

# N52 TULLAMORE TO KILBEGGAN LINK

## Option Selection Report

### Volume F – Environmental Appendices Appendix F3 – Material Assets (Non-Agricultural)

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# 1 INTRODUCTION

This report outlines the comparative assessment of options in relation to non-agricultural properties for the seven options for the N52 Tullamore to Kilbeggan Link Scheme.

This assessment will form part of a Phase 2 – Option Selection Report which is a deliverable under Phase 2 – Options Selection of the TII PMG 2019, and has been undertaken with regard to the TII “*Project Appraisal Guidelines for National Roads Unit 7.0 - Multi Criteria Analysis*” (PAG) (2016) (the “TII MCA Guidelines” hereafter). The purpose of the Option Selection Report is to present the project constraints and the assessments that were undertaken in order to identify the Preferred Option for the project.

This report assesses the impact of each option shortlisted for Stage 2 from a material assets non-agricultural properties and built services perspective. Specifically, this report evaluates the potential impacts associated with each of the options under consideration on non-agricultural properties and types of land classed as commercial, recreational, open space, and minerals, which are not of an agricultural nature.

It is a requirement of the EIA Directive 2011/92/EU as amended by Directive 2014/52/EU (together “the EIA Directive”) to carry out an assessment of potential impacts on Material Assets. The EPA Draft Guidelines on the Information to be Contained in Environmental Impact Assessment Reports (2017) (the “EPA Draft EIAR Guidelines” hereafter) provides some guidance on the relevant matters with regard to the scope of assessment for Material Assets, noting the relevant topics as follows; Built Services, Roads and Traffic, and Waste Management. And so, for completeness and in preparation for EIA, a high level review of built services present in proximity of each route option have also been noted in this assessment.

The impacts for each of the options on non-agricultural properties and land, and built services, are identified so that those with unacceptably high levels of impact can be avoided to the extent feasible as part of the overall option assessment process.

## 1.1 Guidance

This analysis was undertaken by means of a desktop assessment based on the following guidance and information sources:

- Transport Infrastructure Ireland “*Project Appraisal Guidelines for National Roads Unit 7.0 - Multi Criteria Analysis*” (2016);
- EPA Maps Tool (2021) - <https://gis.epa.ie/EPAMaps/>;
- Aerial photography (Google Maps and Google Earth);
- Ordnance Survey Ireland (OSi) Mapping;
- CORINE Land Cover 2018 Mapping;
- An Post GeoDirectory Data;
- The EPA Draft Guidelines on the Information to be Contained in Environmental Impact Assessment Reports (2017);
- EIA Directive 2011/92/EU as amended by Directive 2014/52/EU; and
- Utility Providers (ESB, Gas Networks Ireland (GNI) and Irish Water).

The primary aspects of the assessment relate to existing non-agricultural properties and lands, and built services (utilities), and the proximity of sensitive locations to each option.

## 1.2 Project Appraisal Guidelines Requirements

The TII “*Project Appraisal Guidelines for National Roads Unit 7.0 - Multi Criteria Analysis*” (PAG) (2016) (the “TII MCA Guidelines” hereafter) states that for a Stage 2 appraisal of Non-Agricultural Properties, the following should be considered in the route corridor selection:

*“All affected properties and types of land classed as commercial, recreational, open space, minerals and public facilities (hospitals, schools, and religious institutions) which are not of an agricultural nature are considered under the heading of Non-Agricultural Properties. The impact assessment criteria adopted in the*

MCA are adapted from the EPA Guidelines on Information to be contained within Environmental Impact Statements (March 2002)”.

Residential property and public facilities, including hospitals, schools, sports facilities and places of worship are addressed in **Appendix F1** on Population and Human Health. This report predominately relates to commercial and minerals assets within the area and for completeness (for future EIA) utilities are also included.

### 1.3 Assessment Criteria

The Stage 2 Appraisal Process was carried out using the full range of sub criteria recommended in PAG unit 7.0, and with regard to the objectives of the scheme, so as to take account of all the predicted impacts of each option or alternative. In many cases there is a strong overlap between the objectives of the scheme and one or more of the PAG sub criteria.

All appraisal criteria use a standard scale. Each impact is scored on a scale of 1 (major or highly negative impact) to 7 (major or highly positive impact). A score of 4 represents a neutral or not significant impact. Each impact is scored as per the system presented in **Table 1-1**.

**Table 1-1: Project Appraisal Guidelines Scoring**

Score	PAG Score
7	Major or highly positive
6	Moderately positive
5	Minor or slightly positive
4	Not significant or neutral
3	Minor or slightly negative
2	Moderately negative
1	Major or highly negative

All scores refer to impacts measured relative to the Do-Minimum. The Do-Minimum consists of doing nothing further to improve the N52 route. The Do-Minimum would therefore by definition be scored as Neutral (relative to itself) under all sub criteria.

PAG 7.0 notes that simply adding up the scores of the different sub-criteria gives an indication of the overall performance of each option under a given criterion, but this is not to be used in a mechanistic way as a decision process. The performance of each option in meeting the scheme objectives was then considered to be one of the criteria presented in **Table 1-2**.

**Table 1-2: Qualitative Scoring**

Score	PAG Score
Preferred	The choice which most fully meets the project objectives.
Good	Where project objectives are met notably better than with the intermediate choices but notably not as well as with the best choice.
Intermediate	Where project objectives are met considerably less well than with the best choice but considerably better than with the worst choice.
Poor	Where project objectives are met notably less well than with the intermediate choices but notably not as well as with the best option.
Least Preferred	The choice which does least to achieve the project objectives.

Having regard to the full range of impacts assessed in each case. This is a high level of ranking of the options or alternatives. The scoring process allows for options or alternatives to be identified as being “Good”, falling between “Intermediate” and “Preferred”, or as “Poor”, falling between “Least Preferred” and “Intermediate”.

For some options there will be very little between their impact scores and some may even have the same impact scores. In such circumstances, the author has applied expert judgement and evaluated each option comparatively against the other options, taking into account the quantitative and qualitative assessments. This has allowed the author to determine a preference for each option. In some instances, similar options may have the same preference.

## 2 EXISTING ENVIRONMENT

### 2.1 Baseline

The existing N52 Tullamore to Kilbeggan Link forms part of the N52 National Secondary Route from Ardee in Co. Louth to Nenagh in Co. Tipperary. The existing road is a single carriageway, passing through the village of Durrow. The N52 is one of the country's most important National Secondary Routes. It is a cross-country route of particular importance especially for commercial traffic as it links the north east and south west of the country.

Apart from north Tullamore Town and Kilbeggan South, the scheme study area and the wider environment encompasses a rural area and as such the principal land use in the area is agriculture, with single one off and detached housing and buildings dispersed throughout the area, with some groupings of properties present along the local road network.

The study area contains a road network comprising the existing N52 connecting Tullamore and Kilbeggan, together with a number of regional and local roads including; the R443, R421, R389, L2003, L2006, L2005, L1025, L1024, L5202. The M6 Motorway traverses the northern section of the study area (running east-west), just south of Kilbeggan. No rail infrastructure traverses the study area or proposed route options; the closest rail line identified is the intercity (Dublin to Galway) line which passes through the south and west of Tullamore.

Various non-agricultural properties and land, and built service, constraints have been identified within the scheme study area. Their interaction with the proposed route options is discussed in the following sections.

### 2.2 Study Area and Options

#### 2.2.1 'Do-Something' Options

This Options Assessment for the N52 Tullamore to Kilbeggan Link Road Scheme assesses the six 'Do-Something' options taken forward to Stage 2, with particular reference to non-agricultural properties and land (public services, recreational, mineral/extractive industries, forestry, etc.).

As mentioned, other than the more urban environment of the towns of Tullamore and Kilbeggan, the scheme study area and the wider environment encompasses mainly rural and agricultural lands.

For the purposes of this assessment, a conservative buffer of a 300m Zone of Influence (Zoi) has been used to assess the level of non-agricultural commercial properties and built services (utilities) present in the vicinity of the six each route options proposed.

Each of the six route options brought forward for Stage 2 assessment are described below:

- Proposed Option 1 (8.54km) follows existing N52 closely in horizontal and vertical alignment. The proposed cross section is wider than the existing carriageway in sections and will involve land take along the edges of the road. Multiple existing field accesses along N52 will be joined by parallel collector roads or diverted to the local roads minimizing field access points to the new carriageway.
- Proposed Option 2 (8.17km) follows the existing N52 closely in horizontal and vertical alignment from the Tullamore Bypass roundabout until chainage 2050. At chainage 2050 it diverges east from the existing N52 and joins back to the existing alignment at chainage 6400. The 4350m new offline road allows for elimination of substandard junctions at Four Roads and Durrow Village. The Option 2 will cross Derrygolan Esker at chainage 5050 to 5200. Option 2 contains the shortest offline section, trying to utilise as much as possible of the existing road. Option 2 skirts to the left of the national monument of Meeneglish avoiding direct impact on the monument at chainage 5700. Four crossings of waterbodies will be required on Option 2 at chainages: 2150, 3850, 5900 and 7000.
- Proposed Option 3 (7.90km) diverges east from the existing N52 at chainage 600. It crosses Molloy's Quarry at chainage 1250-1600 and the source protection area at chainage 1000-2100. Three road crossings are proposed along the Option 3: at chainage 2240 with L2003, at chainage 3120 with L2005 and at chainage 4790 with L2006. Three crossing of waterbodies will be required on the Option 3 at chainages: 2150, 5780 and 6800. Option 3 joins the existing N52 alignment at chainage 7000 following to the M6 junction.

- Proposed Option 4 (8.09km) is an eastern option and diverges east from existing N52 at chainage 250. It crosses Molloy's Quarry at chainage 1750-1950 and the source water protection area at chainage 1000-2400. Two road crossings are proposed along Option 4: at chainage 3200 with L2005 and at chainage 4900 with L2006. Option 4 avoids crossing Derrygolan Esker passing it on the east at chainage 4900. It then goes north west passing west of Pallas forest at chainage 6000. Two crossings of waterbodies will be required on Option 4 at chainages: 2730 and 7050. Option 4 joins the existing N52 alignment at chainage 7850 and follows to the M6 interchange.
- Proposed Option 5 (8.05km) diverges east from the existing N52 at chainage 2300 making use of an already upgraded alignment of N52 up to this point. The proposed alignment east of the existing N52 replaces two substandard junctions at Four Roads and Durrow Village and substandard horizontal and vertical alignment of N52 at the middle section. Two road crossings are proposed at Option 5: at chainage 3480 with L2005 and at chainage 4990 with L2006. Option 5 crosses Derrygolan Esker at chainage 4900-5000. Two crossings of waterbodies will be required on Option 5 at chainages: 2150 and 7050. Option 5 joins the existing N52 alignment at chainage 7850 and follows to the M6 interchange.
- Proposed Option 2-3 (8.10km) was developed during the course of the scheme development and appraisal as a combination of Options 2 and 3 above. This option combines the southern part of Option 2 with the northern part of Option 3 and has been developed as a means of further minimising impact on the Ballybought Castle site identified for Option 2.

## 2.2.2 Management Option

As a result of the TII review process (July 2021), an additional 'Management Option' has been put forward for consideration/assessment within the Stage 2 Options Assessment Phase. The proposed 'Management Option' follows the existing N52 Tullamore to Kilbeggan alignment (8.54km) and would involve upgrading a number of sections, mainly along the centre of the existing scheme. This would result in a single carriageway in each direction with roundabouts at junctions, including the following elements:

- Three roundabout junctions proposed; at R42-N52 junction, at Four Roads Cross / L2005, and Durrow Village / Balleek Beg;
- Priority junctions at L2003-N52 Junction north of existing Silver River Bridge and at the L2006-N52 junction north of Durrow Village / Balleek Beg;
- Carriageway to be upgraded to Type 1 Single Carriageway Cross Section (circa chainage 2500);
- Proposed *cul de sac* at L2005-N52 Junction; and
- Carriageway to be upgraded to Type 1 Single Carriageway Cross Section with localised green verge narrowing between proposed cul de sac at L2005-N52 Junction and Durrow Village / Balleek Beg.

Regarding the context of this additional option, this is a Management Option as opposed to a Do-Minimum option. This option sits between a Do-Minimum and the Do-Something options proposed. This Management Option considers a short to medium term solution that may be able to achieve some of the objectives of the scheme.

In comparison to Option 1 (Brown), while the Management Option will follow the same centre line (i.e. the existing N52 Tullamore to Kilbeggan alignment), it is proposed as a single carriageway (Type 1 single) rather than a dual-carriageway as per the other Do-Something options. This option provides at-grade roundabouts at the key junctions, rather than grade separated junctions. However, this Management Option does not address the significant private accesses onto the N52 while Option 1 (Brown) requires a significant number of parallel roads to accommodate private accesses.

The southern and northern sections will require only minimal intervention as these have been recently upgraded, and it is essentially the middle section of the route that requires the most intervention (from the R421 junction to a point approx. halfway between the L2006 High Road and the M6 interchange). Across this section there is still likely to be hedge line loss to accommodate the wider carriageway (on both sides), although the extent of this loss will be considerably lower than Option 1.

In terms of impacts on Durrow Demesne, while Option 1 will potentially directly impact on the boundary at Durrow Demesne with tree and hedge line loss and the design can try to reduce the impacts on the wall, there is potential that there would be direct impact to the boundary wall with Option 1. This tree and hedge line loss impact would be more limited for the Management Option with less road widening and no impact on the boundary walls.



## 3 OPTION SELECTION

### 3.1 Methodology

The assessment of Non-Agricultural Material Assets has been assessed in accordance with the TII MCA Guidelines (2016), assessing affected properties and types of land which are not of an agricultural nature classed as:

- Commercial (addressed in Section 3.2 Properties);
- Recreational (addressed in Section 3.3 Forestry);
- Open Space (addressed in Section 3.3 Forestry); and
- Minerals (addressed in Section 3.4 Minerals (extractive industry)).

Built services (utilities - electricity, gas, and water) are addressed in Section 3.7 Built Services (Utilities). As previously mentioned, residential property and public facilities, including hospitals, schools, sports facilities, and places of worship are addressed in **Appendix F1** Population and Human Health.

The assessment has been undertaken with reference to non-agricultural commercial properties, and built services within the study area. The scope of the evaluation is based on information collected through a detailed desk-top review of online and published resources, guidance documents, legislation, mapping and aerial photography. As mentioned, a conservative buffer of 300m Zone of Influence (Zoi) has been used to assess the number of non-agricultural commercial properties and built services (utilities) present in the vicinity of each route.

### 3.2 Properties

Various non-agricultural commercial property receptors are present along the existing N52 and the local roads which intersect with the N52 between Tullamore and Kilbeggan, and the wider scheme study area.

A number of commercial properties have been identified within the study area. The GeoDirectory data categorises properties into residential, commercial, both or unknown.

Properties with a commercial element are identified either as 'commercial', i.e. solely commercial in nature, or as 'both', which indicates that the property is both residential and commercial in nature; in rural areas, properties with the status of 'both' generally tend to refer to farms, agricultural businesses or similar.

A number of properties were identified as 'unknown' status; the nature of the property type as provided by GeoDirectory is unknown. Residential properties can be more impacted by road upgrades than commercial properties. Property status is identified 'residential', refers to properties that are solely residential in nature.

For the purposes of the option selection assessment, 'residential' and 'both' categories have been considered together to represent the various numbers of residential properties within the population and human health assessment under **Appendix F1** Population and Human Health. The 'unknown' properties have been included for the purposes of this assessment, as they appear to be disused residential and farm properties.

As referred to in Section 2.2, an additional option, the Management Option, has been considered as part of the TII review process. As such, a count of properties within 300m of each of the seven route options proposed is summarised in Table 3-1.

**Table 3-1: Study Area Commercial Property Breakdown**

Route Option	Type	0-50m	50-100m	100-200m	200-300m	Total
<b>Management Option</b>	Commercial	4	3	2	0	<b>12</b>
	Unknown	1	0	1	1	
	<b>Total</b>	<b>5</b>	<b>3</b>	<b>3</b>	<b>1</b>	
<b>Option 1 (Brown)</b>	Commercial	4	1	4	0	<b>11</b>
	Unknown	0	0	1	1	
	<b>Total</b>	<b>4</b>	<b>1</b>	<b>5</b>	<b>1</b>	
<b>Option 2 (Purple)</b>	Commercial	2	1	1	2	<b>8</b>
	Unknown	0	0	1	1	
	<b>Total</b>	<b>2</b>	<b>1</b>	<b>2</b>	<b>3</b>	
<b>Option 3 (Orange)</b>	Commercial	1	0	0	0	<b>3</b>
	Unknown	0	0	1	1	
	<b>Total</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>1</b>	
<b>Option 4 (Blue)</b>	Commercial	1	0	1	1	<b>4</b>
	Unknown	0	0	1	1	
	<b>Total</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>2</b>	
<b>Option 5 (Green)</b>	Commercial	1	0	0	1	<b>4</b>
	Unknown	0	0	1	1	
	<b>Total</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>2</b>	
<b>Option 2-3</b>	Commercial	2	1	1	0	<b>5</b>
	Unknown	0	0	1	1	
	<b>Total</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>1</b>	

In terms of commercial properties, the proposed Management Option and Option 1 (Brown) have the highest number of properties located within 300m (12 and 11 respectively), with 4 and 5 of these situated within 50m of each of the options respectively.

Options 2 (Purple) and the proposed combined option 2-3 both have two properties within 50m, and each have 8 and 5 properties within 300m respectively.

Option 3 (Orange), 4 (Blue), and 5 (Green) all have one property present within 50m of each route, and a similar level of properties within 300m of each route at 3, 4, and 4 properties respectively.

None of the properties noted as ‘unknown’ status by GeoDirectory are present within 50m of a route alignment. Each route option has two unknown properties present within the 100-300m buffer of their alignments.

Although both follow the existing N52 alignment, the proposed Management Option and Option 1 have the potential to impact property access during any works to take place along the existing alignment. All new route options have the potential to impact local access to properties and routes along the local road network and where these routes intersect and/or pass local lanes and accesses. Options 2 (Purple), 3 (Orange), 4 (Blue), 5 (Green), and Combination Option 2-3, all cross the L2005 and L2006, and also intersect with or pass a number of local lanes/accesses at different points. Options 2 (Purple), 3 (Orange), 5 (Green), and Combination Option 2-3, also intersect with the L2003; Option 3 traverses the L2003 at Acantha, and Options 2, 5 and 2-3 pass the L2003 at its junction with the N52 where they follow the existing N52 alignment. Access via these the local roads will be impacted by all options proposed. All route options propose to incorporate pedestrian and cycle facilities where pedestrian/cycle traffic is expected.

### 3.3 Forestry (Recreational and Open Space)

Areas of commercial forestry are located on both sides of the existing N52 at White Forge, Ballycallaghan and Rostella. The majority of the areas of forestry identified are located to the west of the existing N52

Blocks of forestry do not absorb the effects of a new road well and land take and/or severance can affect the viability of the block, both through wind blow and the ability to harvest small triangulated portions. However, none of the options proposed will traverse these areas. Option 4 (Blue) will pass close to the south-western edge of the forested area at Rostella/Pallas.

### 3.4 Minerals (Extractive Industry)

There are a number of larger extractive industry operations (quarries, gravel pits, etc.) located to the south of the study area, situated north of Tullamore Town (GSI and EPA, 2020). A currently dormant extractive industry site identified in the north Tullamore area (Molloy’s Quarry) is situated to the east of the existing N52 route (i.e. Management Option and Option 1).

Options 3 (Orange) and 4 (Blue) will traverse and sever this site. Options 1 (Brown), 2 (Purple), 5 (Green), and Option 2-3, avoid this quarry and will not or require land take or severance of the site. This site has the potential to act as a direct source of aggregate material for use in the project and this may offer a co-beneficial opportunity for the project.

Minerals and soils are assessed in further detail in the context of soils and geology in **Appendix F8 Soils and Geology**.

### 3.5 Built Services (Utilities)

Electricity infrastructure is present within the study area. A 38kV Medium Voltage (MV) overhead power line (OHL) was identified in the south of the study area and all route options traverse this line. An existing 110kV overhead electricity transmission line traverses the south east section of the study area to the north east of Tullamore Town connecting to the 38kV MV line; no options interact with this line.

Gas Networks Ireland (GNI) medium pressure distribution pipes are present in north Tullamore Town, within the southern section of the study area. A section of this pipeline, runs adjacent to the R420 and traverses the N52 Ardan Roundabout, where all proposed route options commence

A number of water mains are present within the study area, generally running adjacent to the road network and residential estates. A higher level of water mains infrastructure is present along the road network to the west of the existing N52 and north Tullamore Town (southern section of study area and west of N52), including along the L2005 and L2006, Ardan Lane, the R421, and Eisclair Meadows; no Stage 2 option passes along the west side of the N52. Water mains are present along stretches of the existing N52 alignment, and within the eastern section of the study area, along sections of the L2006 (at Durrow), the L5202 (at Ballybroder/Cappalahy), and the L2005 (at Ballynamona/Carton East), and the L1024 (Tinnycross Road). Some water mains are also present in southern area of Kilbeggan (northern section of the study area), including a main adjacent to the R389, and crossing the M6, and traverses the north section of the study area adjacent to the road network of the residential area of Hallsfarm and Kilbeggan South.

- **Electricity (ESB):**

- None of the options interact with the existing 110kV overhead electricity transmission line that traverses the south east section of the study area to the north east of Tullamore Town connecting to the 38kV MV line.
- **Options 2 (Purple), 3 (Orange), 4 (Blue), 5 (Green), and Option 2-3**, will all likely intersect with the paths of any existing Low Voltage (LV) electricity infrastructure situated along the local road network they intersect. This would be the same in terms of any telecoms lines and poles along the road network.

- **Gas (GNI):**

- None of the options proposed traverse GNI network infrastructure at any other location, and no high or low pressure gas pipelines were identified within the study area.

- **Water (Irish Water):**

- Of all options proposed, the alignment of the Management Option and **Option 1 (Brown)** cross the highest level of water main lines at four crossings. However, as these are online options, the impact of the crossings will be minimised by the existing protection measures that will be extended or replaced.

- **Options 2 (Purple)** and **5 (Green)** will interact with water mains where each follows the existing N52 alignment north out of Tullamore (Acontha/Gormagh area).
- **Option 2 (Purple)** also traverses watermain infrastructure identified along the L2006 at Durrow/Balleek Beg.
- **Option 5 (Green)** also traverses the L2006 at Durrow/Balleek Beg, east of **Options 2 (Purple)** and **3 (Orange)**, however, watermains present on the L2006 do not appear to extend to where this option crosses.
- **Option 3 (Orange)** appears to avoid interaction with watermain infrastructure; watermains present on the L2006 also do not appear to extend to where **Option 3** crosses.
- **Option 4 (Blue)** will traverse watermain infrastructure where it crosses the L2005 at Ballynamona.
- **Combination Option 2-3** will interact with any utilities identified where it follows the Option 2 and Option 3, including the watermain infrastructure identified along the L2006 at Durrow/Balleek Beg.
- No proposed option will interact with watermains identified in southern area of Kilbeggan (northern section of the study area).

Wells and water sources are addressed in **Appendix F9** Water (Hydrology and Hydrogeology).

## 4 OPTION SUMMARY

**Table 4-1** provides an overview of the impact scores for each receptor type by each route option based on the property counts and review of information, mapping and supplementary qualitative analysis. The impacts of the alternative options have been assessed with particular reference to commercial, mineral, other assets and non-agricultural land use. Table 4-1 illustrates that there is no significant difference between the options for commercial property, forestry or built services. The mineral sector is the key determinant for the route options under consideration.

**Table 4-1: Impact Score Matrix – Review of Impacts for Each Receptor Type**

Option	Properties	Forestry (Recreation and Open Space)	Minerals (Extractive Industry)	Built Services	Overall
Management Option	4	4	4	5	4.25
Option 1 (Brown)	3	4	4	4	3.75
Option 2 (Purple)	3	4	4	3	3.5
Option 3 (Orange)	3	4	3	3	3.25
Option 4 (Blue)	3	4	3	3	3.25
Option 5 (Green)	3	4	4	3	3.5
Option 2-3	3	4	4	3	3.5

**Table 4-2** provides a summary of the impact score matrix for each of the seven options assessed in Stage 2 in terms of Material Assets.

The proposed Management Option would result in the least number of impacts on Material Assets, when compared to the other route options proposed, due to the limited requirement for third party property severance or land take. This option does not propose widening of the road and the route would remain as a single carriageway, with upgrades and management including, three new roundabout junctions, a single carriageway, and junction upgrades at certain sections. In this regard the Management Option is classed as having a “neutral” impact and is considered the “preferred” option.

Like the Management Option, Option 1 (Brown) would result in limited impacts on the existing material assets identified within the study area. With this option there would be limited requirement for property severance but some land take will be required along the existing alignment to allow for the road widening. In this regard Option 1 is classed as having a “neutral” impact and is considered the “preferred” option.

Options 3 and 4 will sever the existing mineral extraction operation located to the north of Tullamore and hence have the greatest potential for material asset impact. These options are assigned an impact score of 2 (“moderately negative”) and are classed as “poor” for material assets.

The remaining options, 2 (Purple) and 5 (Green), and Combination Option 2-3, have been assigned an impact level of “minor or slightly negative impact” are classed as “intermediate”.

**Table 4-2: Non-Agricultural Material Assets Impact Score Matrix**

Option	Potential for Impact	Impact Level	Impact Score	Preference
Management Option	<ul style="list-style-type: none"> <li>Limited level of construction required compared to other options;</li> <li>4 properties located within 50m of the existing N52;</li> <li>11 properties located within 300m of the existing N52 alignment;</li> <li>Follows existing alignment – Limited impact on non-agricultural commercial properties or limited to no land take required in places;</li> <li>No severance of existing mineral extraction sites; and</li> <li>Limited impact on existing utilities.</li> </ul>	Not significant or Neutral	4	Preferred
Option 1	<ul style="list-style-type: none"> <li>4 properties located within 50m of the existing N52 remain impacted under the proposed alignment;</li> <li>11 properties located within 300m of this alignment &amp; existing N52;</li> <li>Follows existing alignment – Limited impact on non-agricultural commercial properties or land take required;</li> <li>No severance of existing mineral extraction sites; and</li> <li>Limited impact on existing utilities.</li> </ul>	Not significant or Neutral	4	Preferred
Option 2	<ul style="list-style-type: none"> <li>2 properties located within 50m of route alignment;</li> <li>8 properties located within 300m of route alignment;</li> <li>Will intersect with utilities where present along route</li> <li>Follows existing alignment of N52 where crosses paths with ESB OHL i.e. existing crossing;</li> <li>No severance of existing extractive industry site identified.</li> </ul>	Minor or slightly Negative	3	Intermediate
Option 3	<ul style="list-style-type: none"> <li>1 properties located within 50m of route alignment;</li> <li>4 properties located within 300m of route alignment;</li> <li>Traverses existing mineral extraction site;</li> <li>Will intersect with utilities where present along route;</li> <li>Intersects with ESB OHL i.e. new crossing required.</li> </ul>	Moderately Negative	2	Poor
Option 4	<ul style="list-style-type: none"> <li>1 properties located within 50m of route alignment;</li> <li>4 properties located within 300m of route alignment;</li> <li>Traverses existing mineral (extractive industry) site;</li> <li>Will intersect with utilities where present along route;</li> <li>Intersects with ESB OHL i.e. new crossing required.</li> </ul>	Moderately Negative	2	Poor
Option 5	<ul style="list-style-type: none"> <li>1 properties located within 50m of route alignment;</li> <li>4 properties located within 300m of route alignment;</li> <li>No severance of existing mineral (extractive industry) site;</li> </ul>	Minor or slightly negative	3	Intermediate

Option	Potential for Impact	Impact Level	Impact Score	Preference
	<ul style="list-style-type: none"> <li>• Will intersect with some utilities where present along route;</li> <li>• Follows existing alignment of N52 where crosses paths with ESB OHL i.e. existing crossing.</li> </ul>			
Option 2-3	<ul style="list-style-type: none"> <li>• 2 properties located within 50m of route alignment;</li> <li>• 5 properties located within 300m of route alignment;</li> <li>• Will intersect with utilities where present along route;</li> <li>• Follows existing alignment of N52 where crosses paths with ESB OHL i.e. existing crossing;</li> <li>• No severance of existing extractive industry site.</li> </ul>	Minor or slightly negative	3	Intermediate