PAG Score 2) crosses previously undisturbed areas of greenfield and a watercourse, which have the potential to impact on previously unrecorded archaeological remains. There are no recorded architectural or cultural heritage sites within this Corridor Option. There is one recorded archaeological monument listed within the SMR partially within the Corridor Option which comprises a ringfort (FER228:063) Whilst impacts on this site is unlikely, the potential remains due to its inclusion in the Corridor Option. Two watercourse crossings would be required for this corridor, which are areas of archaeological potential. Any crossings have the potential to impact on archaeological deposits or artefacts.

In the comparison of the Green Corridor Option (PAG Score of 3) and the Yellow Alternative Corridor Option (Switch 17) (PAG Score of 3), there is no preference. The Green Corridor Option focuses on the historic railway line, which can promote a positive heritage narrative and potentially reduce impacts on pristine greenfield areas. Additionally, this Corridor Option lacks recorded archaeological or cultural heritage sites,

except for one Listed Building which may face potential impacts. The Yellow Alternative Corridor Option (Switch 17) does not have any recorded archaeological, architectural, or cultural heritage sites, but as with the Green Corridor Option, it traverses previously untouched greenfield areas that could disturb unrecorded archaeological remains.

The Cyan Corridor Option (PAG Score 2) does not contain any recorded archaeological, architectural, or cultural heritage sites, but crosses predominantly undisturbed greenfield areas, which has potential to impact previously unrecorded archaeological remains. The Yellow Alternative Corridor Option (Switch 18) (PAG Score of 3), focuses on an existing road, potentially reducing the need for undisturbed greenfield, and also lacks recorded archaeological or cultural heritage sites, except one Listed Building (church), posing a potential risk to this site. This Corridor Option may require some areas of previously undisturbed greenfield, with the potential to impact previously unrecorded archaeological remains. The Yellow Alternative Corridor Option (Switch 18) is preferred.

A portion of the Cyan Corridor Option (PAG Score 2) focuses on an existing road, which will potentially reduce the requirement for previously undisturbed greenfield. However, there is one recorded monument within this Corridor Option (FER229:064 Burnt Mound). Whilst impacts on this site is unlikely, the potential remains due to its inclusion in the Corridor Option. There is also one bridge structure located within the Corridor Option, which is listed within the Industrial Heritage Record (IHR 01187). Whilst impacts on this site is unlikely, the potential remains due to its inclusion in the Corridor Option. Part of this Corridor Option may require some areas of previously undisturbed greenfield, which have the potential to impact on previously unrecorded archaeological remains.

In the alternative Yellow Alternative Corridor Option (Switch 19 + 20) (PAG Score of 3) there are no recorded archaeological, architectural or cultural heritage sites located within this Corridor Option. However, the combined Corridor Option predominately crosses previously undisturbed greenfield and as such has the potential to directly impact previously unrecorded archaeological remains.

The corresponding Yellow Alternative Corridor Option (Switch 19) + Green Corridor Option (PAG Score of 4) has no recorded architectural or cultural heritage sites and part of this combined Corridor Option follows the route of the historic railway. The utilisation of same will create a positive heritage narrative in the landscape and potentially reduce the need for impacts on previously undisturbed greenfield areas. The site of the railway line is listed in the Industrial Heritage Record (IHR 01009:009). However, there is one recorded archaeological monument listed within the SMR within the combined Corridor Option which comprises a crannog (FER229:046). Whilst impacts on this site is unlikely, the potential remains due to its inclusion in the Corridor Option. This combined Corridor Option also crosses a short area of previously undisturbed areas of greenfield, which has the potential to impact on previously unrecorded archaeological remains.

For the Yellow Alternative Corridor Option (Switch 19) (PAG Score of 3), there are no recorded archaeological, architectural or cultural heritage sites located within this Corridor Option. However, this Corridor Option predominately crosses previously undisturbed greenfield and as such has the potential to directly impact previously unrecorded archaeological remains. The corresponding Green Corridor Option (PAG Score of 4) focuses largely on utilization of the historic railway line, which has since been developed as a road. This utilisation of the existing infrastructure will potentially reduce the need for impacts on previously undisturbed greenfield areas. There are no recorded archaeological, architectural or cultural heritage sites within the Green Corridor Option, with the exception of a recorded crannog located on the edge of a lake, which will remain unaffected. The Green Corridor Option (Node P1 to R1) is generally preferred.

6.5.10 Soils and Geology

A Stage 1 Option Appraisal of Geological Constraints is contained in Appendix H. This appraisal details the soils and geology within the Study Area for the proposed SLNCR Greenway project and provides an appraisal between the various Corridor Options and Switches based on publicly available geological mapping of the area. Each of the Corridor Options and Switches have been considered under the following headings:

- Superficial geology
- Bedrock geology, &
- Aquifers

In the following sub-sections, the potential Corridor Options and Switches are scored (7 to 1) based on the geological constraints in each Corridor Option. Ultimately each Corridor Option shall be assessed as either Preferred, Intermediate or Least Preferred based on the scoring and comparison with the other Corridor Options in each geographical section.

In this assessment, a baseline of glacial till has been set which will provide a competent base for greenway construction, all other superficial deposits are ranked/scored against this. For example, where two corridor options sit within areas which have a mix of glacial till and peat, the corridor with the most peat have been ranked as ‘Minor Negative’ due to the less favourable soils present. A baseline of glacial till as the neutral (4) score, providing a competent base for greenway construction has been assumed and the other corridors assessed in comparison to this. The greater the score the more preferable the corridor option.

The appraisal noted that the proposed engineering solutions for construction of the Greenway will have relatively low impact on the existing landscape, the soils and geology will have largely comparable impact on the engineering assessment of any Corridor Option selection.

Drawings ARP-ERW-P2-DR-101-112 in Appendix C show the Stage 1 Corridor Options in relation to the Superficial Geology, Bedrock Geology and Aquifers in the Study Area.

Section 1 – Carraroe to Collooney

The Orange Corridor Option passes through fewer areas of peat and alluvium compared with the Green Corridor Option, therefore comparatively the Orange Corridor Option is the preferable corridor option of the two.

The Yellow Alternative Corridor - Switch 1 passes through similar soils and geology to the Orange Corridor Option and therefore is comparable in terms of potential geological impacts.

Corridor Option	PAG Score (7 to 1)
Yellow Alternative Corridor - Switch 1	4
Orange Corridor Option (Nodes A to C)	4

Table 6-186 Stage 1 Enviro. Assessment, Soils & Geology, Section 1 - Nodes A to C

Between Nodes C-D the Green Corridor Option is less preferable to the Blue Corridor Access Ballysadare (Switch 2) and Yellow Alternative Corridor – Switch 21 as it passes through areas of peat (north east of Node E) whereas the other two Corridor Options do not.

Corridor Option	PAG Score (7 to 1)
Green Corridor Option (Nodes C to D)	3
Yellow Alternative Corridor - Switch 21	4
Blue Corridor Access Ballysadare (Switch 2)	4

Table 6-187 Stage 1 Enviro. Assessment, Soils & Geology, Section 1 Nodes C to D

When comparing the Magenta Corridor through Union Wood - Switch 3 to the Orange and Green Corridor Options, in terms of soils and geology the Magenta Corridor through Union Wood - Switch 3 is less preferable as it passes through an area of peat and of rock outcrops, immediately adjacent to peat and alluvium deposits.

Corridor Option	PAG Score (7 to 1)
Green Corridor Option (Nodes E to G)	4
Magenta Corridor through Union Wood - Switch 3 (Nodes E to G)	3
Orange Corridor Option (Nodes F to G)	4
Magenta Corridor through Union Wood - Switch 3 (Nodes F to G)	3

Table 6-188 Stage 1 Enviro. Assessment, Soils and Geology, Section 1 Nodes E to G & Nodes D to G

6.5.10.1 Section 2 – Collooney to Dromahair

The Orange Corridor Option is the preferable corridor, as peat is encountered less than on the Green or Cyan Corridor Options. The Yellow Alternative Corridor - Switch 4 and Orange Corridor Option are preferable to the Green Corridor Option between Nodes G to H as they traverse less areas of peat and river alluvium.

Corridor Option	PAG Score (7 to 1)
Green Corridor Option (Nodes G to H)	3
Orange Corridor Option (Nodes G to H)	4
Yellow Alternative Corridor - Switch 4	4

Table 6-189 Stage 1 Enviro. Assessment, Soils and Geology, Section 2 Nodes G to H

The Yellow Alternative Corridor - Switch 5 is preferable to the Green Corridor Option as it traverse less areas of peat and river alluvium than the Green Corridor Option between Nodes J to K.

Corridor Option	PAG Score (7 to 1)
Green Corridor Option (Nodes J to K)	3
Yellow Alternative Corridor - Switch 5	4

Table 6-190 Stage 1 Enviro. Assessment, Soils and Geology, Section 3 Nodes J to K

6.5.10.2 Section 3 – Dromahair to Manorhamilton

The Green Corridor Option passes predominately through glacial till and comparatively fewer areas of peat and alluvium than the Orange Corridor Option, therefore the Green Corridor Option is preferable in this section. The Yellow Alternative Corridor - Switch 6 passes through similar soils and geology to the Green Corridor Option and therefore is comparable in terms of the geological assessment to the Green Corridor Option.

Corridor Option	PAG Score (7 to 1)
Green Corridor Option (Nodes O to P)	4
Yellow Alternative Corridor - Switch 6	4

Table 6-191 Stage 1 Enviro. Assessment, Soils and Geology, Section 3 Nodes O to P

Yellow Alternative Corridor - Switch 7 passes through extensive areas of peat and is less preferable than the Green Corridor Option between Nodes P to Q.

Corridor Option	PAG Score (7 to 1)
Green Corridor Option (Nodes P to G)	4
Yellow Alternative Corridor - Switch 7	2

Table 6-192 Stage 1 Enviro. Assessment, Soils and Geology, Section 3 Nodes P to G

The Yellow Alternative Corridor - Switch 8 passes through less areas of peat and alluvium than the Green Corridor Option between Nodes Q to S and is therefore preferable in terms of the geological assessment.

Corridor Option	PAG Score (7 to 1)
Green Corridor Option (Nodes Q to R to S)	4
Yellow Alternative Corridor - Switch 8	4

Table 6-193 Stage 1 Enviro. Assessment, Soils and Geology, Section 3 Nodes

6.5.10.3 Section 4 – Manorhamilton to Blacklion / Belcoo

There is little difference between the Green and Orange Corridor Options in terms of geological constraints overall in this section as the Corridor Options pass through similar superficial deposits and will both encounter localised areas of soft deposits throughout their length and localised rock outcrops in the east. However, to the east of Manorhamilton the Green Corridor Option passes through a longer length of peat compared to the Orange Corridor and therefore is ranked less preferable, the peat appears to stretch across the full width of the corridor.

The Yellow Alternative Corridor - Switches 9, 10, 11, 12 & 13 pass through geologically similar deposits to that of the Green Corridor Option between Nodes U to V, Nodes X to Z, Nodes X to Y, Nodes Y to A1 and Nodes B1 to D1 and therefore are equally preferable to the corresponding sections of Green and Orange Corridor Options.

Corridor Option	PAG Score (7 to 1)
Green Corridor Option (Nodes U to V)	4
Yellow Alternative Corridors - Switch 9	4
Green Corridor Option (Nodes X to Z)	4
Yellow Alternative Corridors - Switch 10	4
Green Corridor Option (Nodes X to Y)	4
Yellow Alternative Corridors - Switch 11	4
Green Corridor Option (Nodes Y to A1)	4
Yellow Alternative Corridors - Switch 12	4

Table 6-194 Stage 1 Enviro. Assessment, Soils and Geology, Section 4

6.5.10.4 Section 5 – Blacklion / Belcoo to Enniskillen

The Orange Corridor Option is the preferable to the Green and Cyan Corridor Option in this section due to relatively larger areas of glacial till it would traverse compared with the other Corridor Options.

The Yellow Alternative Corridors (Switches 14 through 20) pass through geologically similar conditions which they offer an alternative to. However, the exceptions would be for Switch 18 and Switch 19 which both pass through areas of predominantly peat and therefore are less preferable to the corresponding section of Green and Orange Corridor Options between Nodes M11 to N1 and P1 to Q1.

Corridor Option	PAG Score (7 to 1)
Orange Corridor Option (Nodes C1 to E1) + Cyan Corridor Option (Nodes E1 to F1)	4
Yellow Alternative Corridors - Switch 14	4
Green Corridor Option (Nodes G1 to H1)	4
Yellow Alternative Corridors - Switch 15	4
Green Corridor Option (Nodes E1 to J1)	4
Cyan Corridor Option (Nodes E1 to I1) + Yellow Alternative Corridors - Switch 16	4
Green Corridor Option (Nodes H1 to K1 to L1) + Cyan Corridor Option (Nodes L1 to M1)	4
Yellow Alternative Corridors - Switch 17	4
Cyan Corridor Option (Nodes M1 to N1)	4
Yellow Alternative Corridors - Switch 18	3
Cyan Corridor Option (Nodes P1 to S1)	4
Yellow Alternative Corridors - Switch 19 + Green Corridor Option (Nodes Q1 to R1)	3
Green Corridor Option (Nodes Q1 to R1)	4
Yellow Alternative Corridors - Switch 20	4

Table 6-195 Stage 1 Enviro. Assessment, Soils and Geology, Section 5

6.5.11 Materials Assets – Agriculture

Potential agricultural impacts were appraised for the Corridor Options and Switches across the five geographical sections. Comparisons of the relative land use in terms of agricultural and non-agricultural land were made for each Corridor Option and Switch using Corine 2018 data and examination of aerial photography. The relative number of highly sensitive enterprises and farmyards were considered to determine the relative preference and level of impact.

Following the Unit 13.0 guidelines, the environmental TAF criteria for Agricultural Impacts are defined in Table 6-196, sub-criteria are defined in Table 6-197 and A PAG Score from 1 to 7 was assigned to each corridor and link based on their potential Agricultural Impacts. Preference determinations and scoring were based on the absence of any highly sensitive enterprises and lower potential impacts to agriculture.

Climate Change Impacts Criteria	Description
Material Assets Agriculture – Impact Criteria	Landtake (loss of agricultural land). Severance (where proposed greenway crosses farms) Potential impact on farm yards (based on the number of farmyards within the corridor) Potential impact on high sensitive farms (based on the number of high sensitive farms within the corridor)

Table 6-196 Stage 1 Enviro. Assessment, Material Assets - Agricultural Impacts, Main Criteria

Local Environmental Impacts Sub-criteria	Description
Landtake sub-criteria	Total area of corridor; Area of agricultural Land (Corine 2018 data and examination of aerial photography) Total length of indicative centre line Total length of indicative centre line through agricultural land
Severance sub-criteria	Total length of indicative centre line Total length of indicative centre line through agricultural land

Table 6-197 Stage 1 Enviro. Assessment, Material Assets - Agricultural Impacts, Sub-criteria

6.5.11.1 Section 1: Carraroe to Collooney (Node A to G)

Within Section 1: Carraroe to Collooney (Node A to G), the Orange Corridor Option (PAG Score of 4) is preferred to the Yellow Alternative Corridor Options - Switch 1 (PAG Score 3) between Nodes A to B.

Corridor Option	PAG Score (7 to 1)
Yellow Alternative Corridor - Switch 1	3
Orange Corridor Option (Nodes A to C)	4

Table 6-198 Stage 1 Enviro. Assessment, Material Assets - Agricultural Impacts, Section 1 Nodes A to B

Between Nodes C to D, while the Blue Corridor Access to Ballysadare (Switch 2) is preferable to the Green Corridor Option and Yellow Alternative Corridor Switch – 21 as it was entirely on-line with existing public roads the potential impacts of all three Corridor Options were not deemed to be significant differentiator as no highly sensitive enterprises were noted and each of the Corridor Options was assigned a PAG Score of 4 - Neutral.

Corridor Option	PAG Score (7 to 1)
Green Corridor Option (Nodes C to D)	4
Yellow Alternative Corridor - Switch 21	4
Blue Corridor Access Ballysadare (Switch 2)	4

Table 6-199 Stage 1 Enviro. Assessment, Material Assets - Agricultural Impacts, Section 1 Nodes C to D

Similarly between Nodes E to G and F to G while the Magenta Corridor through Union Wood (Switch 3) was marginally preferable to the Green and Orange Corridor Options, respectively in the absence of highly sensitive enterprises and the potential agricultural impacts not being considered significant each Corridor was assigned a PAG Score of 4 - Neutral.

Corridor Option	PAG Score (7 to 1)
Green Corridor Option (Nodes E to G)	4
Magenta Corridor through Union Wood - Switch 3 (Nodes E to G)	4
Orange Corridor Option (Nodes F to G)	4
Magenta Corridor through Union Wood - Switch 3 (Nodes F to G)	4

Table 6-200 Stage 1 Enviro. Assessment, Material Assets - Agricultural Impacts, Section 1 Nodes E to G & Nodes F to G

6.5.11.2 Section 2: Collooney to Dromahair (Node G to N)

Within Section 2: Collooney to Dromahair (Node G to N), the Orange Corridor Option (PAG Score of 4) and the Yellow Alternative Corridor Option (Switch 4) (PAG Score of 4), were similarly absent of highly sensitive

enterprises. These were therefore both preferable to the corresponding Green Corridor Option (PAG Score of 3), which was considered to have higher potential agricultural land take and severance.

Corridor Option	PAG Score (7 to 1)
Green Corridor Option (Nodes G to H)	3
Orange Corridor Option (Nodes G to H)	4
Yellow Alternative Corridor - Switch 4	4

Table 6-201 Stage 1 Enviro. Assessment, Material Assets - Agricultural Impacts, Section 2 Nodes G to H

The Yellow Alternative Corridor Option (Switch 5) (PAG Score of 4) was preferred to the corresponding Green Corridor Option (PAG Score of 3) for the advantage of using the existing roadway thereby minimizing potential land take and severance as well as the absence of highly sensitive enterprises.

Corridor Option	PAG Score (7 to 1)
Green Corridor Option (Nodes J to K)	3
Yellow Alternative Corridor - Switch 5	4

Table 6-202 Stage 1 Enviro. Assessment, Material Assets - Agricultural Impacts, Section 2 Nodes J to K

6.5.11.3 Section 3: Dromahair to Manorhamilton (Node N to S)

Within Section 3: Dromahair to Manorhamilton (Node N to S), the predominant advantage of using existing roadways and thereby minimizing potential land take and severance as well as the absence of high sensitive enterprises resulted in preference for the Yellow Alternative Corridor Options (Switches 6 and 7) (PAG Scores of 4) over the corresponding Green Corridor Options (PAG Scores of 3 and 4, respectively); and the Green Corridor Option (PAG Score of 4) over the Yellow Alternative Corridor Option (Switch 8) (PAG Score of 4).

Corridor Option	PAG Score (7 to 1)
Green Corridor Option (Nodes O to K)	3
Yellow Alternative Corridor - Switch 6	4
Green Corridor Option (Nodes P to Q)	4
Yellow Alternative Corridor - Switch 7	4
Green Corridor Option (Nodes Q to R to S)	4
Yellow Alternative Corridor - Switch 8	3

Table 6-203 Stage 1 Enviro. Assessment, Material Assets - Agricultural Impacts, Section 3

6.5.11.4 Section 4, Manorhamilton to Blacklion (Node S to C1)

Within Section 4, Manorhamilton to Blacklion (Node S to C1), there was no significant difference from an agricultural perspective between the Yellow Alternative Corridor (Switch 9) and the corresponding Green Corridor Option resulting in no preference between these options. Both options were assigned a PAG Score of 3 predominantly based on potential land take and severance.

Corridor Option	PAG Score (7 to 1)
Green Corridor Option (Nodes U to V)	3
Yellow Alternative Corridors - Switch 9	3

Table 6-204 Stage 1 Enviro. Assessment, Material Assets - Agricultural Impacts, Section 4 Nodes U to V

The Yellow Alternative Corridor Options (Switches 10, 11, 12) (PAG Scores of 4), were preferred over the corresponding Corridor Options predominantly based on the lower potential for land take and severance and the presence of high sensitivity enterprises within the corresponding Corridor Options at each instance.

Corridor Option	PAG Score (7 to 1)
Green Corridor Option (Nodes X to Z)	2
Yellow Alternative Corridors - Switch 10	4
Green Corridor Option (Nodes X to Y)	2
Yellow Alternative Corridors - Switch 11	4
Green Corridor Option (Nodes Y to A1)	2
Yellow Alternative Corridors - Switch 12	4

Table 6-205 Stage 1 Enviro. Assessment, Material Assets - Agricultural Impacts, Section 4

Conversely, the Green Corridor Option (PAG Score of 4) was preferred to the corresponding Yellow Alternative Corridor Option (Switch 13) (PAG Score of 3), due to the lack of highly sensitive enterprises, and lower potential land take and severance.

Corridor Option	PAG Score (7 to 1)
Green &/or Orange Corridor Option (Nodes B1 to D1)	4
Yellow Alternative Corridors - Switch 13	3

Table 6-206 Stage 1 Enviro. Assessment, Material Assets - Agricultural Impacts, Section 4 Nodes B1 to D1

6.5.11.5 Section 5: Blacklion / Belcoo to Enniskillen (Node C1 to S1/R1)

Within Section 5: Blacklion / Belcoo to Enniskillen (Node C1 to S1/R1), the preferred Corridor Options were based predominantly on lower potential land take and severance and the absence of high sensitivity enterprises.

The combined Orange, Cyan, and Green Corridor Option (PAG Score of 3) was preferred to the Yellow Alternative Corridor Option (Switch 14) (PAG Score of 2); the Yellow Alternative Corridor Option (Switch 15) (PAG Score of 4) was preferred to the corresponding Green Corridor Option (PAG Score of 2); the Green Corridor Option (PAG Score of 4) was preferred to the Cyan Corridor Option and Yellow Alternative Corridor Option (Switch 16) (PAG Score of 2); and the Yellow Alternative Corridor Option (Switch 18) (PAG Score of 4), was the preferred to the corresponding Cyan Corridor Option (PAG Score of 2).

Corridor Option	PAG Score (7 to 1)
Orange &/or Green Corridor Option (Nodes C1 to E1) + Cyan Corridor Option (Nodes E1 to F1)	3
Yellow Alternative Corridors - Switch 14	2
Green Corridor Option (Nodes G1 to H1)	2
Yellow Alternative Corridors - Switch 15	4
Green Corridor Option (Nodes E1 to J1)	4
Cyan Corridor Option (Nodes E1 to I1) + Yellow Alternative Corridors - Switch 16	2
Cyan Corridor Option (Nodes M1 to N1)	2
Yellow Alternative Corridors - Switch 18	4

Table 6-207 Stage 1 Enviro. Assessment, Material Assets - Agricultural Impacts, Section 5

The Yellow Alternative Corridor Option (Switch 17) and the corresponding Green Corridor Option showed minor differences from an agricultural perspective and thus there was no preference between these options. Both options were assigned at PAG Score of 2, based on potential land take and severance and the presence of farmyards within the corridor boundaries.

Corridor Option	PAG Score (7 to 1)
Green Corridor Option (Nodes H1 to K1 to L1) + Cyan Corridor Option (Nodes L1 to M1)	2
Yellow Alternative Corridors - Switch 17	2

Table 6-208 Stage 1 Enviro. Assessment, Material Assets - Agricultural Impacts, Section 5 Nodes H1 to M1

Finally, the comparative appraisal of the Yellow Alternative Corridor Options (Switches 19) were made in combination as follows:

- The Yellow Alternative Corridor Options (Switches 19 (Node P1 to Q1) and 20 (Node Q1 to R1)), were considered in combination and assigned a PAG Score of 2.
- The Yellow Alternative Corridor Option (Switch 19 (Node P1 to Q1)) was considered in combination with the Green Corridor Option (Node Q1 to R1) and assigned a PAG Score of 3.
- The corresponding Cyan Corridor Option (Node P1 to S1) was assigned a PAG Score of 4.

Based on low potential for land take and severance as well as the absence of high sensitivity enterprises, the Cyan Corridor Option is preferred. The combined Yellow Alternative Corridor Option (Switch 19) and Green Corridor Option (Node Q1 to R1) was considered to be of intermediate preference while the combined Yellow Alternative Corridor Options (Switches 19 and 20) were considered as least preferred due to high potential land take and severance, and the presence of a high sensitivity enterprise.

Corridor Option	PAG Score (7 to 1)
Cyan Corridor Option (Nodes P1 to S1)	4
Yellow Alternative Corridors - Switch 19 + Green Corridor Option (Nodes Q1 to R1)	3
Yellow Alternative Corridors - Switch 19 + Yellow Alternative Corridors - Switch 20	2

Table 6-209 Stage 1 Enviro. Assessment, Material Assets - Agricultural Impacts, Section 5 Nodes P1 to S1, P1 to Q1 to R1

Between Nodes Q1 to R1 the Green Corridor Option (PAG Score of 3) was preferred to the Yellow Alternative Corridor Option (Switch 20) (PAG Score of 2) as it is shorter resulting in less agricultural land being impact upon.

Corridor Option	PAG Score (7 to 1)
Yellow Alternative Corridors - Switch 20	2
Green Corridor Option (Nodes Q1 to R1)	3

Table 6-210 Stage 1 Enviro. Assessment, Material Assets - Agricultural Impacts, Section 5 Nodes Q1 to R1

6.6 Outcome of Stage 1 Preliminary Options Assessment

The tables below show the outcome of the combined scores for each Switch and corresponding Corridor Option following the Stage 1 Preliminary Options Assessment.

Nodes	Part	Switch	Corridor Option	Climate Action Impact	Land Use & Planning Policy	Population & Human Health	Biodiversity	Soils & Geology	Hydrology & Hydrogeology	Air Quality	Noise & Vibration	Archaeology & Cultural Heritage	Landscape & Visual Quality	Agriculture	Journey Quality	Road Safety	Structures	Cost Estimates	Total
Nodes A-B	Carraroe to south of Drumaskibbole	Switch 1	Option B - Orange Corridor Option	3	4	3	3	4	4	2	2	4	2	4	5	7	4	2	53
			Option D – Yellow Alternative Corridor Option	3	4	5	3	4	4	3	3	2	2	3	7	6	4	2	55
Nodes C-D	Access to Ballysadare	Switch 2 & 21	Option A – Green Corridor Option	3	4	3	2	3	2	3	3	4	3	4	5	7	1	3	50
			Option E – Blue Corridor Access to Ballysadare	3	4	5	3	4	2	2	2	4	2	4	5	5	3	1	49
			Option D – Yellow Alternative Corridor Option	3	5	4	3	4	4	3	3	3	3	4	6	6	3	3	57
Nodes E to G	Access to Ballysadare	Switch 3	Option A – Green Corridor Option (E to D and D to G)	2	2	3	1	4	1	2	2	2	3	4	6	7	4	1	44
			Option F – Magenta Corridor through Union Wood	3	3	6	2	3	2	3	3	5	3	4	6	6	4	3	56
Nodes F to G	Access to Ballysadare	Switch 3	Option B - Orange Corridor Option	2	4	3	3	4	1	2	2	3	3	4	5	7	4	1	48
			Option F – Magenta Corridor through Union Wood	3	3	6	2	3	1	3	3	5	3	4	6	6	4	3	55

Table 6-211 Stage 1 Preliminary Options Assessment, Combined scores - Section 1

Section 2 – Collooney to Dromahair (Node G to N)																				
Nodes	Part	Switch	Corridor Option	Climate Action Impact	Land Use & Planning Policy	Population & Human Health	Biodiversity	Soils & Geology	Hydrology & Hydrogeology	Air Quality	Noise & Vibration	Archaeology & Cultural Heritage	Landscape & Visual Quality	Agriculture	Journey Quality	Road Safety	Structures	Cost Estimates	Total	
Nodes G-H	Collooney to Ballygawley	Switch 4	Option A – Green Corridor Option	3	6	6	1	3	1	3	3	5	4	3	7	7	2	2	56	
			Option B – Orange Corridor Option	2	4	3	3	4	1	2	2	4	3	4	4	7	6	2	1	48
			Option D – Yellow Alternative Corridor Option	3	4	3	1	4	1	3	3	2	3	4	4	6	5	2	1	45
Nodes J-K	Ballygawley to Ballintogher	Switch 5	Option A – Green Corridor Option	3	6	6	3	3	2	3	3	5	4	3	7	6	2	2	58	
			Option D – Yellow Alternative Corridor Option	3	4	3	3	4	4	2	2	2	2	4	4	6	6	2	2	49

Table 6-212 Stage 1 Preliminary Options Assessment, Combined scores - Section 2

Section 3 – Dromahair to Manorhamilton (Node N to S)																			
Nodes	Part	Switch	Corridor Option	Climate Action Impact	Land Use & Planning Policy	Population & Human Health	Biodiversity	Soils & Geology	Hydrology & Hydrogeology	Air Quality	Noise & Vibration	Archaeology & Cultural Heritage	Landscape & Visual Quality	Agriculture	Journey Quality	Road Safety	Structures	Cost Estimates	Total
Nodes O-P	R287 at Sox	Switch 6	Option A – Green Corridor Option	3	4	5	2	4	1	3	3	3	3	3	7	7	2	2	52
			Option D – Yellow Alternative Corridor Option	3	3	3	3	4	3	2	2	4	3	4	4	5	5	1	1
Nodes P-Q	R280 North West Cycle Trail	Switch 7	Option A – Green Corridor Option	3	4	5	3	4	2	2	2	3	3	4	5	7	2	2	51
			Option D – Yellow Alternative Corridor Option	3	5	3	3	2	1	3	3	4	2	4	4	6	6	2	1
Nodes Q-S	Historic SLNCR to Manorhamilton Mart	Switch 8	Option A – Green Corridor Option	2	4	5	2	4	1	2	2	4	3	4	5	7	1	1	47
			Option D – Yellow Alternative Corridor Option	3	5	3	3	4	4	3	3	4	4	3	4	6	6	3	3

Table 6-213 Stage 1 Preliminary Options Assessment, Combined scores - Section 3

Section 4 – Manorhamilton to Blacklion (Node S to C1)																			
Nodes	Part	Switch	Corridor Option	Climate Action Impact	Land Use & Planning Policy	Population & Human Health	Biodiversity	Soils & Geology	Hydrology & Hydrogeology	Air Quality	Noise & Vibration	Archaeology & Cultural Heritage	Landscape & Visual Quality	Agriculture	Journey Quality	Road Safety	Structures	Cost Estimates	Total
Nodes U-V	R283, Thur Mountain	Switch 9	Option A – Green Corridor Option	3	4	4	3	4	3	3	3	4	3	3	7	7	2	2	55
			Option D – Yellow Alternative Corridor Option	3	4	4	3	4	2	2	2	3	3	3	3	6	5	2	2
Nodes X-Z	N16, Lough Macnean Upper	Switch 10	Option A – Green Corridor Option (X to Y and Y to Z)	3	5	5	3	4	2	3	3	5	3	2	7	7	2	2	56
			Option D – Yellow Alternative Corridor Option	3	4	3	2	4	3	2	2	4	3	4	3	4	6	5	2
Nodes X-Y	L5000 & L1001 Thornhill Road	Switch 11	Option A – Green Corridor Option	3	5	4	3	4	2	3	3	4	3	2	7	6	2	1	52
			Option D – Yellow Alternative Corridor Option	3	4	4	2	4	3	2	2	4	3	4	4	5	6	2	2
Nodes Y-A1	L1000 Thornhill Road and R206	Switch 12	Option A – Green Corridor Option (Y to Z and Z to A1)	3	5	5	3	4	2	3	3	4	3	3	7	6	2	2	55
			Option D – Yellow Alternative Corridor Option	3	4	3	3	4	3	2	2	3	3	4	4	5	6	2	2
Nodes B1-D1	New bridge at the site of the Historic SLNCR Railway Bridge over Belcoo River	Switch 13	Option A – Green Corridor Option (B1 to E1 and E1 to D1)	2	4	3	2	4	2	2	2	4	3	4	6	5	3	1	47
			Option D – Yellow Alternative Corridor Option	3	5	5	1	4	4	3	3	3	3	3	3	7	6	1	2

Table 6-214 Stage 1 Preliminary Options Assessment, Combined scores - Section 4

Section 5 – Blacklion to Enniskillen (Node C1 to S1/R1)																			
Nodes	Part	Switch	Corridor Option	Climate Action Impact	Land Use & Planning Policy	Population & Human Health	Biodiversity	Soils & Geology	Hydrology & Hydrogeology	Air Quality	Noise & Vibration	Archaeology & Cultural Heritage	Landscape & Visual Quality	Agriculture	Journey Quality	Road Safety	Structures	Cost Estimated	Total
Nodes C1-F1	Marlbank Wood	Switch 14	Green Corridor Option (C1 to E1) and Cyan Corridor Option (E1 to F1)	2	4	5	3	4	2	2	2	3	2	3	6	7	2	2	49
			Orange Corridor Option (C1 to E1) and Cyan Corridor Option (E1 to F1)	2	4	5	3	4	2	2	2	3	2	3	6	7	2	2	49
			Option D – Yellow Alternative Corridor Option	3	4	3	3	4	4	3	3	4	3	2	4	5	2	2	49
Nodes G1-H1	A4 at the Belcoo Quarry	Switch 15	Option A – Green Corridor Option	3	5	6	3	4	3	3	3	5	3	2	7	6	2	1	54
			Option D – Yellow Alternative Corridor Option	3	4	2	3	4	3	2	2	3	3	4	6	6	2	2	49
Nodes I1-L1	East shore of Lough Macnean Lower	Switch 16	Option C - Cyan Corridor Option	3	4	3	2	4	3	2	2	2	3	2	7	6	1	1	45
			Yellow Alternative Corridor – Switch 16 (I1 to J1) and Green Corridor Option (J1 to L1)	3	5	5	3	4	3	2	2	4	3	4	7	6	3	2	56
Nodes H1 - M1 via K1	Mullaghdund	Switch 17	Green Corridor Option (H1 to J1 and J1 to K1 and Ki to L1) and Cyan Corridor Option (L1 to M1)	3	5	5	3	4	3	3	3	3	3	2	7	6	2	1	51
			Yellow Alternative Corridor Option H1 to K1) and Green Corridor Option (K1 to L1) and Cyan Corridor Option (L1 to M1)	3	4	3	2	4	3	2	2	3	3	2	6	6	2	2	47
Nodes M1-N1	A4 into Letterbreen	Switch 18	Option C - Cyan Corridor Option	2	4	3	3	4	2	3	3	2	3	2	6	6	2	1	46
			Option D – Yellow Alternative Corridor Option	3	4	2	3	3	3	2	2	3	3	4	5	6	2	2	47

Table 6-215 Stage 1 Preliminary Options Assessment, Combined scores - Section 5 (Switches 14 to 18)

Section 5 – Blacklion to Enniskillen (Node C1 to S1/R1)																			
Nodes	Part	Switch	Corridor Option	Climate Action Impact	Land Use & Planning Policy	Population & Human Health	Biodiversity	Soils & Geology	Hydrology & Hydrogeology	Air Quality	Noise & Vibration	Archaeology & Cultural Heritage	Landscape & Visual Quality	Agriculture	Journey Quality	Road Safety	Structures	Cost Estimated	Total
Nodes P1-Q1	Glencunny Woods to Drumrainy Bridge	Switch 19	Option C - Cyan Corridor Option (P1 to S1)	3	4	3	3	4	3	2	2	3	3	4	5	6	1	3	48
			Yellow Alternative Corridor Option(Q1 to P1) and Green Corridor Option (Q1 to R1)	2	5	4	3	3	3	2	2	4	4	3	7	6	1	1	50
			Yellow Alternative Corridor – Switch 19 (P1 to Q1) and Yellow Alternative Corridor - Switch 20 (Q1 to R1)	2	4	3	3	4	3	2	2	3	3	2	6	5	1	1	44
Nodes Q1-R1	Drumrainy Bridge to Cappog Road	Switch 20	Option A – Green Corridor Option	3	5	5	3	4	3	3	3	4	4	3	7	7	1	1	54
			Option D – Yellow Alternative Corridor Option	3	4	4	3	4	4	2	2	2	3	2	6	6	1	2	48

Table 6-216 Stage 1 Preliminary Options Assessment, Combined scores - Section 5 (Switches 19 & 20)

Following the Stage 1 Preliminary Appraisal some Corridor Options and Switches were screened out. These updates have resulted in the Stage 2 Corridor Options that will form the basis of the Stage 2 – Project Appraisal Matrix. The updates to the Corridor Options are outlined in the Figure 6-52 to Figure 6-54 and Table 6-217 to Table 6-219 below.

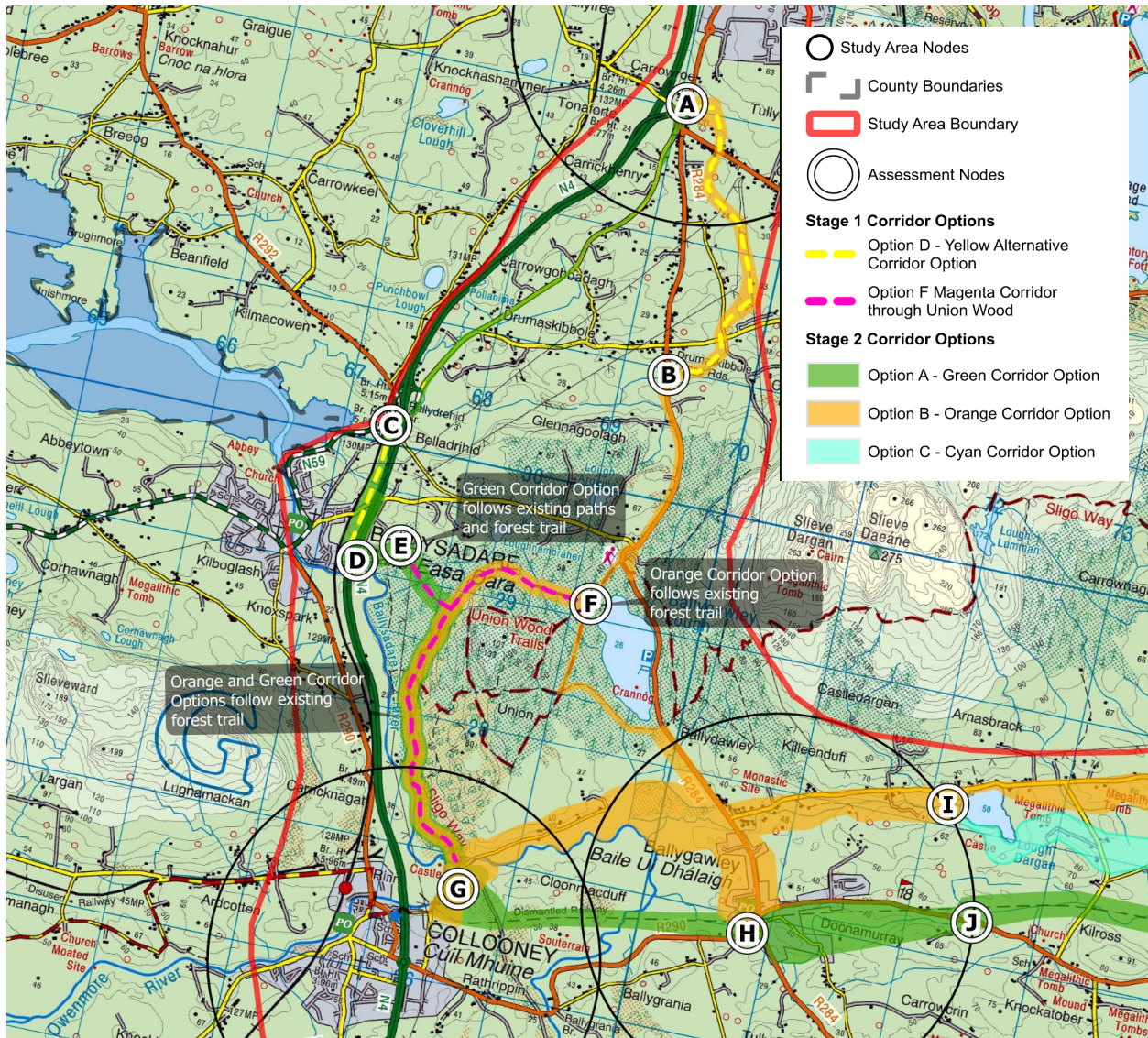


Figure 6-52 Alterations to the Stage 1 Corridor Options in County Sligo

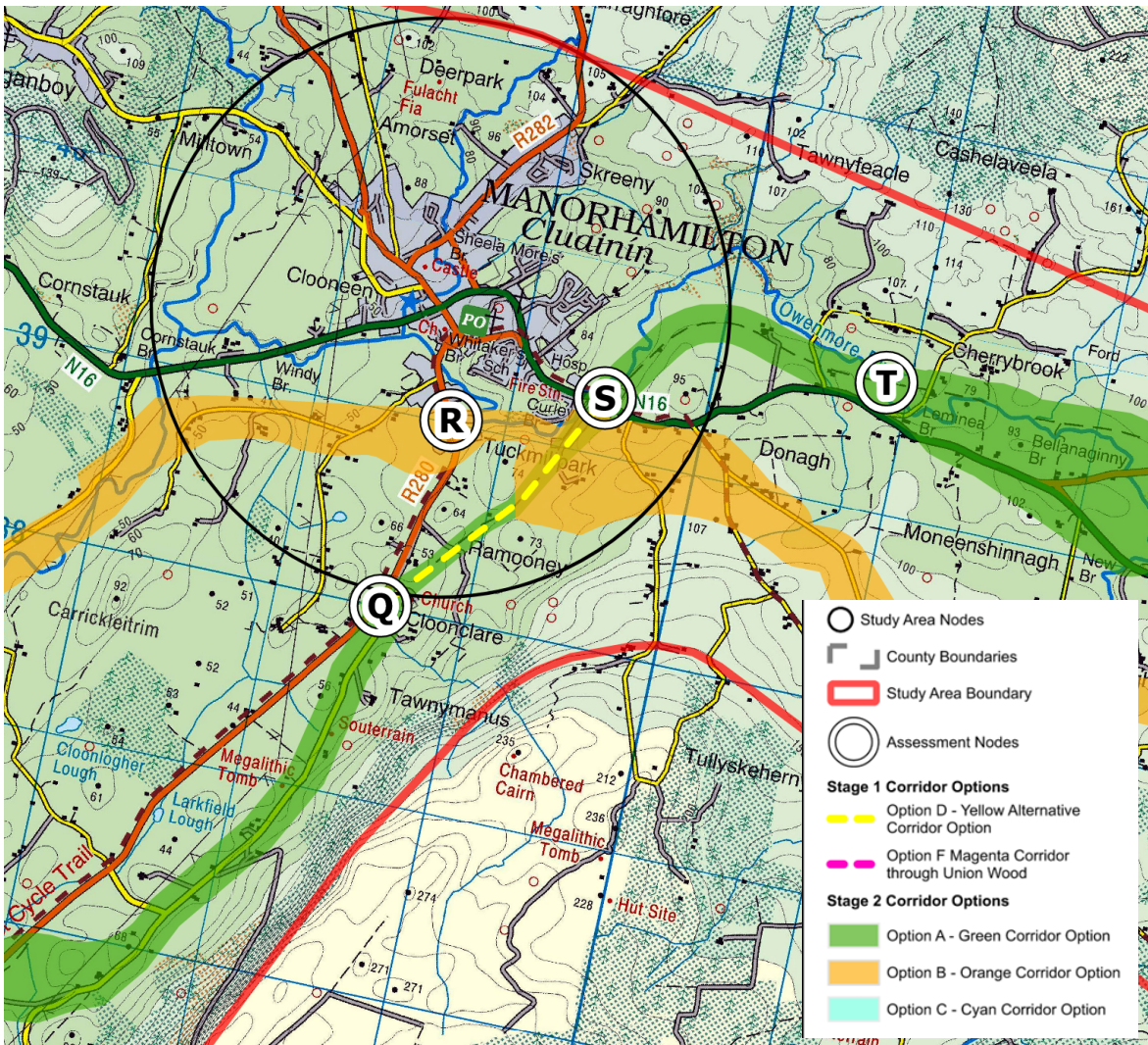


Figure 6-54 Alterations to the Stage 1 Corridor Options in County Leitrim

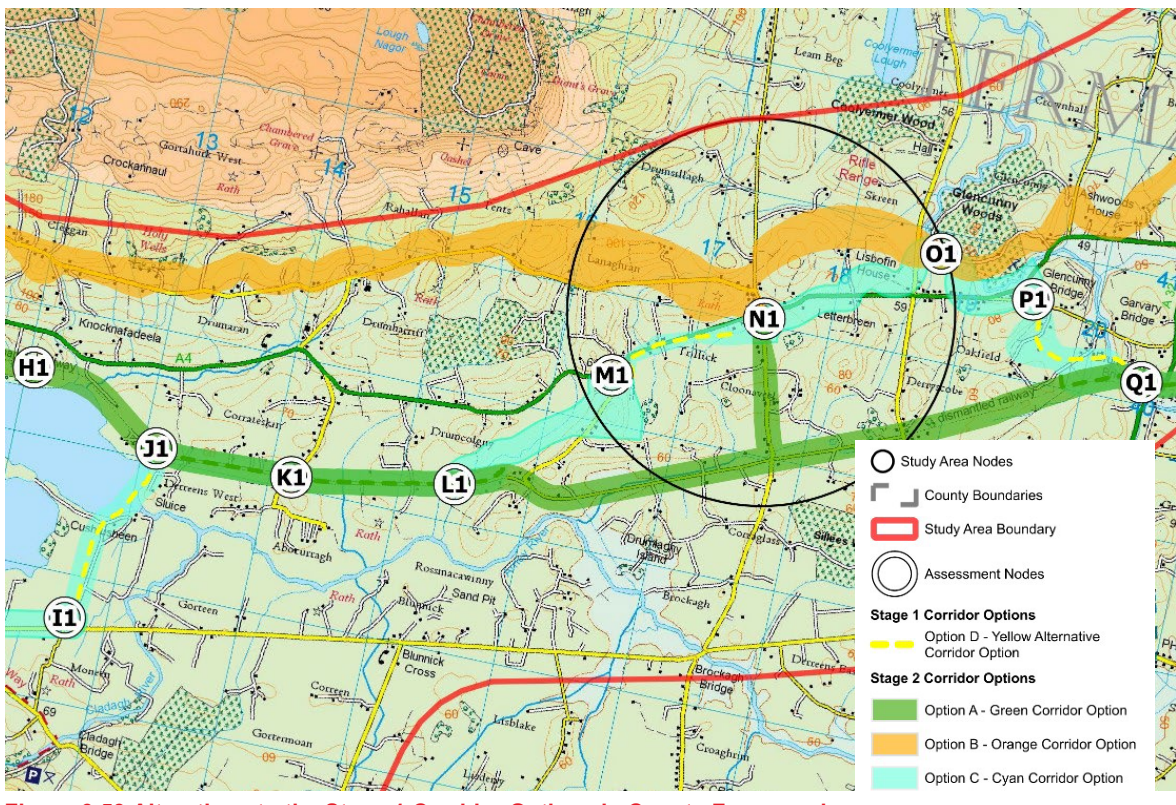


Figure 6-53 Alterations to the Stage 1 Corridor Options in County Fermanagh

The following Yellow Alternative Corridor – Switches 4, 5, 7, 9, 10, 11, 12, 14, 15, 17, 19 and 20 were screened out. In addition, Option E – Blue Corridor Access to Ballysadare (Switch 2) was screened out.

As shown in Table 6-217 and the Stage 1 Preliminary Appraisal resulted in the following alterations being made to the Green Corridor Option:

Nodes	Description of Change
C to D	Yellow Alternative Corridor – Switch 21 replaces the Stage 1 Green Corridor Option between Nodes C to D (Figure 6-52)
D to E	Between Nodes D to E the Green Corridor Option has been retained
E to G	Magenta Corridor through Union Wood - Switch 3 replaces the Stage 1 Green Corridor Options between Nodes E to G (Figure 6-52)
Q to S	Yellow Alternative Corridor – Switch 8 replaces the Stage 1 Green Corridor Options between Nodes Q to S (Figure 6-54)
B1 to D1	Yellow Alternative Corridor – Switch 13 replaces the Stage 1 Green Corridor Options between Nodes B1 to D1, within Blacklion, between Nodes B1 to E1 the Green Corridor Option has been extended to include the existing offline Blacklion Village Trail (Cathal Bui Trail)

Table 6-217 Outcomes of Stage 1 Preliminary Assessment, Green Corridor Option

As shown in Table 6-218 the Stage 1 Preliminary Appraisal resulted in the following alterations being made to the Orange Corridor Option:

Nodes	Description of Change
A to B	Yellow Alternative Corridor – Switch 1 replaces the Stage 1 Orange Corridor Options between Nodes A to B (Figure 6-52)
F to G	Magenta Corridor through Union Wood - Switch 3 replaces the Stage 1 Orange Corridor Options between Nodes F to G (Figure 6-52)
G to H	Between Nodes G to H the area within the Orange Corridor Option has been reduced
B1 to E1	Within Blacklion, between Nodes B1 to E1 the Orange Corridor Option has been extended to include the existing offline Blacklion Village Trail (Cathal Bui Trail)

Table 6-218 Outcomes of Stage 1 Preliminary Assessment, Orange Corridor Option

As shown in Table 6-219 the Stage 1 Preliminary Appraisal resulted in the following alterations being made to the Cyan Corridor Option:

Nodes	Description of Change
G to H	Between Nodes G to H the area within the Cyan Corridor Option has been reduced
I1 to L1	Yellow Alternative Corridor – Switch 16 (Nodes I1 to J1) and the Green Corridor Option (Nodes J1 to L1) replaces the Stage 1 Cyan Corridor Options between Nodes I1 to L1 (Figure 6-53)
M1 to N1	Yellow Alternative Corridor – Switch 18 replaces the Stage 1 Cyan Corridor Options between Nodes M1 to N1
P1 to S1	Yellow Alternative Corridor – Switch 19 (Nodes P1 to Q1) and the Green Corridor Option (Nodes Q1 to R1) replaces the

Nodes	Description of Change
	Stage 1 Cyan Corridor Options between Nodes P1 to S1 (Figure 6-53)

Table 6-219 Outcomes of Stage 1 Preliminary Assessment, Cyan Corridor Option

A full description of the revised Corridor Options is provided in Section 7.

In Section 4 it should be noted that while Yellow Alternative Corridor – Switch 14 received the same combined score as the Orange Corridor Option (Nodes C1 to E1) + Cyan Corridor Option (E1 to F1) it has been deemed less preferable following a review of both Options against the Overall Project Objectives, particularly Economic Impacts, Accessibility Impacts, Social Impacts and Land Use Impacts. BackCover