

| DART+ Depot - MCA Stage 2 | | | | | | | | |
|---------------------------|--|---|--|---|---|------------------------------|--|---|
| Parameter | Criteria | Sub-Criteria (Quantitative/ Qualitative) | Option 30 Maynooth West | Rating | Option 33 Kilcock West | Rating | | |
| 1 | Transport User Benefits and Other Economic Impacts | Alignment with Customer Requirements Specification | Empty Running, Connection to Mainline, Configuration | 4 – Neutral Impact | 4 | 3 – Slightly Negative Impact | 3 | |
| | | | | Empty running (Distance and travel time to the city centre) | Distance to the city centre - 29 kms | 3 | Distance to the city centre - 34 kms | 2 |
| | | | | Impact on white space Normal white space used as baseline 1:00 to 5:00 (4 hours per night) | White Space in Maynooth St - Clonsilla line is reduced 15' (reducing from 4 hours to 3:45) No impact on M3 Parkway - Clonsilla white space No impact on Clonsilla - City Centre white space | 5 | White space in Kilcock-Maynooth section is reduced by 30' (from 4 hours to 3:30) White Space in Maynooth-Clonsilla section is reduced by 15' (reducing from 4 hours to 3:45) No impact on M3 Parkway-Clonsilla white space No impact on Clonsilla - City Centre white space | 4 |
| | | | | Mainline impacts (rail access, new turnbacks/crossovers requirements, operational constraints - less flexibility) | Solution provides two turn-back tracks in the Depot entrance | 4 | Solution provides two turn-back tracks in the Depot entrances | 4 |
| | Transport Costs and Operational Characteristics | Capital Cost Estimates, OPEX Cost Estimates, Release of DMUs to other lines, Demand | Capital Cost Estimates, OPEX Cost Estimates, Release of DMUs to other lines, Demand | 5 – Slightly Positive Impact | 5 | 3 – Slightly Negative Impact | 3 | |
| | | | | Capital Cost Estimates | Estimated Capital Cost = 100 % | 3 | Estimated Capital Cost = 115 % | 3 |
| | | | | OPEX Cost Estimates | Estimated Operational Cost = 100% | 3 | Estimated Operational Cost = 113% | 2 |
| | | | | Release of DMUs to other lines, Demand | 30% increased landtake associated with this option Twin ended depot configuration required Located on Maynooth Line, (Higher latent passenger demand than SW and Coastal, more DMUs released to other lines) | 4 | 7.67km extension of electrification and twin track to depot site Located on Maynooth Line, (Higher latent passenger demand than SW and Coastal, more DMUs released to other lines) | 4 |
| | Change of Land Value | Positive or Negative impacts on Land Value consequent the depot delivery enabling the introduction of the DART+ service | Change in Land Value | 7 – Highly positive Impact | 7 | 7 – Highly positive Impact | 7 | |
| | | | | The introduction of the DART+ service will lead to an increase in property values proximal to the railway. This impact is across the whole of the DART+ Network and arises from the delivery of a depot. The outcome is independent of site location. The positive impact rating is common for all options. | The introduction of the DART+ service will lead to an increase in property values proximal to the railway. This impact is across the whole of the DART+ Network and arises from the delivery of a depot. The outcome is independent of site location. The positive impact rating is common for all options. | | | |
| | Transport User Benefits | Positive or negative impacts on transport users due to the implementation of the depot | All site options result in enhancement to transport user experience due to the depot enabling the DART+ service | 6 – Positive Impact | 6 | 7 – Highly positive Impact | 7 | |
| | | | | All options result in equivalent benefit across the whole of the proposed DART+ Network | All options result in equivalent benefit across the whole of the proposed DART+ Network. The location of the Depot west of Kilcock will facilitate the extension of DART+ services to Kilcock. | | | |
| | Site Security | Site Security | Site Security | 4 – Neutral Impact | 4 | 4 – Neutral Impact | 4 | |
| | | | | All options perform equivalently in respect of impact on Site Security | All options perform equivalently in respect of impact on Site Security | | | |
| 2 | Accessibility Impacts | Impacts on existing accessibility | 4 – Neutral Impact | 4 | 4 – Neutral Impact | 4 | | |
| | | | Impacts on existing accessibility (access to services, jobs, amenities and community facilities) | Although road diversions and bridgeworks are likely to be required for all options it is considered that access to local facilities will be largely unaffected by the proposed works | Although road diversions and bridgeworks are likely to be required for all options it is considered that access to local facilities will be largely unaffected by the proposed works | | | |
| 2 | Freight Access | Impacts on access to jobs, key services and recreational facilities, and freight access. | 4 – Neutral Impact | 4 | 4 – Neutral Impact | 4 | | |
| | | | Impact on access for freight traffic and access to freight facilities | All options are not likely to have an impact on freight access | All options are not likely to have an impact on freight access Musgrave business operations is not likely to be impacted | | | |
| 3 | Social Impacts | Impacts on socially disadvantaged geographical areas | 5 – Slightly Positive Impact | 5 | 6 – Positive Impact | 6 | | |
| | | | Review of socially disadvantaged geographical areas (HP deprivation index) within 1km of site locations. Scores better if in deprived region. This option is located within Electoral Division(s) (ED) of Marginally Above Average and Affluent HP deprivation index. EDs within 1km of the proposed depot site are also of this mix of affluence. Due to the nature of the proposed depot development which requires speciality skills to work at the depot, all options are likely to have comparable social impacts. The implementation of a DART+ Programme will enable the delivery of the proposed DART+ service. This will result in improvement for all socially deprived areas across the network. All depot sites perform equally in this respect. | This option is located within Electoral Division(s) (ED) of Marginally Above Average HP deprivation index. Affluency of EDs within 1km of the proposed depot site are identified as Marginally Above Average and Affluent. Due to the nature of the proposed depot development which requires speciality skills to work at the depot, all options are likely to have comparable social impacts. The implementation of a DART+ Programme will enable the delivery of the proposed DART+ service. This will result in improvement for all socially deprived areas across the network. All depot sites perform equally in this respect. The location of a depot west of Kilcock will facilitate the extension of DART+ services to Kilcock. | | | | |
| Land Use Impacts | Change in Quality of Public Realm | Impacts related to changes in public realm, such as streets, footpaths, and public buildings, as a result of a scheme. | 4 – Neutral Impact | 4 | 4 – Neutral Impact | 4 | | |
| | | | Direct impacts on Public realm areas | The proposed depot option will not enhance or have negative impacts on the existing public realm. | The proposed depot option will not enhance or have negative impacts on the existing public realm. | | | |
| 4.2 | Existing Transport Network and Service Impact: | Impact of Local Road Network | 3 – Slightly Negative Impact | 3 | 5 – Slightly Positive Impact | 5 | | |
| | | | Impact on Local Road Network | The Depot area severs a section of a local access road to a number of residential houses. A new over bridge will be required to maintain connectivity across the canal and railway. Depot access will be provided at the south of the Depot to connect to the L5041 providing diverted access to the R148. The R148 provides connectivity to the M4 junction 8 approximately 4.5km to the north through Kilcock town. Option 33 diverts the L5027 which provides connectivity across the railway line and canal at Ferrans Lock and provides connectivity between the R158 and R148. Another crossing is provided 3km to the south and 6km to the north. This option permits maintenance of the level crossing and does not affect the lock. A new at grade road provide access to the Depot from the R148. The R148 will provide access to the M4 junction 8 approximately 2km to the south. OBG26 will require replacement to facilitate railway access to the depot. This is anticipated to be achieved without alteration of the R148. The bridge will be replaced in segments which will permit the maintenance to traffic flows along the R148 during construction. The location of a depot west of Kilcock will facilitate the extension of DART+ services to Kilcock. | | | | |

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| 4 | 4.3 | Material Assets: Property | Impact on agricultural and non-agricultural property | Direct and indirect impacts on sensitive agricultural enterprise (e.g., beef or equine farms. Tillage is low sensitivity). Severance of landholding, direct acquisition of farm yards, sheds etc). Indirect impacts due to construction and operation near sensitive agri enterprises. No. of residential, community and businesses directly impacted by the option (acquisition). Indirect impacts on properties are assessed under noise, landscape and visual quality, and air quality assessments. | 1 – Highly Negative Impact | 2 – Negative Impact | 2 |
| | | | | The depot site will involve the permanent landtake of approximately 68.9ha on seven agricultural holdings. There will be significant or greater impacts on six of the seven agricultural properties. There is a significant direct impact on one tillage constraint and one dairy constraint. There will be significant or greater impacts on four of the remaining agricultural properties. There is a moderate indirect impact on one equine property. There is no impact on non-agricultural property. | This option will involve the permanent landtake of approximately 54.2ha on six agricultural holdings. There will be significant or greater impacts on three of the six agricultural properties with land severance on one property. There is a minor to moderate indirect impact on one equine property. There is a minor direct boundary impact on a commercial premises | | |
| | 4.3 | Built Services (Utilities) | Impacts on existing utilities | Direct impacts on existing utilities | 2 – Negative Impact | 3 – Slightly Negative Impact | 3 |
| | | | | | 2No. 38kV OH Lines Affected, No Public Road Crossings Access Requires Crossing of Railway | 38kV OH Line Affected Existing watermain and foul drainage utilities impacted by reconstruction of OBG26 ESB 110 kV line: current design does not touch existing ESB mast and vertical clearance (above 12 m) is enough to consider no impact on the line (pending ESB confirmation). | |
| | 4.4 | Soils and Geology (incl. Waste) | land, soils, waste and geological heritage sites. | Soils: Desktop Study, GSI | 3 – Slightly Negative Impact | 3 – Slightly Negative Impact | 3 |
| | | | | | The proposed Maynooth West depot site is located west of Maynooth, between Kilcock and Maynooth, in a predominantly rural area bounded by the R148 and M4 highway, adjacent to the Royal Canal. The terrain is relatively low-lying and flat, with elevations ranging from +58.4m OD to +66.5m OD, gently sloping up towards the west. The site will require earthworks, including the construction of typical depot structures such as a main access building, maintenance workshops, offices, and stabling areas, as well as retaining walls, culverts, and a road underbridge (OBG23A). GI database and historical GI campaigns revealed that the subsurface conditions are dominated by Till derived from Limestones (TLs), with smaller proportions of Alluvium deposits (A) and Lacustrine sediments (L), covering approx. 3.0% and 1.0% of the depot site, respectively. The bedrock consists of the Lucan Formation, primarily limestone and weak mudstone / shale. Historical GIs and geophysical surveys indicated a subsurface profile transitioning from soft soils to stiffer layers and bedrock, with groundwater levels varying between 0.7 to 5.4m BGL. However, potential risks were found to be associated with soft glacial till deposits, which may lead to settlement issues, particularly in areas with thicker soft ground. This results in a TAF impact score of 3 – Slightly Negative Impact from the perspective of soft ground. The project requires substantial earthworks due to cut and fill imbalances, with an estimated net deficit of 284,652.8 m ³ . Assuming 65% reuse of excavated materials, the estimated disposal volume is 181,379.8 m ³ . The fill/cut ratio was estimated at 120% to 185% (considering estimated disposal volume), leading to a TAF Impact Score of 2 – Negative Impact for earthworks. Assessments also indicated 4 – Neutral Impact scoring for karst and contaminated soils as contamination levels are generally low, with most materials classified as “No Category” and one as “Category A” (free from contamination). Landslide, quarry / mine resources and geologic heritage sites have a 4 – Neutral Impact, as no significant issues were identified. Overall, the site was assigned a TAF Impact Score of 3 – Slightly Negative Impact. Key concerns include soft soils, potential settlement issues, and the earthworks required in terms of cut and fills. Implementing ground improvement techniques where necessary and carefully planning earthworks to address the high volume of material required and potential reuse challenges were recommended. | The proposed Kilcock West Site 3 depot site is located north of the R148 and south of the Royal Canal in a predominantly rural area, near industrial facilities such as the Murgrave distribution centre. The terrain is relatively flat, with a slight slope towards the Royal Canal, and elevations range from +71m OD to +80m OD. The site will require earthworks, including noise mitigation walls, retaining walls, culverts, and typical depot structures such as maintenance workshops, offices and stabling areas. GSI database and historical GIs revealed that the subsurface conditions are dominated by Gravels derived from Limestones (GLs), covering approx. 63.5% of the site, with Alluvium (A) deposits covering around 17.0% and Till derived from Limestones (TLs) present in smaller areas. Historical GIs align with the GSI database, indicating shallow topsoil underlain by firm to stiff clayey soils, with glacial till and limestone bedrock at deeper levels. However, soft ground conditions, particularly in areas with alluvial deposits, may require ground improvement techniques such as surcharge, PVDs, or lime/cement stabilisation. This results in a TAF impact score of 2 – Negative Impact from the perspective of soft ground. The earthworks required for the project are significant, with an estimated net deficit of 60,155.6 m ³ . Assuming 65% reuse of excavated materials, the estimated disposal volume is 204,791.7 m ³ . The fill/cut ratio was estimated at 75% to 116% (considering estimated disposal volume), leading to a TAF Impact Score of 3 – Slightly Negative Impact for earthworks. Assessments also indicated a 4 – Neutral Impact for landslide risk, karst risk, quarry/mine resources, and geologic heritage sites, as no significant issues were identified. Contaminated soils received a 4 – Neutral Impact based on the low levels of contamination observed in the surrounding area (relatively nearby Option 30). Overall, the site was assigned a TAF Impact Score of 3 – Slightly Negative Impact. Key concerns include the significant earthworks required in terms of cut and fills, potential soft ground challenges, and the need for detailed geotechnical investigations to confirm subsurface conditions, serviceability / stability requirements of the proposed structures / infrastructure and potential contamination. | |
| 4.5 | Planning Applications | Planning search: LAs, ABP, EIA Portal | Large Scale residential and non-residential planning applications (granted and pending) potentially within the site boundaries. | 2 – Negative Impact | 4 – Neutral Impact | 4 | |
| | | | | This site is adjacent to the DART+ West project proposed by IE (ABP Ref. 314232). Modifications to tie in with the permitted Railway Order can be incorporated into the future application for the depot. Future projects for the area identified in the Kildare and Meath County Development Plans include the Maynooth Outer Orbital Route (MOOR). It is noted that this site option was the subject of a previous refusal by An Commission Pleanalá in respect of a proposed depot as part of the DART+ West Railway Order Application | This site is adjacent to the DART+ West project proposed by IE (ABP Ref. 314232). Modifications to tie in with the permitted Railway Order can be incorporated into the future application for the depot. Future projects for the area identified in the Kildare and Meath County Development Plans include the Maynooth Outer Orbital Route (MOOR). | | |
| 4.6 | Zoned Land, Land Use Planning and Spatial Planning | Impacts on strategic land-use planning at a national, regional, or local level. | Policy Review Impact on land use strategies and regional and local plans. Assessment of support for land use factors local land use and planning. | 5 – Slightly Positive Impact | 5 – Slightly Positive Impact | 5 | |
| | | | | The Kildare CDP and Maynooth ILAP support the development of rail infrastructure and include specific objectives and designations supporting the development of the Dart + programme, including a depot west of Maynooth. Lands between the settlements are un-zoned and will be assessed against their merits. Lands within the Maynooth ILAP boundary, including the SR(2) zoned lands south of the rail line, will be considered against its policies and objectives. The Kildare and Meath CDPs and relevant Local Area Plans supports the development of rail infrastructure and includes specific objectives supporting the development of the Dart + programme with TM OSO facilitating and supporting the extension of the DART+ line to Kilcock. Lands outside the settlement boundary for Kilcock are un-zoned, deemed to be primarily agriculture in the Kildare CDP. There is no land use zoning or associated land use matrix for these lands. Under the Kildare CDP, the use of un-zoned land shall be primarily agriculture, but other uses may be considered. TM OSO of the Kildare CDP is favourable in this regard. The lands previously zoned in the Kilcock LAP will also be considered under the Kildare CDP with the Council incorporating the land use zoning plans – the land use zoning includes ‘heavy commercial vehicle parks’ and ‘utilities structures’ as open for consideration. Proposals for the proposed depot would be considered on their merits and have regard to these uses and the general objectives of the industrial land use zoning class. | | | |
| 5 | Safety Impacts | 5.1 Collisions & Related Impacts | Safety Considerations associated with site layout Safety Considerations at Level Crossings. Collision Statistics. Fire Safety of Trains, Train Stability | 5 – Slightly Positive Impact | 5 – Slightly Positive Impact | 5 | |
| | | | | This site will require the construction of a new bridge over the railway. Access will however be off the existing R148 regional road Refer to Utilities impact details in 4.4 above. This option does not require extension electrification beyond the end of the proposed DART+ Network to access the depot. The enabling of the DART+ Network Services will enhance safety by removing vehicles from the road network with transfer to an inherently safer form of travel. | Access to this site will be straight forward due to the proximity to the M4 Motorway west of Kilcock. No Bridgeworks are required Refer to Utilities impact details in 4.4 above. This option does not require extension electrification beyond the end of the proposed DART+ Network to access the depot. The enabling of the DART+ Network Services will enhance safety by removing vehicles from the road network with transfer to an inherently safer form of travel. | | |
| 5.2 | Other Safety Impacts | Impacts on anti-social behaviour, trips, falls, etc | Review of Alignment with local infrastructure | 4 – Neutral Impact | 4 – Neutral Impact | 4 | |
| | | | | All options perform equivalently in respect of impacts on anti-social behaviour, trips, falls, etc. and Assessment of Alignment Integration with local urban infrastructure. | All options perform equivalently in respect of impacts on anti-social behaviour, trips, falls, etc. and Assessment of Alignment Integration with local urban infrastructure. | | |

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| 6 | Climate Change Impacts | Climate Action Impact | Qualitative assessment of carbon emissions | <p>Greenhouse gases - assumption will be that the depot building will be the same on all sites. Sites that will require longer journeys for rail i.e. more operational energy have also been considered.</p> <p>This option is less preferred as it results in the highest GHG emissions of the options. However, when the depot is considered in isolation of the wider DART+ Programme, there is no significant change with respect to operational phase CO2 emissions, modal shift or car km travelled. In combination with the wider DART+ Programme, which the depot facilitates, this option has the potential to provide a small GHG reduction and will align with Ireland's net zero trajectory. Some mitigation measures are in place. Therefore the impact for this option is considered "slightly positive".</p> | 5 | <p>This option is preferred as it results in the lowest GHG emissions of the options. However, when the depot is considered in isolation of the wider DART+ Programme, there is no significant change with respect to operational phase CO2 emissions, modal shift or car km travelled. In combination with the wider DART+ Programme, which the depot facilitates, this option has the potential to provide a small GHG reduction and will align with Ireland's net zero trajectory. Some mitigation measures are in place. Therefore the impact for this option is considered "slightly positive".</p> | 5 |
| | | | Impact on Resilience and Robustness of Transport Infrastructure | <p>Crossovers</p> <p>Flood risk, sites with soil stability issues, wind exposure. Train journeys (additional train running)</p> <p>Highest vulnerability to fluvial and pluvial flooding (Flood Zone A and B) and requires the most mitigation. Low vulnerability to other climate change hazards.</p> | 1 | <p>Lower vulnerability to fluvial and pluvial flooding (Flood Zone A and B) than Maynooth West. Low vulnerability to other climate change hazards.</p> | 2 |
| 7 | Local Environment Impacts | Biodiversity | Impact on European sites (SAC / SPAs/RAMSAR), nationally designated sites and protected species, ASSIs, AONBs Nature Reserves, Wildlife Reserves, Invasive Species. | <p>Identification of European sites (SAC / SPAs/RAMSAR), nationally designated sites and protected species, ASSIs, AONBs Nature Reserves, Wildlife Reserves, Invasive Species.</p> <p>This option is hydrologically connected to the Rye Water/Carlton SAC which is 3.5 km downstream of Jackson's Bridge. The northern boundary runs along c. 2.7 km of the Royal Canal pNHA. This option will have a total area of 72.6 ha, most of which is of agricultural grassland and arable land. There is 1.2km of mature treelines within the site boundary, most of which include mature to very mature oak trees. This option will result in the realignment of Ballycaghan Stream for a distance of 2km. A new bridge over the Royal Canal will be constructed between this option and the R148. This option scores 2-negative on the basis that it will result in disturbance to the Royal Canal pNHA during construction and operation and the loss of mature treelines within the site.</p> | 2 | <p>This option is hydrologically connected to the Rye Water/Carlton SAC which is 8.5 km downstream. One EPA watercourse, the Pitchfordstown Stream, flows along the eastern boundary of the site. The stream is mapped incorrectly by the EPA, and in fact it travels west along the railway line before crossing the railway line and canal through the culvert. This option will include the culverting of a drainage ditch that runs parallel to the railway line and canal for a distance of c. 2km, to a proposed new culvert which will discharge to the Rye Water. The northern boundary of this option is adjacent to the Royal Canal for a distance of c. 2.8km. This option has a total area of 59.2ha, the vast majority of which is improved agricultural grassland. There is also an area of wet grassland dominated by reed canary grass which is 0.5 hectares and a mosaic habitat which include pockets of wet grassland within improved agricultural grassland that measures 1.4 hectares. There is approximately 900m of mature treelines within the site boundary. The most significant ecological features are the Royal Canal pNHA, the area of wet grassland and the mature treelines. This option will result in the realignment of Ballycaghan Stream for a distance of 2km. A new bridge over the Royal Canal will be constructed between this option and the R148. This option scores 2-negative on the basis that it will result in disturbance to the Royal Canal pNHA during construction and operation.</p> | 2 |
| | | | Impact on surface water, ground waterbodies, and flood risk | <p>Flood Risk and Hydrology: using Eastern CFRAMS Hydrological Studies and Hydraulic Models, NIFM, Local Area Plans, County SFRAs, Ground Profile, Lidar and ground survey, Historic Mapping, Current Aerial Photography</p> <p>The development has the potential to affect the Lyreen River, its tributary Ballycaghan stream and an additional stream running north from the N4. The depot is generally interfering with the Ballycaghan stream while the CCE compound, the main rail track and access road are inside Lyreen River flood zone A and interfering with its floodway. The Eastern CFRAM study of Maynooth provides info to document significant areas that are flooded as water ponds upstream of an inverted siphon located under Royal Canal. On the basis of its high vulnerability within flood zones A and B, we can conclude that the development needs a detailed flood risk assessment. Due to high water levels in the river, even pluvial flooding could become a critical risk due to discharge difficulties. A significant amount of flood volume is occupied by the development and its complementary infrastructure, the need for compensatory storage areas is crucial. The depot site lies within the main floodplain of the Lyreen, fed from both upstream and downstream flow paths across banks and along drainage ditches. Fluvial flood risk could be managed but will have implications, requiring land for storage area to compensate for displaced volume to not deteriorate flood situation elsewhere and requires the depot to be elevated to account for high water levels in the area. Flood risk from pluvial source can be managed adequately by implementing storm water controls and SuDS. Passing the Justification Test will require complicated mitigation measures. This will require a complex assessment using a detailed hydraulic model. The flood risks issues associated with this site are considered sufficiently significant to warrant the overall Water Resources rating being set to Highly Negative Impact.</p> | 1 | <p>Regarding the fluvial risk, the depot location is not within the floodplain of the Ryewater River, and no part of it is inside any of the available published flooding zones. However, the likely previous route of the Ryewater prior to the canal construction has not been mapped during the CFRAM study and is likely to have a floodplain controlled by the discharge into the Ryewater. This will be a localised floodplain affecting the lower lying parts of the depot site and the depot will constrain the OPW drainage ditch leading to the culvert crossing to the Ryewater. Part of the stream will be culverted to allow the entrance of the railway into the depot. The study referred to, for this assessment, was the Eastern CFRAM model, although the relevant area is noted as being Under Review by OPW, this source does provide reliable information for the Ryewater River. Potential flooding from the Royal Canal overtopping of embankments is considered as a low risk being very unlikely to occur along this stretch. Ground water risk is very low based on the available info. The geological survey site does not indicate any risk related to underground flooding. Regarding pluvial flooding risk, overland flow tends to get accumulated close to the Depot boundary due to terrain gradient, but no impact is expected. Pluvial overland flow discharges into Ryewater River (potentially increased levels) by crossing under the Royal Canal. Flood risk from pluvial source can be managed adequately by implementing storm water controls and SUDS, additional land will be required. A combined compensatory storage area(s) to manage the displacement of the old Ryewater stream floodplain and the pluvial flow routes will be needed. The sensitivity of the upstream water level changes will need to be assessed by a detailed hydraulic model. Diversion of the L5027 will require an additional crossing of the Ryewater tributary and compensation for any floodplain displaced will be required. All compensation storage areas will be modest and located adjacent to the depot. This option also has the potential to affect the Lyreen River, its tributary Ballycaghan stream and an additional stream running north from the N4 and results in the requirement or compensatory storage in the vicinity of Jacksons Bridge. The impact is however significantly lower than that of Option 30.</p> | 2 |
| | | Landscape & Visual Quality | Potential landscape and visual impacts from new depot. | <p>Vulnerable Aquifers; Desktop Study - GSI</p> <p>The option is predominantly underlain by groundwater of moderate vulnerability. A small section on the southeastern side of the option has a vulnerability range of high to extreme with a very small section of rock at or near surface. The option is underlain by a Locally Important Aquifer - Bedrock which is Moderately Productive only in Local Zones, of medium importance. No groundwater wells/boreholes are shown to be crossed by this option boundary, although borehole 2923SWW198 is within 10m of the realigned road to the northeast of the rail line. As groundwater flow is indicated to be eastwards towards Lyreen_020, several boreholes are shown to be down hydraulic gradient of the option. No NFGWS group schemes or source protection zones are proximal to the option. No GWDT E SAC/SPA is present or within 1km of this option. Recharge to groundwater is very low (51-100mm/yr). The main potential impact in terms of groundwater flow and quality is likely to arise from the cuttings, earthworks, piling, resurfacing and vehicular activities. However, the cuttings in relation to this option will be shallow and not likely to extend deep into groundwater. Overall, this option will result in a slight to moderate magnitude of impact on the existing groundwater environment and the significance of impact is Slightly Negative.</p> | 3 | <p>The option is predominantly underlain by groundwater of high and moderate vulnerability but with a large extent of groundwater of low vulnerability towards the north of the scheme boundary and under the western-most access road. The option is underlain by a Locally Important Aquifer - Bedrock which is Moderately Productive only in Local Zones, of medium importance. The option boundary intersects three (3) wells/boreholes and several boreholes are down hydraulic gradient. The indicative direction of groundwater from the option is south easterly, and this is influenced by the option topography with gradient dipping to the southeast in the local direction of Rye_Water_010 and Rye_Water_020. No NFGWS group schemes or source protection zones are proximal to the option. No GWDT E SAC/SPA is present or within 1km of this option. Recharge to groundwater is very low (1-200 mm/yr). The main potential impact in terms of groundwater flow and quality is likely to arise from the cuttings, earthworks, piling, resurfacing and vehicular activities. Based on GI records and GSI data, the areas of cut could potentially intersect the water table, causing localised alterations to groundwater vulnerability and flow patterns, but will not significantly impact the aquifer as a whole. Therefore, this option results in a slight magnitude of impact on the existing groundwater environment and the significance of impact is Slightly Negative.</p> | 3 |
| | | | Key landscape characteristics affected; Effects on lists/ key views; Impact on landscape character. | <p>Despite the presence of the M4 in the wider landscape, the baseline landscape / visual environment is of local Medium Significance and Sensitivity, due to the quality of the agricultural fabric of the landscape, the presence of the Royal Canal & Greenway and the high number of residential properties. The degree of change in the landscape and the visual environment is of locally High / Very High Magnitude due to the disruption of the existing fabric, the loss of treelines and hedgerows, and the introduction of a major "industrial type" development with associated change in land use and lighting. The impact on the local landscape is Significant, while the impact on the visual environment (including visual impact on properties) is Significant.</p> | 2 | <p>Despite the presence of the Distribution Centre, the baseline landscape / visual environment is of local High Significance and Sensitivity, mainly due to the quality of the agricultural fabric of the landscape, the presence of the Royal Canal & Greenway and the proximity of residential properties. The degree of change in the landscape and the visual environment is of locally High / Very High Magnitude mainly due to the disruption of the existing fabric, the loss of treelines and hedgerows, the introduction of a major "industrial type" development and the associated change in land use and the introduction of lighting lighting and the visibility / visual impact from the Royal Canal and Greenway. The impact on the local landscape is Very Significant, while the impact on the visual environment (including visual impact on properties) is Very Significant.</p> | 1 |

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|---------------------------|--|--|---|---|------------------------------|--------|
| 7.4 | Cultural Heritage | Impact on archaeology, cultural and built heritage. No. of RPS, National Monuments, SMRs, Conservation areas within 250m and / or directly effected by options etc. Number of designated sites/structures (by level of designation) directly impacted by scheme (landtake). | 2 – Negative Impact | 2 | 2 – Negative Impact | 2 |
| | | | This option has potential for direct impacts on 2 no. archaeological heritage sites (KD005-033 and KD005-003) which are located within the site boundary, along with a further potential ring ditch visible in aerial photographic coverage. It is noted that these are small-scale features. There is potential for indirect impacts on Jackson's Bridge and Lock (RPS no B05-36 and NIAH no. 11900505) and Chambers Bridge and Lock (RPS no. B05-35 and NIAH no. 11900504) which are both located approximately 5m north of the site boundary. Much of this site has been subject to geophysical survey and as such, previously unrecorded large-scale monuments have not been recorded within the area. The site also contains three sections of townland boundaries, which would be impacted directly by the construction of the depot. | This option has potential for direct impacts on one recorded archaeological site (KD005-001) and one potential enclosure site, which are located within the site boundary. There are no architectural heritage sites within the site boundary and as such, no direct impacts are anticipated. This option has potential for indirect impacts on Ferns Lock Station (RPS no. 91506 and NIAH no. 14404903) which is located approximately 39m to the north of site boundary. The site comprises a large parcel of greenfield, which has the potential to contain previously unrecorded archaeological remains that survive with no surface expression. The site also contains the site of the now removed county boundary between Meath and Kildare and one further section of townland boundary. The overall archaeological potential of the site has been reduced by historic quarrying during the past, which is likely to have affected the archaeological resource. | | |
| | | | 2 – Negative Impact | 2 | 2 – Negative Impact | 2 |
| | | | •Potential Impact Rating = 427 •No. of properties potentially above daytime criteria: 2 •No. of properties potentially above nighttime criteria: 4 •Technical Movements Noise Impact: Moderate The site has a lower PIR compared to the Kilcock depot site. Both sites have a comparable number of NSLs within 100m of their site boundaries. This option has the potential to result in noise impacts at a small number of properties to the south of the CCE areas and likely require noise mitigation. There will be additional rail noise impacts to receptors between the proposed depot and Maynooth station, requiring noise mitigation as per the DART+ West EIAR. The number of NSLs affected by changes in rail noise for this option is lower compared to the Kilcock depot site. There will be some temporary to short term negative noise impacts due to construction of the depot. The overall ranking is determined to be Negative Impact, 2 | •PIR = 515 •No. of properties potentially above daytime criteria: 0 •No. of properties potentially above nighttime criteria: 0 •Technical Movements Noise Impact: Moderate This site has the highest PIR compared to the Maynooth depot site. There are a higher number of NSLs within 50m of this depot compared to the Maynooth depot site, but a comparable number of NSLs within 100m. This depot site is calculated to result in lower noise emissions at the closest NSLs with the operation of the depot compared to the Maynooth Depot site. Noise mitigation may however, be required depending on the activities within this area. There will be additional rail noise impacts due to technical movements at receptors between the proposed depot and Maynooth station, likely requiring noise mitigation. There will be some temporary to short term negative noise impacts due to construction of the depot. This site will require extension of the DART+ electrification to the depot site from the proposed Kilcock station. This will result in temporary noise impacts which will require night-time works and will have temporary moderate to significant impacts at the closest NSLs . Overall this option has been scored as negative impact – 2 | | |
| 7.5 | Noise & Vibration | Impact on sensitive properties Estimated number of sensitive receptors (residential properties, community facilities etc) likely to be affected by transport related noise with the project within 50m, 100m, 200m and 300m bands. | 4 – Neutral Impact | 4 | 4 – Neutral Impact | 4 |
| | | | No potential for significant impact on local air quality due to vehicle emissions of NOx, PM10 and PM2.5 as traffic volumes are below TII screening criteria (PE-ENV-01106). There are sensitive receptors within 250 m of the potential construction works, however with dust mitigation there is no potential for significant effect on air quality. All options have the same rating due to the lack of potential for significant operational phase impacts. Ranking is based on minor differences in the potential for construction and operational phase dust impacts. However, these impacts can be mitigated and, therefore, do not affect the assessment score. Due to temporary potentially significant effects, which are not significant with dust mitigation, on at least 88 no. high sensitivity receptors by construction dust within 250m of the site during construction, all options are scored as '4' on TAF impact scoring as they'll have 'Neutral Impact'. | No potential for significant impact on local air quality due to vehicle emissions of NOx, PM10 and PM2.5 as traffic volumes are below TII screening criteria (PE-ENV-01106). There are sensitive receptors within 250 m of the potential construction works, however with dust mitigation there is no potential for significant effect on air quality. All options have the same rating due to the lack of potential for significant operational phase impacts. Ranking is based on minor differences in the potential for construction and operational phase dust impacts. However, these impacts can be mitigated and, therefore, do not affect the assessment score. Due to temporary potentially significant effects, which are not significant with dust mitigation, on at least 67 no. high sensitivity receptors by construction dust within 250m of the site during construction, all options are scored as '4' on TAF impact scoring as they'll have 'Neutral Impact'. | | |
| 7.6 | Air Quality | Impact on sensitive properties Estimated number of sensitive receptors (residential properties, community facilities etc) likely to be affected by transport related air quality impacts with the project within 50m of the site boundary. | 4 – Neutral Impact | 4 | 4 – Neutral Impact | 4 |
| | | | No likely significant impacts on equipment susceptible to electromagnetic interference. Guideline limits for exposure to electromagnetic fields will not be exceeded for at any of the receptors in the current baseline environment | No likely significant impacts on equipment susceptible to electromagnetic interference. Guideline limits for exposure to electromagnetic fields will not be exceeded for at any of the receptors in the current baseline environment | | |
| 7.9 | Electromagnetic Compatibility | Electromagnetic Compatibility Impact on sensitive local receptors Estimated number of potential receptors (residential properties, sensitive commercial properties etc) 100m either side of the outermost depot rail line. | 4 – Neutral Impact | 4 | 4 – Neutral Impact | 4 |
| | | | No likely significant impacts on equipment susceptible to electromagnetic interference. Guideline limits for exposure to electromagnetic fields will not be exceeded for at any of the receptors in the current baseline environment | No likely significant impacts on equipment susceptible to electromagnetic interference. Guideline limits for exposure to electromagnetic fields will not be exceeded for at any of the receptors in the current baseline environment | | |
| Assessment Summary | | | | | | |
| 1 | Transport User Benefits and Other Economic Impacts | | 5 – Slightly Positive Impact | 5.2 | 5 – Slightly Positive Impact | 4.8 |
| 2 | Accessibility Impacts | | 4 – Neutral Impact | 4.0 | 4 – Neutral Impact | 4.0 |
| 3 | Social Impacts | | 5 – Slightly Positive Impact | 5.0 | 6 – Positive Impact | 6.0 |
| 4 | Land Use Impacts | | 3 – Slightly Negative Impact | 2.9 | 4 – Neutral Impact | 3.7 |
| 5 | Safety Impacts | | 5 – Slightly Positive Impact | 4.5 | 5 – Slightly Positive Impact | 4.5 |
| 6 | Climate Change Impacts | | 3 – Slightly Negative Impact | 3.0 | 4 – Neutral Impact | 3.5 |
| 7 | Local Environment Impacts | | 2 – Negative Impact | 2.4 | 2 – Negative Impact | 2.4 |
| | Overall Rating | | 4 – Neutral Impact | 3.9 | 4 – Neutral Impact | 4.1 |
| | Total Rating / Preferred site | | | 27.0 | Yes | 28.9 |