

M7 Osberstown Interchange and R407 Sallins Bypass Scheme

Volume 1
EIS Non-Technical Summary

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NTS



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1 Introduction

This Environmental Impact Statement (EIS) examines the potential environmental impacts associated with the development of a proposed M7 Osberstown Interchange and R407 Sallins Bypass Scheme, Co Kildare. A location plan for the proposed scheme is presented in Figure NTS1.

This proposed scheme will address existing inadequate connectivity of national, regional and local road networks and facilitate planned and zoned development in accordance with regional and local development plans and objectives. The interchange will connect to the proposed R407 Sallins Bypass to the north and the existing regional and local road network to the south. The proposed scheme is shown in Figure NTS2.

The preparation of the EIS was an iterative process, which by its very nature was inherently linked with the design development process. The approach adopted in the assessment and preparation of the EIS document was generally based on that recommended in the EPA 'Guidelines on the Information to be contained in Environmental Impact Statements 2002'.

A design was developed and the potential impacts of the proposal on the receiving environment were identified along with mitigation measures and possible residual effects.

Consultation was carried out with the general public, statutory and non-statutory consultees through an open information session and a scoping process. Comments received during this consultation phase were reviewed and considered in the preparation of the EIS.

2 Planning and Policy Context

The proposed M7 Osberstown Interchange and R407 Sallins Bypass was assessed against a range of national, regional and local policies. The review of National, Regional and Local planning policy considers that the provision of the proposed scheme will:

- Will, in conjunction with the proposed M7 Naas to Newbridge By-Pass Scheme, relieve peak period traffic congestion currently experienced at the existing 'Maudlins' and 'Newhall' M7 interchanges as well as the local and regional road network by providing additional connectivity between the local and regional network and the national road network.

- Provide a convenient connection to the existing Sallins Train Station, and will encourage greater use of the existing ‘*park and ride*’ facilities.
 - Facilitate and promote the development of Naas as a Large Growth Town I and a Primary Development Centre within the context of both the Regional Planning Guidelines for the Greater Dublin Area and the National Spatial Strategy respectively.
- Facilitate improved public transport services including a north/south public transport link across the M7 Motorway between Sallins and Naas in accordance with the objectives of the Kildare County Development Plan 2011 to 2017.
- Provide for the future achievement of the Sallins Local Area Plan 2009 objective for a Public Transport Interchange connecting the M7 Motorway and the railway (the proposed Sallins / Regional Railway Interchange Station).
- Relieve congestion within the town of Sallins, which will facilitate greater local accessibility within the town, with an improved streetscape, which will encourage local growth.
- Facilitate planned development of zoned land within the Naas Northwest Quadrant and will also provide connectivity to the Regional Road Network (R407 Sallins Bypass) to the north of the M7.

It is concluded that the construction of the proposed M7 Osberstown Interchange and R407 Sallins Bypass Scheme will be in accordance with the policies of the Regional Planning Guidelines for the Greater Dublin Area, the Kildare County Development Plan, the Naas Town Development Plan and the Sallins Local Area Plan and will be consistent with the proper planning and sustainable development of the area.

3 Need for the Scheme and Alternatives

A Motorway Order Application including an EIS for the M7 Osberstown Interchange was submitted to An Bord Pleanála (ABP) in November 2008. In March 2010, ABP refused permission for the M7 Osberstown Interchange Scheme indicating that “*in terms of road and transportation planning, there is a very strong connection between the motorway interchange and the R407 Sallins By-pass and the Board has come to the view that both projects should be considered together for the purposes of environmental impact assessment and that it would be premature to determine the instant applications in advance of, or separately from, the determination of a route and design of the R407 Sallins By-pass*”.

Following consideration of this ABP decision, this application has been prepared combining the M7 Osberstown Interchange and R407 Sallins Bypass for the purposes of environmental impact assessment.

The R407 Sallins Bypass will cross the existing local Osberstown Road approximately 200m south of the Dublin to Cork railway line. The Osberstown Road will be realigned horizontally and vertically to accommodate the crossing of the bypass under the local road.

Segregated pedestrian and cyclist facilities will be provided in the eastern verge of the R407 Sallins Bypass to accommodate the urban population of Sallins for all pedestrian and cyclist provisions. These facilities will be provided from the proposed tie-in at the existing R407 Clane Road at the northern end to approximately 100 m north of the railway crossing, a total distance of approximately 2 km. A connection will be provided from the R407 Sallins Bypass pedestrian and cyclist facilities north of the Grand Canal to the Grand Canal tow path. Approximately 100m north of the railway crossing the non-motorised users will then be connected back to the existing local road network with access to the Grand Canal Way Route and access onwards into Naas town.

5 Transportation

The proposed scheme comprises the construction of the M7 Osberstown Interchange and R407 Sallins Bypass. The proposed scheme may be developed incrementally. The proposed Interchange and bypass projects are dependent sequentially on the completion of the proposed 'M7 Naas to Newbridge By-Pass Upgrade Scheme'.

The transport assessment looks at the impact of the proposed scheme for an opening year, 2015 and a design year, 2030. The assessment is based on comparing 'without Scheme' (or 'Do Minimum') and 'with Scheme' (or 'Do Something') scenarios.

The proposed M7 Osberstown Interchange will have a net positive traffic impact on the local road network in terms of reducing traffic volumes on key sections of the local road network, particularly the "Western Distributor Road", releasing capacity for local trips and public transport services and, where appropriate, the reallocation of road space for enhanced cyclist and pedestrian infrastructure.

The introduction of the proposed R407 Sallins Bypass and its connection to the M7 via the proposed new interchange will provide immediate traffic relief to Sallins Main Street, effectively removing regional orbital 'through traffic', including HGV's accessing the motorway. This traffic currently has to access the M7 via the Western Distributor Road and Newhall Interchange to the south or via Monread Road and Maudlins interchange to the north

The proposed scheme has also been designed to provide alternative cyclist and pedestrian connectivity to the north and south of the M7, removing the need to traverse the proposed M7 Osberstown Interchange. This is achieved by the proposed connection between the existing cyclist and pedestrian route along the Western Distributor Road and a new connection to the Canal Road, which in turn will connect to the R407 Sallins Bypass north of the proposed rail underbridge.

The proposed scheme specifically incorporates an amenity cycle track and pedestrian walkway provision on the Sallins Town side of the Bypass and makes provision for connection to future cycle network and pedestrian routes along the Canal.

The opening of the proposed M7 Osberstown Interchange and R407 Sallins Bypass Scheme will see changes to the local, regional and national (M7 Corridor) road network and traffic flows. The modelling work undertaken to assess the traffic impacts of the proposed scheme indicates that there will be an overall significant traffic benefit associated with the proposed scheme. Further, the proposed scheme will provide benefits to existing and new public transport services and walking and cycling routes on the adjoining local and regional road network.

In the longer term, the proposed scheme will facilitate regional transport objectives for the establishment of a Public Transport Interchange off the R407 Sallins Bypass adjacent to the Dublin to Cork railway line.

6 Agronomy

The proposed agricultural landtake will comprise of land used for road carriageway and embankments, accommodation roads, drainage features and planted/landscaped areas. Impacts of these components of the proposed road development are taken into account in the assessment of impacts. Any reduction in land area can potentially reduce the viability and productivity of farms. The level to which landtake affects the viability of an individual farm is not solely dependent on the amount of land removed, but is also dependent on factors such as quality of the land taken, total area of the holding, type of enterprise and whether the landtake results in separation of land or permanent reduction and damage to land access, farm structures or water sources.

Approximately 35.9 hectares of land is taken from agricultural holdings for the proposed road development of which 8.7 hectares is zoned for non-agricultural use.

The agriculture area of Co Kildare is 115,058 hectares (CSO 2010) (including 1293 hectares of commonage). The land required for the proposed scheme will take 0.04% of this area. Five new land segments will be created due to the construction of the proposed scheme. This is 0.06% of the total number of land segments in county Kildare (which is 7,734 – Table 28 of 2010 Census of Agriculture). Therefore the impact on a regional or national level will be imperceptible.

The area of all farms directly affected is approximately 464 hectares. Approximately 27.2 hectares of agricultural land and approximately 8.7 hectares of lands zoned for non-agricultural use will be required for the proposed scheme. The permanent landtake will be approximately 10% of the total area of farms directly impacted.

Separation will affect 5 farmers and 55 hectares of land will be separated due to construction of the proposed scheme – approximately 9% of the affected farms. The overall impact on agriculture (eleven affected farms) along the proposed scheme is moderately adverse.

The main results of the individual farm impact assessment results are summarised below:

- 9% of farms (No 1) affected by the proposed scheme have an imperceptible impact. The farm in this impact category occupies 17% of the area of all farms affected.
- 27% of farms (No 3) affected by the proposed scheme have a slight impact. The farms in this impact category occupy 3% of the area of all farms affected.
- 55% of farms (No 6) affected by the proposed scheme have a moderate impact. These farms occupy 58% of the area of all farms affected.
- 9% of farms (No 1) affected by the proposed scheme have a significant impact. This farm occupies 18% of the area of all farms affected.

7 Human Beings

The purpose of the community assessment is to identify the likely significant impacts as they might affect users of the proposed road development and local people. Human being impacts fall into four key categories, namely: journey characteristics, community severance, amenity and economic impacts.

Overall, the proposed scheme will have a significant net positive residual impact on journey characteristics, community severance, journey and general amenity, and the local economy.

There are numerous interactions between each of these impacts. There are also positive cumulative impacts in terms of the sustainability of transport use and local amenity.

Negative impacts will apply to a few businesses on Main Street and Clane Road in Sallins that are currently patronised by drivers passing through Sallins. Although significant for these businesses, the net economic impact at community level is moderate to major positive.

8 Archaeology and Cultural Heritage

The archaeology and cultural heritage assessment takes place in order to identify the likely character, extent, quality and worth of the known or potential archaeological resource in order to make an assessment of its merit in context.

It highlights any potential for a profound or significant direct negative impact on any archaeological features, cultural heritage features or deposits during ground disturbance associated with the proposed road development.

The proposed road development passes within the vicinity of two designed landscapes, Osberstown House demesne and Osberstown Hill demesne. The route of the proposed road development follows existing modern trends in the landscape. There will be a moderate negative indirect impact on the landscape setting of Osberstown House demesne and a slight negative indirect impact on the landscape setting of Osberstown Hill demesne.

A programme of archaeological investigation (which may include testing and/or geophysical survey) will be undertaken in previously undisturbed greenfield areas within the footprint of proposed road development.

Full provision will be made for the resolution of any archaeological features/deposits that may be discovered, should that be deemed the appropriate way to proceed. It is also proposed to carry out an archaeological wade survey at the diverted watercourse prior to any construction works.

Cultural heritage features will be avoided where possible. Where impacts cannot be avoided, the feature will be fully recorded, through photographic and written record, prior to any construction works being undertaken. It is also proposed that ground disturbances at the site be monitored and results recorded in order to supplement the record.

It is proposed that appropriate planting be instated along the northern boundary of the M7 Osberstown Interchange and R407 Sallins Bypass in order to mitigate against the visual impact on designed landscapes.

9 Architectural Heritage

The Architectural Heritage assessment of the proposed M7 Osberstown Interchange and R407 Sallins Bypass Scheme comprises a thorough examination on site of the existing environment and through appraisal of cartographic and other historical information. The assessment allows the significance of the existing historic landscape and its structures to be articulated.

The existing motorway to be served by the junction and with which the proposed bypass is to connect is mature and passes through relatively featureless landscape in the vicinity of Sallins and Osberstown. The existing motorway is a dominant feature in the landscape.

Reference in this assessment is made mainly to Osberstown House, which is a protected structure the setting of which is measurably impacted by the proposed development. The Leinster Aqueduct which straddles the Liffey is a protected structure also and is located roughly three hundred and fifty metres from the proposed road development. It is not directly impacted, although there will be changes to its setting. No other structures of architectural merit will be impacted by the proposed road development.

Nevertheless, by reason of elevation, openness, proximity to property, or visual context, other sections of the proposed scheme will give rise to levels of significant visual impact.

During the construction stage, the contractor will ensure good working practices are followed so as to minimise and manage any significant, negative environmental impacts arising from construction.

Proposals will ensure that planting is distributed along the entire proposed road development and the associated local road re-alignments and will vary from typical rural, randomly tree-lined hedgerow reinstatement to wide plantings of landscape and screen planting to the establishment of larger areas of new woodland for integration of the proposed road development into the wider landscape. Shrub planting will be used at the edges of the tree planting. This will increase the density and diversity of the plantings and improve the biodiversity structure.

The detailed lighting design shall be completed in a manner, which will minimise glare and light pollution that in combination with extensive landscaping as proposed at junctions will ensure that light-spill effect is minimised. It is noted that the proposed road development includes for a minimum of roadside illumination, effectively restricted to roundabouts and junctions and along the link to Sallins.

In specific locations barriers and earth bunds will be provided to reduce the impact of noise. Such barriers will also have the effect of providing immediate visual screening of traffic from properties. Such features shall, wherever possible, be integrated within the proposed landscaping measures.

As with all such developments, the proposed road development, by the means of its very presence will have a permanent effect and therefore some degree of residual impact on the landscape and visual character of its immediate corridor. Nevertheless, it is considered that with the gradual establishment of proposed landscape mitigation measures, the road will be successfully integrated within its landscape setting in the longer-term.

It is considered that some level of moderate residual impact will remain at Osberstown House, in crossing the Grand Canal and in crossing the River Liffey corridor.

11 Noise and Vibration

A series of noise surveys were undertaken at selected residential properties along the length of the proposed scheme to provide a baseline of noise levels at each receptor. Attended noise levels were measured at a total of 11 locations, of which two locations were also selected as unattended monitoring positions.

The assessment has indicated that construction activities can, for the majority operate within the adopted noise limits for daytime periods at the nearest properties to the works. A number of potential exceedances are predicted at properties facing directly to site works.

Given the linear nature of the works, however, noise emissions related to construction works will be of short term impact at any one area as the works progress along the length of the proposed scheme. The application of proposed noise limits such as selection of quiet plant, control of noise sources, screening, monitoring and restricted hours of operation, will ensure that noise impact is kept to within acceptable standards.

The expected increase in HGV traffic along the local road network is minor in comparison to the existing volume of traffic along the assessed routes.

In terms of the contribution to noise levels, predicted noise levels are all below 1dB (A). An increase of this magnitude is not significant and will typically not be evident above the prevailing traffic noise environment.

Traffic noise predictions have been conducted for the operational phase of the scheme for 2015 the proposed year of opening and 2030 the design year. Noise mitigation measures are provided whenever all three of the conditions specified by the NRA guidance are satisfied.

Options for the reduction in traffic noise levels can take the form of a low noise road surface (LNRS), the use of barriers and or bunds or a combination of both. Mitigation measures were proposed for the development scenarios under assessment.

12 Air Quality

The air quality assessment focuses on traffic-related pollutants – carbon monoxide (CO), benzene, nitrogen oxides (NO_x) and particulate matter (PM₁₀ and PM_{2.5}). The potential impact of construction dust was also addressed.

Emissions from construction vehicles are assessed where construction traffic results in a significant (>5%) increase in Average Annual Daily Traffic (AADT) flows near sensitive receptors. The assessment was carried out using the National Roads Authority Design Manual for Roads and Bridges (DMRB) screening model, as recommended by the NRA guidance

Traffic related emissions were assessed using the UK DMRB screening spreadsheet. The predicted concentration levels were compared to the relevant limit values. During the operational phase, no exceedances of air quality standards are predicted to occur at sensitive receptors located in the vicinity of the proposed scheme. During the construction phase, the potential for significant dust emissions during construction arises during site clearance and excavation in dry weather. Construction dust emissions will be controlled via a construction environmental management plan.

Following the implementation of mitigation measures during the construction phase of the development, the proposed scheme is not predicted to have a residual impact on air quality.

13 Climate

The impact of the proposed M7 Osberstown Interchange and R407 Sallins Bypass on climate was considered for both macro-climate and micro-climate. The climate of a large geographic area (global) is defined as macro-climate.

The climate in the immediate local area of a development is known as the micro-climate.

The potential macro-climatic impact of the proposed Scheme was considered in relation to Ireland's future obligations under the EU Climate Change and Renewable Energy Package, 2008.

The NRA Design Manual for Roads and Bridges (DMRB) screening spreadsheet was used to calculate carbon dioxide (CO₂) emissions from traffic generated by the proposed scheme. CO₂ emission projections were generated as a result of the proposed road development and were determined not to be significant in terms of the EU Climate Change and Renewable Energy Package. No significant impact on micro-climatic is envisaged.

No significant residual impacts on climate are predicted as a result of the proposed M7 Osberstown Interchange and R407 Sallins Bypass. Future measures implemented by government as part of the Climate Change Bill 2013 will ensure compliance with climatic obligations.

14 Ecology

Habitats along the proposed scheme were classified according to the Heritage Council. The plant communities within each habitat type were noted and particular attention was given to identifying any protected, rare or invasive species of plant.

The aquatic habitats in the vicinity of the scheme were surveyed for the presence of, and suitability for, rare or protected species of fauna and flora. Watercourses were surveyed in detail over a stretch from 50 m upstream to approximately 300 m downstream of the proposed crossing point, while instream habitat conditions were assessed for a further 200 m downstream.

The survey recorded a variety of physical parameters including depth, width, substrate, flow-regime and bankside profile, instream and bankside vegetation, fisheries habitats and a visual assessment of water quality and downstream of the proposed crossing point was surveyed in particular to assess spawning areas

Evidence of otter activity along the stretch of watercourse surveyed was examined. Mammals and birds were also assessed in the course of the main habitat surveys using a combination of direct sightings and observations of signs, tracks and droppings. A dedicated faunal survey was undertaken in July 2013.

The suitability of the habitats for roosting, commuting and feeding purposes by bats was also assessed.

Candidate Special Areas of Conservation (cSAC) and Special Protection Areas (SPAs) are classified as Natura 2000 sites and the Habitats Directive applies to these sites only. A separate screening report has been prepared to determine the potential impacts, if any, of the proposed road scheme on the Natura 2000 network. There is no crossing of or direct impact on any Natura 2000 site by the proposed M7 Osberstown Interchange and R407 Bypass Scheme. The screening stage report concluded there will be no direct or indirect impact on any Natura 2000 site and therefore, there are not likely to be significant effects on any Natura 2000 site

The main impacts of the proposed scheme will arise from the construction of crossings for the Grand Canal pNHA and the River Liffey along the Sallins Bypass. The risks are considered temporary in nature as they are associated with the construction phase of the crossings points and works within the immediate catchment with risks of impacting on water quality through siltation and pollution. With adherence to the specified measures detailed, these risks can be adequately mitigated and will not result in any residual impact.

The abutments and piers for the three bridge structures are set sufficiently back from the river banks to avoid any direct impacts on the riparian zone and will not interfere with the on-going ecological functioning and connectivity of these linear habitats. Overall movement across the proposed scheme for fauna will be facilitated through the combination of the clear span structures over the Grand Canal and the River Liffey, mammal underpasses at strategic locations and the portal frame culvert on the Dead Canal.

The operation phase of the proposed scheme will also have inherent risks of impacting on water quality through road-runoff and accidental spillages, though the design of the road drainage and associated attenuation spill containment and run-off treatment will provide adequate protection against these risks.

There will be a loss of habitats associated with the construction and operation of the proposed scheme, with the principle ecological receptors of concern being the treelines and hedgerows that will be dissected by the proposed scheme with resultant severance of ecological corridors. Over time landscaping for the proposed scheme will compensate for the loss of this habitat and to some extent provide ecological continuity which will be further facilitated through the provision of mammal underpasses.

15 Soils and Geology

The potential impact of the proposed scheme on the soils and geology environment has been assessed by classifying the importance of the relevant attributes and quantifying the likely magnitude of any impact on these attributes. The rating of potential environmental impacts on the soils and geology environment are based on both the importance of an attribute and the magnitude of the potential environmental impacts of the proposed road development on it.

The proposed road development shall require the excavation and importation of material from cut and fill sections along the proposed route

In total, estimated quantities of fill along the proposed road development are: 703,000 m³ for importation and 36,000 m³ for exportation. Therefore, the proposed road development is estimated to have a net deficit of 667,000 m³, and the significance of the impact on geology for removal of materials off-site is considered to be slight, refer to Chapter 18: *Resource and Waste Management* for detail on the disposal of such materials.

Engineering design solutions will be provided (e.g. gabions, soil nails, structural retention systems, etc.) as required during construction to deal with ground instability. Long term gravity drainage measures will be employed to retain the groundwater levels below the road level.

Seepage from excavations in glacial till shall be mitigated by the use of an appropriate drainage system such as herringbone drains on the slope surface with suitable angle employed to maintain slope stability during construction of the railway crossing.

16 Hydrogeology

The initial programme of site investigation and groundwater level monitoring for the proposed road development was reviewed to determine the baseline hydrogeology.

The rating of the potential impact of the proposed road development on the hydrogeological environment has been assessed by classifying the importance of the relevant attributes and quantifying the likely magnitude of any impact on these attributes. Aquifer classification, vulnerability and hydrogeological features of importance such as public groundwater abstractions, karst features and Groundwater Dependent Ecosystems are documented.

There are no major groundwater abstractions adjacent to the study area. The two closest Public Water Schemes are Tullylost, Rathangan which is circa 20 km from the study area and the Scheme at Ballykelly, Monasterevin is circa 25 km away. The Geological Survey of Ireland (GSI) National Draft Gravel Aquifer Map states that the shallow aquifer underlying the majority of Kildare is the Curragh Aquifer (also known as the North Kildare Gravel Aquifer). This is one of the most extensive sand and gravel deposits in Ireland and is classed as a Regionally Important sand and gravel aquifer. It is composed of glacial outwash plain deposits with till horizons in places. The aquifer is roughly ovoid in shape and its extent is defined as those areas of the aquifer where the deposit is more than 5 m thick. Outside of the defined extents of this aquifer, there are many parts of Kildare which are classified as being Locally Important or others that are currently Not Mapped

During the construction phase, the water quality of an aquifer can be negatively impacted. The significance of this impact is highly dependent on the thickness and permeability of the unsaturated zone (i.e. the vulnerability).

In order to protect the aquifer the proposed road design aims to minimise loss of aquifer storage by keeping cuts to a minimum. The mitigation measures relating to the potential for groundwater contamination include the implementation of an environmental operating plan, safe storage of contaminants, and silt traps. These measures will ensure the risk of groundwater contamination is minimised.

There are no likely significant negative hydrogeological impacts predicted as result of the proposed road development. Residual impacts are all classed as imperceptible.

17 Hydrology

The principal potential impacts to surface water quality and character of the receiving waters are associated with the crossing points of the proposed scheme and the potential for sediment loading and associated anthropogenic polluting substances entering surface watercourses as a result of both the construction and operational phases of the proposed scheme. The assessed potential impacts arising from the proposed scheme include the following:

- Surface watercourses crossed by the proposed Scheme and potential impact on surface water quality arising from re-alignment works and discharge of surface water runoff.
- Sites of aquatic ecological importance in proximity to surface water crossings.
- Surface water abstraction in proximity to surface water crossings.
- Recognised amenity value of surface waters traversed by the proposed Scheme.
- Potential alteration (increase or reduction) of current flood risk at proposed crossing points and downstream of discharge locations.

The rating of the potential impact of the proposed road development on the existing hydrological environment has been assessed by classifying the importance of the relevant hydrological features of the specific catchments the proposed scheme traverses and quantifying the likely magnitude of any impact on these catchment features and the catchment as a whole.

The potential impacts on local watercourses from the construction phase include, silt loading, hydrocarbon spillages and faecal coliform contamination from onsite facilities.

The operational effects associated with road development can include, contamination from road runoff, salt and grit for winter maintenance and accidental spillages involving goods transportation.

All rainfall runoff will be prevented from discharging directly to the receiving surface waters by the proposed road sustainable drainage system. The proposed sustainable drainage system incorporates a range of appropriate pollution control mechanisms to prevent pollutants from entering the receiving watercourses.

There is a potential to increase peak flows and runoff volume due to the increased impermeable area associated with the proposed road development. However, provided that all mitigation measures are implemented, negative impacts on flood risk due to increased runoff are not anticipated for design events of up to the 30 year return period event, with the exception of the River Liffey catchment where negative impacts on flood risk due to increased runoff are not anticipated for design events of up to the 100 year return period event.

18 Resource and Waste Management

EU, national and local policy, legislation and guidance relevant to the M7 Osberstown Interchange and R407 Sallins Bypass is summarised as follows:

- Prevention and minimisation of waste is the preferred management option.
- Where construction waste is generated it should be source separated to facilitate recycling and maximise diversion of waste from landfill.
- Where commercial waste is generated it should be source separated to facilitate recycling and maximise diversion of waste, including biodegradable waste, from landfill.
- Where waste may not be prevented or recycled it should be transported and disposed of in accordance with applicable legislation and without causing environmental pollution.

Waste may only be transferred by a waste collection permit holder and delivered to an authorised waste facility.

The largest potential source of waste arising from the proposed scheme will be from the cut generated along the proposed Scheme. An estimated 76,000m³ material will be excavated to facilitate construction of the proposed road development. The material to be excavated will comprise approximately 40,000m³ general excavation and 36,000m³ topsoil strip removal. From a preliminary site investigation approximately 60% of the general excavation material arising from excavation may be suitable for use as engineering fill within the proposed road development. This will be subject to appropriate testing to ensure material is suitable for its proposed end use.

The remaining 40% of general excavation material arising from excavation or 16,000 m³ is likely to be unsuitable for use as engineering fill within the proposed scheme. In addition it is estimated that there will be some surplus topsoil and imported soil and stones wastage. An estimated 36,000m³ soil and stones will be exported from the site during proposed construction work.

Mitigation measures are set out to minimise the effect of the proposed scheme on the environment, reduce the quantity of waste sent for final disposal and to promote sustainable waste management practices. The contractor will minimise waste disposal so far as is reasonably practicable.

The resulting predicted impact of excavation waste will be slight, negative and short term. The resulting predicted impact of construction and demolition waste will be slight, negative and short term. Based on the proposed scheme description the predicted impact of operational waste will be neutral.

19 Non-Agricultural Material Assets

The land along the proposed road development is mainly agricultural in nature but also consists of a number of clusters of properties, both commercial and residential.

The direct impacts on non-agricultural properties have been assessed. It is proposed that four non-agricultural properties will be acquired or demolished. One is a residential property and three are sheds.

Where existing access to property is affected, this will be reinstated, or an alternative access provided. Where the infrastructure for service providers is impacted, this will be diverted or reinstated in accordance with service providers requirements prior to construction.

Public water supply and foul water systems affected will be reconnected. All necessary diversions will be carried out in accordance with the local authority requirements.

Where private potable water supplies are impacted, a new well or alternative water supply will be provided. Mitigation for interference with septic tanks will be agreed by the valuer at a later stage.

Where part of a property or land surrounding a property is to be acquired, agreement will be reached with the owner of the property on the type of boundary treatment that will be provided. Where an access to a property is affected the access will be reinstated to match the existing.

Compensatory measures for the loss of land, buildings and other injurious affection will form part of the Motorway Order / CPO procedures with property owners affected by the land acquisition for the proposed road development. Assessment of compensation is not part of the Motorway Order / CPO approval procedure and is therefore not considered further.

20 Interrelationships, Interactions and Cumulative Impacts

The potential inter-relationship and interaction of key aspects and/or effects is considered in each of the individual sections of the EIS.

The qualitative assessment was based on information contained within this EIS and consultation with the relevant sub-consultants. To facilitate the identification and consideration of interactions, an EIS workshop was held on 23 May 2013 with attendees including relevant sub-consultants and the Arup EIS Team.

The following summarises the main environmental interactions anticipated as a result of this proposed development.

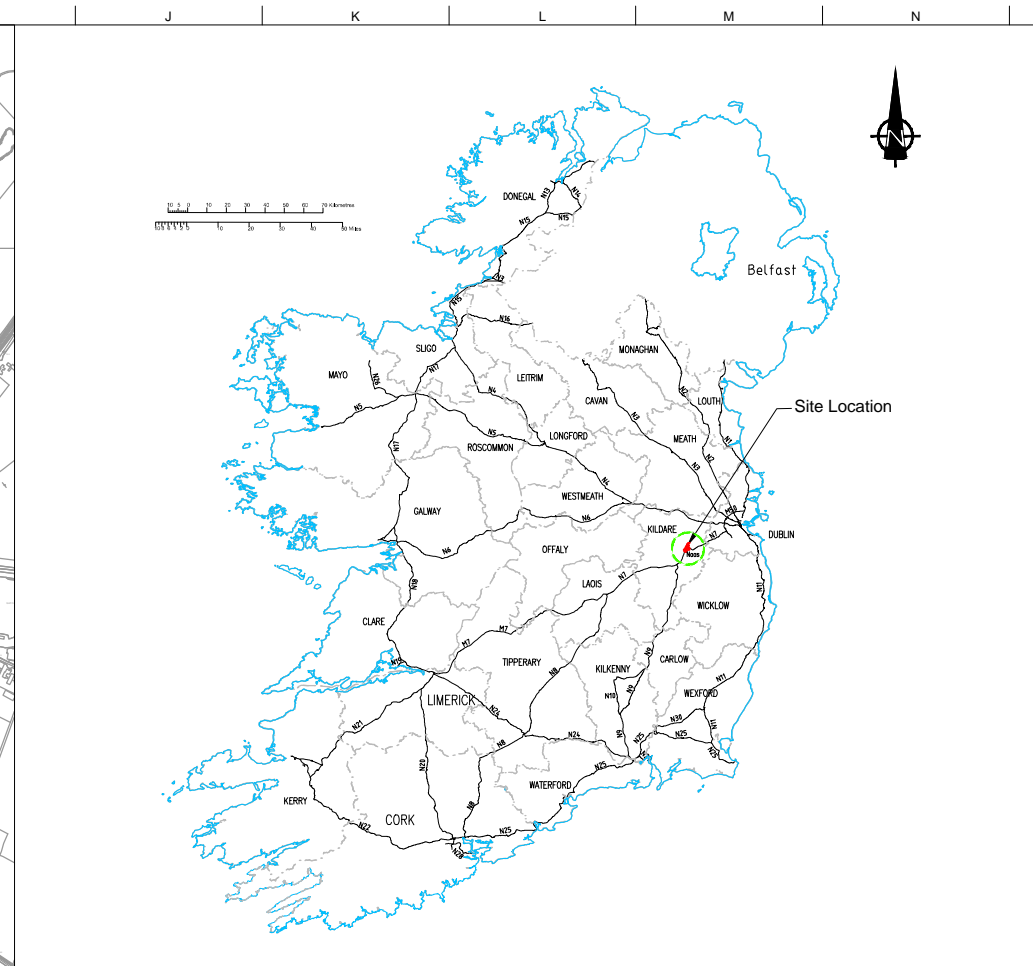
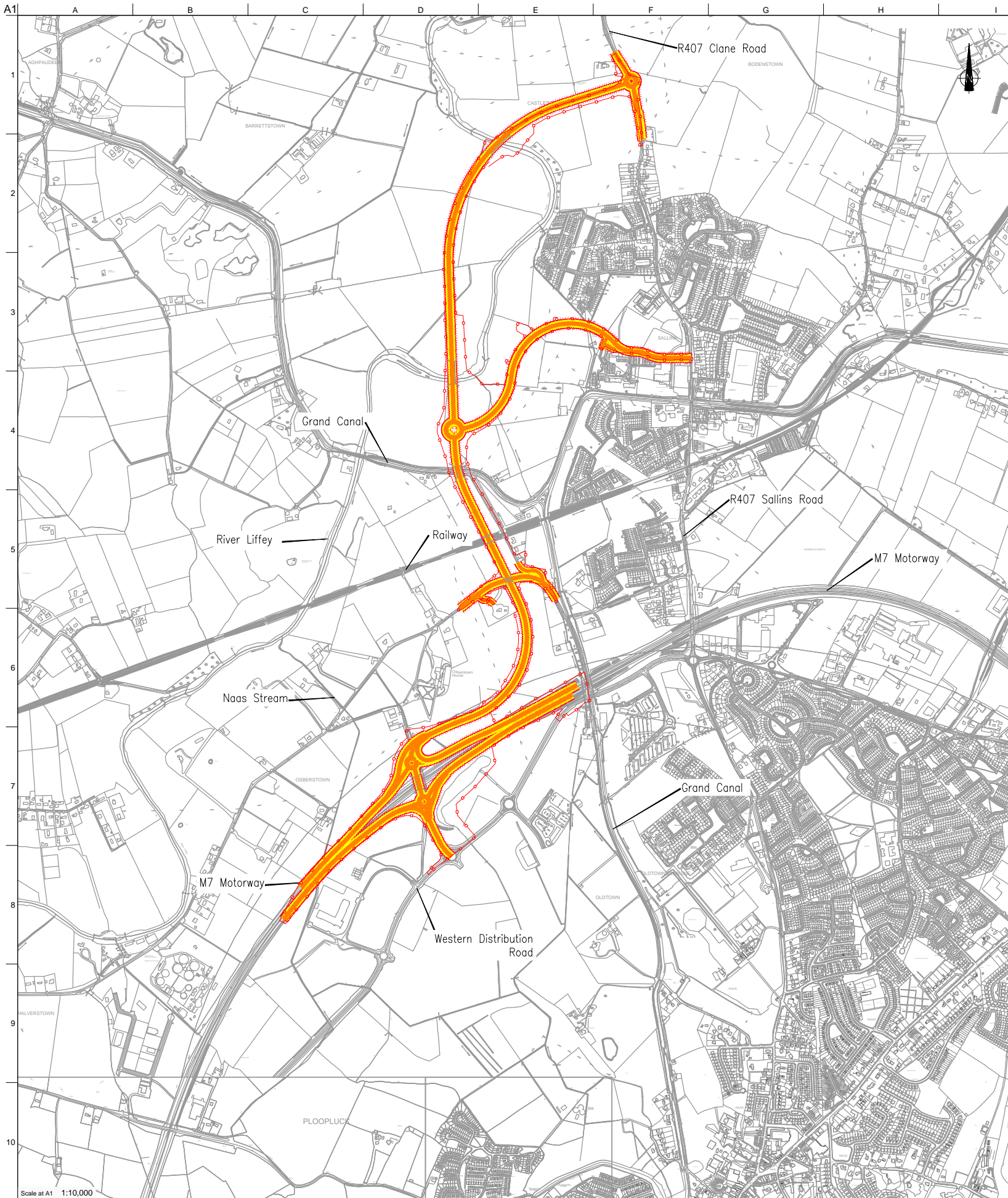
- Transportation, air quality, climate, noise and vibration, hydrology, resource and waste management and human beings.
- Landscape and visual, human beings, ecology and architectural heritage.
- Noise and vibration and landscape and visual.
- Air quality, noise and vibration and human beings.
- Air quality, noise and vibration, geology, archaeology and cultural heritage and architectural heritage.
- Air quality and ecology.
- Climate and hydrology.
- Ecology and hydrology.
- Soils and geology, hydrogeology and hydrology.

Kildare County Council, in conjunction with Kildare National Roads Office and Roughan O'Donovan, are currently progressing the M7 Naas to Newbridge By-Pass Upgrade Scheme. As the M7 Osberstown Interchange is located in between the M7 Maudlins and Newhall Interchanges, there is an immediate interface between the two Schemes. To facilitate the identification and consideration of interactions, an EIS workshop was held on 17 July 2013 with attendees including relevant sub-consultants from both project teams.

Cumulative impacts have been assessed, where applicable, throughout this report. The traffic impact assessment assumes that the M7 Naas to Newbridge By-Pass Upgrade Scheme will be constructed in advance of the M7 Osberstown Interchange and R407 Sallins Bypass Scheme. The do-minimum scenario for all environmental assessments includes for the provision of the M7 Naas to Newbridge By-Pass Upgrade Scheme.

This EIS considers that the M7 Osberstown Interchange and R407 Sallins Bypass will be constructed concurrently. However, there is the possibility that the interchange will be developed first, with the bypass constructed at a later stage. On this basis, an interim scenario has been developed to assess the potential environmental impacts associated with developing the interchange without the bypass. No significant additional impacts by the possible interim scheme than those already presented in the EIS for the proposed scheme are envisaged.

- Notes:**
1. This Drawing is only to be used for the Design Element identified in the title box. All other information shown on the drawing is to be considered indicative only.
 2. These drawings are to be read in conjunction with all other relevant design drawings.



Legend:

- CPO Line
- Proposed Scheme Plan Layout

Scale at A1 1:10,000

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Issue	Date	By	Chkd	Appd
-	Dec 2013	KJ	SOS	EMC

Kildare County Council
Comhairle Contae Chill Dara

Naas Town Council
Comhairle Baile an Náis

An Roinn Iompair
Turasóireachta agus Spóirt
Department of Transport,
Tourism and Sport

NDP
NATIONAL DEVELOPMENT PLAN

Job Title
**M7 Osberstown Interchange
& R407 Sallins Bypass EIS**

Scale at A1 AS SHOWN

Date: December 2013

Consultant

ARUP

Arup, 50 Ringsend Road
Dublin 4
Tel +353(0)1 233 4455 Fax +353(0)1 668 3169
www.arup.ie

Drawing Title
Site Location Plan

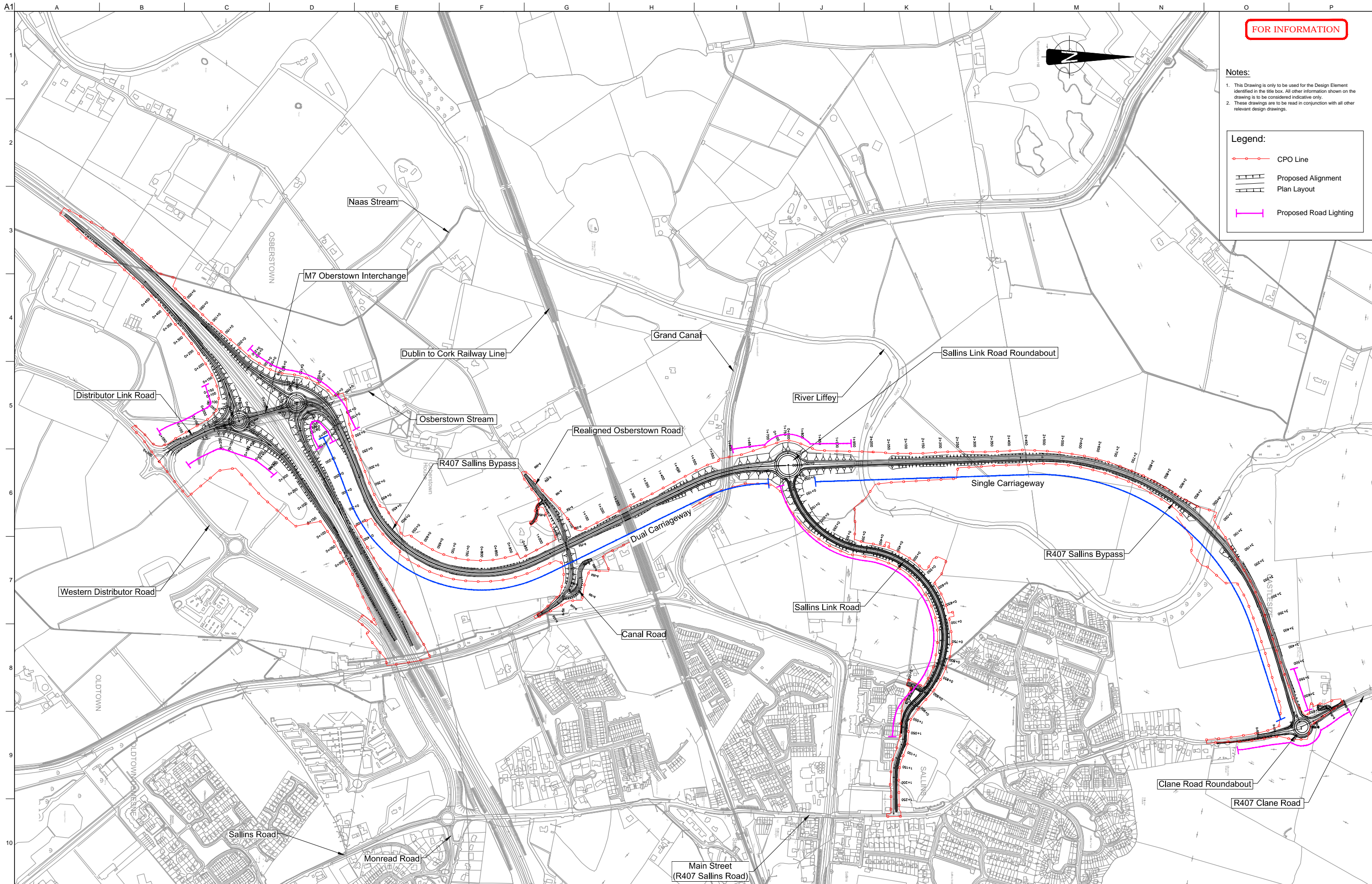
Drawing Status

For Information

Job No
227136-00

Drawing No
Figure NTS 1

Issue
-



FOR INFORMATION

- Notes:**
1. This Drawing is only to be used for the Design Element identified in the title box. All other information shown on the drawing is to be considered indicative only.
 2. These drawings are to be read in conjunction with all other relevant design drawings.

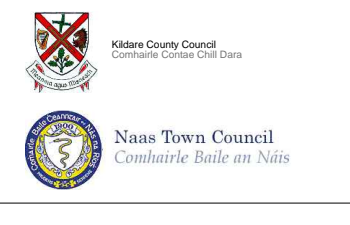
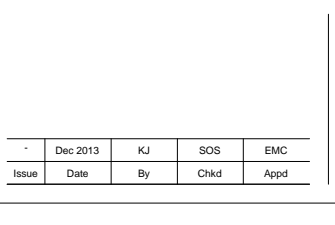
Legend:

- CPO Line
- Proposed Alignment
- Plan Layout
- Proposed Road Lighting

A1
1
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9
10

A B C D E F G H I J K L M N O P

Issue	Date	By	Chkd	Appd
-	Dec 2013	KJ	SOS	EMC



Job Title
M7 Oberstown Interchange & R407 Sallins Bypass EIS

Scale at A3
1:10,000

Date:
December 2013

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Drawing Title
Proposed Scheme Layout

Drawing Status
For Information

Job No
227136-00

Drawing No
Figure NTS 2

Issue
-

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Do not scale