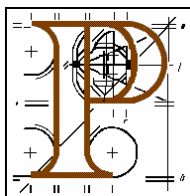


An Bord Pleanála



Inspector's Report

Re: 11.VA0015 – application under Section 182A of the Planning and Development Act, 2000 (as amended).

DEVELOPMENT: - Laois – Kilkenny electricity reinforcement project consisting of interrelated units as follows:-

- Unit 1: New 400/110kV GIS substation at Coolnabacky townland, Co. Laois.
- Unit 2: New connection to Coolnabacky from the existing Moneypoint-Dunstown 400kV line (c.1.4km).
- Unit 3: New 110kV connection to Coolnabacky substation from the existing Athy-Portlaoise 110kV line.
- Unit 4: New 110kV / 38kV / MV substation in Ballyragget, Co. Kilkenny.
- Unit 5: New 110kV overhead line between Ballyragget and Coolnabacky (c.26km).
- Unit 6: Uprate of the existing Ballyragget-Kilkenny overhead line (c.22km).
- Unit 7: New Bay in the Existing Kilkenny 110kV station.
- Unit 8: Modifications to existing Athy-Portlaoise 110kV line.

Type of Application: Strategic infrastructure development

Applicant: EirGrid

Local Authorities: Laois County Council
Kilkenny County Council

SUBMISSIONS AND OBSERVATIONS

Local Authorities: Laois County Council
Kilkenny County Council

Prescribed Bodies Development Applications Unit, Department of
Arts, Heritage and the Gaeltacht
Iarnród Éireann
Inland Fisheries Ireland
Health Service Executive
National Roads Authority
Southeast Regional Authority

Public Representatives: Charlie Flannigan TD
Sean Fleming TD
John Whelan Senator
James Deegan Councillor
Padraig Fleming Councillor

Observers: Chambers Ireland
Michael Brennan
Arthur Drennan and others
Patrick Drennan
Maria Fingleton
Seamus and Stephanie Fingleton
Thomas Freeman
Jim Lowry and others
John Mannion
Chris Miller
Matthew O'Connell
Henry Ramsbottom
Peter Sweetman and Associates

Observer Groups: Concerned Residents care of Eamonn Brennan
RTS Substation Action Group

DATES OF SITE INSPECTION: 30th September and 24th October, 2013.

DATES OF ORAL HEARING: 4th – 7th and 14th – 15th November, 2013.

Inspector: Andrew Boyle

INTRODUCTION

This is a direct application to the Board for approval under Section 182A of the Planning and Development Act, 2000, as amended by the Planning and Development (Strategic Infrastructure) Act, 2006, the Environment (Miscellaneous Provisions) Act 2011 and the European Communities (Public Participation) Regulations, 2010. The proposed development would consist of the construction of a new 400kV/110kV GIS (Gas Insulated Switchgear) substation in the townland of Coolnabacky, County Laois, approximately 5 kilometres southwest of Stradbally; the breaking of the existing Moneypoint – Dunstown 400kV line and its diversion by 1.4 kilometres in a south-easterly direction into and out of the new substation at Coolnabacky; the making of a new connection into the Coolnabacky substation from the existing Athy - Portlaoise 110kV line; the construction of a new 110kV/38kV/MV (medium voltage) substation beside the position of the existing 38kV substation in Ballyragget, County Kilkenny, which would then be dismantled; a new 110kV overhead line over a distance of 26 kilometres between Ballyragget and Coolnabacky; an up-rate of the existing Ballyragget -Kilkenny overhead line over a distance of 22 kilometres with increased pylon heights and two additional earth lines; a new bay in the existing Kilkenny 110kV station; modifications to the existing Athy -Portlaoise 110kV line.

Pre-application discussions were held with the Board under Section 182E of the Act of 2000, as amended by the Act of 2006. On 22nd November 2012, the Board served notice that it was of the opinion that the proposed development fell within the scope of Section 182A of the Planning and Development Act, as amended, and with particular regard to Section 182A(9) of the said Act.

THE SITE

The site is predominantly linear to accommodate a new overhead electricity power line and also an upgraded existing overhead power line over a total distance of 49.4 kilometres (plus a 2.2 kilometre spur for the upgrading of part of the existing Athy-Portlaoise 110kV overhead power line). The site extends from the townlands of Money Lower and Loughteeog in County Laois, approximately 7.5 kilometres southeast of the centre of Portlaoise, generally in a southerly direction, but with many changes in alignment, to the townland of Scart in County Kilkenny, approximately 5.5 kilometres east-southeast of the centre of Kilkenny city. In addition, the site includes a field of 6.7 hectares in the townland of Coolnabacky in County Laois to accommodate a new 400kV/110kV substation and a field of about 1.5 hectares in the townland of

Moatpark in County Kilkenny, about 1 kilometre north of the village of Ballyragget and 17 kilometres north of the centre of Kilkenny city.

From north to south, the site is initially derived from large fields on relatively level land. This continues approximately to a point to the west of the village of Timahoe. It is then derived from a more elevated area of smaller less intensively cultivated fields and areas of afforestation. This continues to a point to the east of the town of Abbeyleix. The site is then derived from a further elevated area of largely undeveloped lands extending to the east of the village of Ballinakill. From the vicinity of Ballinakill, the site is derived from the lower and less steep slopes of the east side of the valley of the River Nore and its tributaries, the Owenbeg River and the Glashagal River below the ridge line traversed by Cromwell's Road. This is an area characterised by small fields in pasture. To the south of Ballyragget, where the site is derived from the alignment of the existing overhead power line to Kilkenny, it, initially, for a distance of about 8.5 kilometres, passes through a series of fairly level fields in pasture on the east side of the broad valley of the River Nore. Having crossed the Dinin River and the N78, the site then climbs to cross the summit of Bullock Hill at 125 metres OD and then a further ridge line before continuing through rolling countryside for the final distance of about 8 kilometres to the existing substation at Scart. The land usage pattern on the entire stretch from Ballyragget to Scart remains much the same, namely medium sized fields, primarily in pasture.

THE PROPOSED DEVELOPMENT

The overall development is known as the Laois Kilkenny Reinforcement Project. As described by the applicant (volume 2 of original submission, section 2.1) it is required to address forecast constraints on the existing transmission network in the Midlands region, South-East Region and County Kildare. The requirement for the project is twofold, namely to ensure security of supply and to improve quality of supply. It would address and improve these concerns in Counties Carlow, Kildare, Kilkenny, Laois and Wicklow.

As set out at section 1 of this report, the applicant subdivides the proposed development into a number of sub-units. I now describe these sub-units in greater detail.

The 400kV/110kV GIS (Gas Insulated Switch Gear) Substation at Coolnabacky

The proposed substation would be located within a 117 metre by 98.142 metre rectangular compound within a 6.7 hectare field which is currently in pasture. As the field is not quite level, the compound would be mounded up, externally, by amounts varying from as little as 0.15 metres to 1.5 metres. The area within the compound would be level. The compound would be surrounded by a 2.6 metre high palisade fence, broken only by a 5 metre wide vehicular entrance on its southwest side.

Within the compound there would be three buildings, namely a 400kV building and a 110kV building, and a building housing two shunt reactors and two transformers located between the 400kV building and the 110kV building, plus a gantry for an incoming/outgoing 400kV overhead power line.

The 400kV building would be rectangular in plan measuring 63.3 metres by 15.32 metres. It would have a maximum height to parapet level on its north-west side of 13.015 metres. Externally the proposed building would consist of a random rubble stone wall up to a height of 5.5 metres. Above this height up to parapet level it would be finished in plastic coated industrial cladding panels. Although there would be various ventilation louvres and steel doors it appears that the building would be entirely artificially lit internally.

The building would be two storeys internally at its northeastern end for the final 16.265 metres of its length. At ground floor level at this end there would be a store/workshop, battery room, generator room, canteen, w.c. and stairs. At first floor level there would be a relay room. The remainder of the building would be double height internally and would enclose 400kV switch gear. Crane rails would run the length of the building to facilitate the movement of plant and machinery.

A near flat hipped pitched roof in the same cladding materials as the upper portions of the walls would be hidden behind a surrounding parapet exceeding the roof height by up to 1.6 metres.

The 110kV building would be separated from the 400kV building by a distance of 53.385 metres. This building would be similar in concept and external finishes to the 400kV building. It would measure 49.83 metres by 11.31 metres in plan. It would have a maximum height to the top of its parapet wall of 12.6 metres. Internally at ground floor level there would be a battery room, control room, w.c., stairs and GIS hoist areas. At first floor level there would

be a 110kV equipment room. Crane rails would run the full length of the building to facilitate the movement of plant and machinery.

The shunt reactor/ transformer building would have the same general profile as the 400kV and 110kV buildings. It would be located between the two buildings, but closer to the 400kV building at just 4.55 metres. It would measure 80.9 metres by 10.8 metres in plan and would have a maximum height of 11.965 metres. On all elevations except that to the south-east, it would be finished in concrete render. The south-eastern elevation would consist of panels of perforated galvanised steel.

The gantry would be located between the 400kV building and the northwestern boundary of the compound. It would consist of three slim open lattice type gantry masts (pylons) each 25 metres in height and separated by 25 metres. These would be surmounted by 3 metre high lightning conductor pins. The gantry masts would be linked at a height of about 18 metres by horizontal open lattice-type gantries. The three lines of each of the incoming and outgoing 400kV overhead power lines would be connected to this gantry.

Within the field, but external to the compound, there would be a berm for excavated material located to the northeast of the compound. This would be crescent shaped in plan, about 130 metres in length by 32 metres in width with a maximum height of 3 metres. There would be a further smaller berm for excavated material to the southeast of the compound, similar in cross section to the larger berm, but in this case just 45 metres in length. Each of these berms would be topped with a 300 millimetre layer of topsoil, seeded with grass and planted with native hedgerow species. To the southeast and northwest of the compound there would be two triple settlement ponds and two temporary ponds. The permanent ponds would each have depths of 700 millimetres, sufficient to cope with a 1 in 100 year storm. Also within the field, but external to the compound, would be the final masts of other relevant sub-units as described by the applicant.

Vehicular access to the substation would be gained via an upgraded version of the existing farm access track up to a point beyond a disused quarry to the southeast of the substation. At this point it would diverge from the alignment of the farm access track and cut diagonally across a field adjoining that of the substation site. Overall, it would extend over a distance of about 1.2 kilometres from the R426 to reach the substation compound. It would be 6 metres in width and would include a swale to one side for its length. It would be raised approximately half a metre above general field level. The existing junction with the R426 would be relocated to the south by 25 metres to allow improved sightlines.

New Connection to Coolnabacky from Existing Moneypoint to Dunstown 400kV Line

This component of the proposed development would be achieved by breaking the existing Moneypoint to Dunstown 400kV line and removing a tower, over a length of 150 metres. Two new single circuit angle masts (MDC2 and MDC8) would be inserted at the western and eastern ends of this break, respectively. These would have heights of 37.25 metres and 32.25 metres. New 400kV lines would lead southwards from these angle masts to converge on a double circuit angle mast (MDC3) at a minimum distance of about 280 metres. This would have a height of 55.5 metres. The lines would then continue southwards on either side of three intermediate double circuit masts (MDC4, MDC5 and MDC6), all 57.75 metres in height. The lines would then continue to another double circuit angle mast (MDC7), 55.5 metres in height before terminating at the horizontal gantry within the substation compound, noted in the preceding subsection of this report.

New Connection to Coolnabacky Substation from Existing Athy to Portlaoise 110kv Line

Approximately 150 metres of the existing overhead line between Athy and Portlaoise would be removed between the positions of intermediate polesets AP98 and AP99. These timber pole sets would be replaced with lattice steel line/cable interface masts approximately 21 metres in height and both within the substation compound. These are claimed to have a generally similar scale and character to the existing angle towers on this circuit. They would connect the existing 110kV line into the new 400/110kV substation.

New 110kV/38kV/MV Substation in Ballyragget

This new substation would be constructed adjacent to the existing 38kV/MV station approximately 1 kilometre north of the village of Ballyragget in County Kilkenny. It would be constructed on a site of approximately 1.5 hectares, the front (east) field of which currently accommodates the existing 38kV substation. . The site adjoins a cemetery to its north and fields in pasture to its west and south. On its east side it adjoins the public road, on the opposite side of which are further fields in pasture.

The proposed development would be located within a 70 metre by 61 metre compound surrounded by a 2.6 metre high palisade fence. The compound would be a minimum of 70.24 metres from the boundary with the R432 between Ballyragget and Abbeylax.

The 110kV building would be located 3 metres from the western boundary of the compound. It would be rectangular in plan measuring 49.83 metres by 11.31 metres. It would have a height to the top of its parapet walls of 11.875 metres. Its walls would be finished, predominantly in profile finish insulated metal cladding panels, but to provide variation, there would be occasional intervening microrib finish insulated metal cladding panels. It would have an extremely low pitched roof hidden behind its parapet walls. Internally, crane rails would run the length of the building to facilitate the movement of plant and machinery by means of a travelling gantry crane. The greater part of the building would contain two storeys with a battery room, control room, tea station and W.C. at ground floor level as well as stairs and GIS hoist areas at either end of the building. The first floor, covering approximately 80% of the footprint of the building at its centre, would support electrical equipment.

The 38kV building would be located towards the northeastern corner of the compound, 3 metres from its eastern boundary. Again, it would be rectangular in plan, measuring 24.36 metres by 7.98 metres. It would have a height to ridge line of 6.9 metres. It would thus be domestic in scale. It would have a pitched gable ended roof finished in synthetic slate and walls finished in sand cement white plaster, those on its side elevations being subdivided into three panels separated by expansion joints. Internally it would consist of a 38kV GIS room, a lobby/store and an MV switch gear room.

Between the 110kV building and the 38kV building there would be two open-topped and fronted transformer enclosures measuring 10.8 metres by 9.3 metres by 9.2 metres. These would have walls of reinforced concrete with a smooth unpainted finish. There would be three smaller roofless enclosures within the compound, one measuring 4.25 metres by 4.25 metres in plan for an arc suppression coil between the two transformer enclosures and two for transformer enclosures to the south of the 38kV building measuring 7 metres by 5.24 metres in plan.

The final mast on the new 110kV Coolnabacky Ballyragget overhead line, an earth wire line/cable interface mast would be located within the site 10 metres from the northeastern corner of the compound. Two out of three existing masts within the existing 38kV station compound would be retained within the site, but the remainder of the 38kV station would be dismantled on completion of the new substation. The existing masts would be used to mount line-cable interfacing equipment.

New 110kV Overhead Line between Ballyragget and Coolnabacky

This is described (EIS section 2.4.5) as consisting of 26 kilometres of overhead line and two short lengths of cable at the two substations. The overhead line would consist of 133 double wood polesets, 13.7 metres to 21.7 metres in height and 17 lattice steel angle masts from 18 metres to 24.5 metres in height, supporting three electrical conductors and two earth wires. At Ballyragget, the proposed overhead line would commence with a line/cable interface mast (angle mast BC1) of lattice steel construction and 21.5 metres in height. The polesets would consist of two timber poles, 5 metres apart. 2.5 metres from the tops of the poles there would be a steel cross arm 9.5 metres in width (or two arms on either side of the poles for additional strength for extra long line spans). The three electrical conductors would be suspended from these cross arms. At the top of the poles there would be (to support the earth wires). A typical poleset is shown on drawing PG567-D004-484-001. The angle masts would be open lattice steel structures with two cross arms, the lower one to support the conductor wires and the upper arm to support the earth wires. The lower arms would be 11 metres across and the upper arms 8 metres across. The angle masts are shown on drawings PG567-D004-463-001-Revision 001 and PG567-D004-463-002-Revision 001. The 17 changes of direction requiring angle masts are variously explained as avoidance of housing, avoidance of a farmstead, paralleling an existing 38kV line, paralleling a tree line for visual absorbency, avoidance of a Scenic Amenity Area, avoidance of a cSAC, avoidance of a privately owned heliport, crossing at a road bridge to minimise impact on a cSAC and avoidance of housing associated views towards an Area of Special Development Control. At the Coolnabacky end of the line, there would be approximately 190 metres of underground cable connecting the final line/cable interface mast (BC150) to the 110kV building in the Coolnabacky compound.

Uprate of the Existing Ballyragget – Kilkenny Overhead Line

This section would consist of the replacement of all structures along the existing line with similar structures along the same alignment. The upgraded circuit would consist of 21.9 kilometres of overhead line and two short lengths of cable at the Ballyragget and Kilkenny substations. There would be 90 double wood pole structures 13.7 to 21.7 metres in height and 14 lattice steel angle masts 13 metres to 24.5 metres in height supporting three electrical conductors. For approximately the first 1.73 kilometres out of Ballyragget and 1.84 kilometres out of Kilkenny the structures would support three electrical conductors and two earth wires. The structures would be similar to those described in the previous subsection. The line would commence with 215 metres of underground cable connecting the proposed 110kV building at

Ballyragget to a line/cable interface mast (BK1) on the far (east) side of the R432. This would be to avoid conflict with an existing telecoms mast and a 38kV line which would occur if the final mast was placed within the compound.

New Bay in Existing Kilkenny 110kV Substation

The proposed works would consist of the installation of outdoor air insulated equipment including a circuit breaker, disconnects and instrument transformers mounted on concrete plinths at the north western corner of the substation compound. They would also involve the removal of the existing Ballyragget to Kilkenny 110kV end mast.

Modifications to the Existing Athy to Portlaoise 110kV Line

This modification would consist of the retro-fitting of an earth wire onto the existing Athy-Portlaoise 110kV line from Coolnaback towards Athy (polesets AP98-AP85) for 2.32 kilometres and from Coolnaback towards Portlaoise (polesets AP99-AP105) for 1.29 kilometres. There would be 17 double wood polesets 13.7 metres to 21.7 metres in height. There would be four lattice steel angle masts 18 metres to 24.5 metres in height. The polesets and angle masts would support three electrical conductors and two earth wires. Two of these angle masts would function as earth wire/cable interface masts (AP98 and AP99) and have already been mentioned in the subsection on the new connection to Coolnaback from the existing Athy-Portlaoise 110kV line.

PLANNING AND POLICY FRAMEWORK

DELIVERING A SUSTAINABLE ENERGY FUTURE FOR IRELAND

This government White Paper was published in 2007. It sets out an energy policy framework for 2007-2020, with the objective of delivering a sustainable energy future for Ireland. It recognises that security of energy supply is crucial for the economy and society. Robust networks and electricity generating capacity are required to ensure consistent supply to consumers and all sectors of the economy. Amongst the underpinning strategic goals set out in the White Paper is ensuring that electricity supply consistently meets demand and delivering electricity and gas to homes and businesses over efficient, reliable and secure networks.

GRID 25 – A STRATEGY FOR THE DEVELOPMENT OF IRELAND’S ELECTRICITY GRID FOR A SUSTAINABLE AND COMPETITIVE FUTURE

This strategy document was published by EirGrid in 2008. It was a response to the above White Paper on energy. It predicted that demand in the Midlands region would grow by 40% by 2025 and by 45% in the South-East Region over the same period. Amongst its proposals for the Midlands Region was tapping into the existing 400kV line to strengthen the 110kV network around Portlaoise, providing capacity to supply the continuing strong growth in Kildare and Laois. For the South-East Region it envisages that an additional investment of approximately 830 million euro would be required to upgrade approximately 490 kilometres of existing network and to build new infrastructure. There would be a requirement to strengthen the network supplying the major cities and towns in the region. There would be reinforcement of current infrastructure including operating 110kV and 220kV circuits while maximising the use of existing corridors where possible. The proposals would ensure security of supply to major urban areas and to the region as a whole.

THE NATIONAL SPATIAL STRATEGY

This strategy is a 20 year planning framework designed to deliver more balanced social, economic and physical development between regions over the years 2002-2020. It notes that a feature of the most mature and successful economies is that they possess highly developed, well integrated infrastructure that supports movement, i.e. public and private transport, and energy and communications networks. It identifies nine medium sized hubs which would work together to promote regional development in their areas. Kilkenny is one such hub. Hubs form the third tier in a hierarchy with Dublin as the top tier followed by “gateways” of Cork, Limerick/Shannon, Galway and Waterford and proposed “gateways” of Dundalk, Sligo and the linked gateways of Letterkenny/Derry - Londonderry and Athlone/Tullamore/Mullingar.

At section 3.7.2, on energy, the strategy notes that reliable and effective energy systems, such as gas and electricity to power industry and services are key pre-requisites for effective regional development. It finds that enhancing both the robustness and choice of energy supplies across the regions through improvements to the national grids for electricity and gas is a prime consideration in terms of spatial policy. It recognises the need to liaise with the operators of the transmission and distribution grids, particularly in the environs of towns, to ensure the continued availability of corridors for

overhead cables and continuity of supply for existing and new users of electricity.

REGIONAL PLANNING GUIDELINES

The Regional Planning Guidelines for the South-East Region 2010-2022

The area of the South-East Regional Authority encompasses Counties Kilkenny, Carlow, Wexford, Waterford and South Tipperary. The guidelines for this region replace those originally published in 2004. They provide a strategic planning framework for the South-East Region with the objective of implementing the National Spatial Strategy at regional level and achieving balanced regional development. They incorporate high level policies informing and advising local authorities in the preparation and review of their development plans, thereby providing an integration of planning and development policy from national to regional to local level.

Section 6 of the Regional Development Plan is on communication/energy/regional climate change strategy.

Objective PPO 6.3 is that local authorities, the private sector, energy production and supply companies are encouraged to formulate sustainable energy policies which seek, inter alia, to ensure security of energy supply in order to support economic and social development. At sub-section 6.2.3.2 on the National Transmission/Distribution Network, the South-east Regional Authority recognises the need to increase electrical infrastructure which will be required within the region, including development of new “main” 400 kV lines and 110 kV transmission lines and equipment. It envisages that the electrical distribution network will be upgraded/maintained as required in order to ensure quality of power supply and minimise electrical faults. Objective PPO 6.5 is to support the sustainable development and expansion of the grid network and future connections to renewable sources of energy (including Gate 3 Projects), subject to appropriate assessment of all necessary environmental considerations.

Section 3 of the guidelines sets out their strategy. Sub-section 3.2 sets out the strategic goals amongst which are A4 – ensuring that supporting infrastructure such as telecommunications and energy supply networks are available and have sufficient capacity to ensure growth in enterprise activity and A9 – supporting the development and improvement of key economic infrastructure, such as energy generation and transmission networks which are essential for the continued development of the region.

The Regional Planning Guidelines for the Midland Region 2010 – 2022

The Midland Regional Authority covers the counties of Laois, Offaly, Westmeath and Longford. The current guidelines supersede the original regional planning guidelines published in 2004.

Chapter 5 of the guidelines sets out a transport and infrastructure strategy. At sub-section 5.8.1, on electricity transmission, it is recognised that an efficient reliable and cost effective electricity supply is a key resource for regional development. It is noted that the transmission reinforcement projects for the Midland Region are, in the short term, driven by the need to increase the security and quality of supply to key parts of the network. There is also an identified long term need to reinforce transmission infrastructure equipment throughout the region so as to facilitate the integration of new wind generation that is associated with meeting the commitment of providing 40% of the nation's energy demand from renewable sources.

Sub-section 5.8.1, on electricity transmission, states that an efficient reliable and cost effective electricity supply is a key resource for regional development. "EirGrid 25" outlines that without investment in the region's electricity transmission network, there would be no capacity over the next 5-10 years and the reliability of the supply would fall below normal international standards. It notes that in order to avoid such a scenario, EirGrid have planned key investments through upgrading of the transmission network and new circuit build and reinforcement to cater for continued demand growth in the linked gateway towns of Athlone, Tullamore and Mullingar and the principal towns of Longford and Portlaoise. It notes that the transmission reinforcement projects in the region in the short term are driven by the need to increase the security and quality of supply to key parts of the network. Policies TIP 31 and TIP 32 are as follows:

TIP31: "The policies, plans and programmes of the key energy agencies and the local authorities should be tailored to ensure that the energy needs of the future population and industry within the designated growth towns and across the Midland Region can be delivered in a sustainable and timely manner" and

TIP32: "Support and promote the sustainable improvement and expansion of the electricity transmission and distribution network that supplies the Midland Region".

DEVELOPMENT PLANS

The Laois County Development Plan, 2011-2017

The greater part of the proposed development would be located within the functional area of Laois County Council. It is thus affected by the provisions of the Laois County Development Plan, 2011-2017.

Chapter 9 of the development plan is on energy and telecommunications. Section 9.5 is on electricity. It notes that EirGrid is the state owned independent transmission system operator and market operator in Ireland. It is the role of EirGrid to deliver quality connection, transmission and market services to electricity generators, suppliers and customers utilising the high voltage electricity system. It notes that in this capacity it is proposing to reinforce the network in the Laois – Kilkenny region by way of constructing a new circuit between the two counties. The proposed new transmission infrastructure would consist of a 400/110kV substation situated to the southeast of Portlaoise, the location of which had yet to be determined. The existing 400kV Moneypoint – Dunstown and 110kV Carlow – Portlaoise overhead lines would be looped into the new substation. There would be a 110kV substation located adjacent to the existing 38kV electricity substation at Ballyragget in County Kilkenny. There would be a 110kV circuit between the proposed 400/110kV substation and the proposed 110kV substation. It notes that these transmission projects are required to address the network problems associated with the increase in load demand in the local area over the last number of years, together with the growth in forecast demand in the future. It notes that these projects **“which shall fully comply with the policies/objectives provided within the plan, in relation to protection of environmental vulnerabilities and sensitivities”** would ensure that an adequate level of security of supply and quality of supply is maintained to the whole region.

Within Chapter 9 of the development plan, policy ET9/P01 is to facilitate energy infrastructure provision, including the development of renewable energy sources at suitable locations so as to provide for the further physical and economic development of County Laois. Policy ET9/P14 is to support and facilitate the development of enhanced electricity and gas supplies and associated networks to serve the existing and projected residential, commercial, industrial and social needs of the county. Policy ET9/P17 is to support the statutory providers of national grid infrastructure by safeguarding strategic corridors from encroachment by other developments that might compromise the provision of energy networks where strategic corridors have been identified. Policy ET9/P18 is to protect areas of recognised landscape

importance and significant landscape views from construction of large scale visually intrusive energy transmission infrastructure. In such circumstances, it is an objective to seek alternative routing or transmission methods. Policy ET9/P19 is, only in cases where feasible, to require the provision of electricity cables underground, especially in the urban environment, and generally within areas of public open space in the interest of visual amenity. Policy ET9/P21 is to ensure that the development of high tension power lines will be restricted, and that new high tension lines will not be permitted adjoining existing dwellings, except where no other alternative can be shown to exist.

Special emphasis is given to Policy ET9/P24. This is to facilitate the sustainable provision of energy networks in principle, provided that it can be demonstrated that

- the development is required in order to facilitate the provision or retention of a significant economic or social infrastructure,
- the route proposed has been identified with due consideration for social, economic, environmental and cultural impacts,
- where impacts are inevitable mitigation measures have been included,
- where it can be shown the proposed development is consistent with international best practice, and
- that any such projects fully comply with the policies/objectives of the development plan in relation to protection of environmental vulnerabilities and sensitivities.

Chapter 12 of the development plan is on environmental management. It includes Section 12.5 on water quality and subsection 12.5.2 on groundwater protection. It notes that sensitive aquifers which form part of the groundwater network require protection and careful management. A county aquifers protection plan is shown on Map 1.12.1 within this chapter. Policy ENV 12/P04 is to protect groundwater sources by way of aquifer protection zones. Policy ENV 12/P07 is to ensure that developments that may adversely affect water quality will not proceed, unless mitigatory measures are employed, such as settlement ponds, interceptors, etc.

Groundwater vulnerability is shown on Map 1.12.3 of the development plan. In the development plan this map is at a very small scale, but appears to show the area in the vicinity of the proposed Coolnabacky substation as having either high or moderate groundwater vulnerability. Water source protection zones are shown on Map 1.12.4 of the development plan. Again, the version of this map included within the development plan is at a very small scale, but it

appears to show a source protection area extending by about 5 kilometres south of Kyle.

Section 10.10 of the development plan relates to flood risk. It notes that the planning authority has adopted policies for a more rigorous assessment of flood risk, having regard to the EU Floods Directive and the Planning System and Flood Risk Management Guidelines (2009). Policy TT10/P80 is to adopt a precautionary approach to flood risk in development management decisions.

Section 11.4 of the development plan is on water conservation. Policy WS11/P10 is to protect groundwater resources and abstraction points. Policy WS11/P11 is to establish zones of protection for aquifers and control development within these zones.

Chapter 13 of the development plan is on Natural Heritage. Section 13.9 of the development plan is on landscape. It notes that a Landscape Character Assessment was prepared to identify specific areas characterised by sensitive landscapes. This is shown on Map 1.13.6 within this chapter. It shows that the northern part of the proposed development to a point a short distance north of the village of Timahoe would be located in a Lowland Agricultural Area, while the remainder of the area down to the border with County Kilkenny would be located in a Hills and Upland Area.

Subsection 13.9.2 on Lowland Agricultural Areas notes that this landscape character type covers the largest proportion of County Laois. It is comprised primarily of pastoral and tillage agriculture. It is generally a flat open landscape with long range views towards the upland areas. Field patterns tend to be of large scale and are generally bounded by deciduous hedgerows containing mature trees. It has been developed more extensively than other landscape character types, particularly in the north and east where there is development pressure from the large towns, as well as the Dublin metropolitan area. This has resulted in significant changes to the landscape character and it is stated to be crucial that future development of the area is carried out sensitively and with particular reference to the rural nature of the landscape. Much of the lowlands have an enclosed character with well-treed road corridors, dense hedgerows, parkland and areas of woodland.

Subsection 13.9.1 of the development plan is on Hills and Upland Areas. It is noted that though lacking in terms of dramatic peaks, hills and uplands are a prominent feature of the county. From the top of these hills panoramic views of the lowland landscapes of Laois and adjacent counties are gained. It is noted that there is extensive mono-type afforestation and marginal agriculture in these areas. Field systems and their enclosures are generally absent. The

hills and uplands represent some potential in terms of tourism development, but at present they are somewhat isolated as separate entities. Policy NH13/P29 is to protect the positive contribution that views across adjacent lowland areas and landmarks within the landscape make to the overall landscape character. Policy NH13/P30 is to respect the remote character and existing low density development.

The Kilkenny County Development Plan 2008-2014

The southern part of the proposed development passes through County Kilkenny. It is thus affected by the provisions of the Kilkenny County Development Plan 2008-2014.

Chapter 9 of the development plan is on infrastructure and environment. At Section 9.8, it is recognised that the availability of energy is of critical importance to facilitate new development. It is noted that the National Development Plan, 2007-2013 sets out policies for the provision of electricity from both renewable and non-renewable sources. Subsection 9.8.1 states that the planning authority, in support of sustainable development and efficient energy utilisation, supports the infrastructural renewal and development of electricity networks in the region.

Chapter 8 of the development plan is on heritage. Subsection 8.2.1, on designated natural heritage sites of international and national importance notes that the habitats in the county of international and national importance are designated under EU and national legislation. It recognises four categories of designated site, amongst which are Special Areas of Conservation. Table 8.1 lists the designated natural heritage sites of international and national importance in the county. They include the River Barrow and River Nore candidate Special Area of Conservation. Policy H5 is to protect natural heritage sites designated in national and European legislation. Policy H6 is to assess all proposed developments (individually or in combination with other proposals, as appropriate) which are likely to impact on designated natural heritage sites or those sites proposed to be designated. Policy H7 is to consult with the prescribed bodies and relevant government agencies when assessing developments which are likely to impact on designated natural heritage sites or those sites proposed to be designated. Policy H8 is to ensure that any development in or near a designated natural heritage site will avoid any significant adverse impact on the features for which the site has been designated. Policy H9 is to require an appropriate environmental assessment in respect of any proposed development likely to have an impact on a designated natural heritage site, or those sites proposed to be designated.

Subsection 8.3.1 is on Areas of High Amenity. This notes that the planning authority established Areas of Special Control within the county in the 1986 county development plan and that this was continued in the 1994 county development plan. The designation was amended to Areas of High Amenity in the county development plan of 2002. While it is intended that the Landscape Character Assessment would be the main guiding force for the assessment of developments in the county, the Areas of High Amenity are being retained. This is to allow the development of the Landscape Character Assessment policies in an historical policy context. As with all areas of the county, a high standard of design and siting will be required for all development in the Areas of High Amenity. Areas of High Amenity are listed in Appendix F of the development plan. Amongst these is area 2 – lands bounded by roads 119, 137,146, 122 and 96, (i.e. the vicinity of Cromwell’s Road).

Subsection 8.3.2 of the development plan is on views and prospects. The development plan recognises a need to protect and conserve views and prospects adjoining public roads and river valleys throughout the county, where these views are of high amenity value. The views and prospects to be preserved and protected are contained in Appendix F of the plan and are shown on Figure 8.1. Amongst these are V12 – views overlooking Castlecomer and Ballyraggett on the Castlecomer/Ballyraggett Road R694 between its junction with road no.1227 and 250 metres southeast of road no. 1063 and V19 – view west towards the Slieve Bloom Mountains on road nos. 96 and 110 at the junctions with road nos. LS5839 and LS5846 (Ballymartin Crossroads). Policy H52 is to preserve and improve places or areas from which views or prospects of special amenity value exist.

Subsection 8.3.3 is on Landscape Character Assessment. A report on Landscape Character Assessment was prepared in 2003 and is included as Appendix C of the development plan. Four broad categories of landscape unit types are identified, namely Upland Areas, Lowland Areas, River Valleys and Transitional Areas. The power line route would pass through the last three types.

WRITTEN SUBMISSIONS

Laois County Council

The submission from Laois County Council is based on the headings set out in a letter from the Board dated 29th January 2013.

In relation to the main relevant development plan provisions relating to the subject site and surrounding area it refers to the terms of its rural housing policy as set out in the Laois County Development Plan, 2011-2017 Section 3.24.

In relation to the planning history of the site and surrounding area, it refers to 11 permissions for houses, extensions to houses or domestic garages on sites within a 100 metre buffer of the substation site and a 100 metre buffer on either side of the transmission line. The planning authority notes that the drawings accompanying the EirGrid application indicate a 600 metre corridor for the power line and refers to A3 drawing nos. PE687-D261-026-012, PE687-D261-026-004-01. In addition to these applications, Laois County Council notes a pre-1997 application, namely its Reg. Ref. 81/596 – permission for retention and extension of gravel pits at Esker, Coolnaback, Timahoe on lands approximately 160 metres distant to the south and west, granted to Denis J. Lowry. The quarry was registered under the planning authority's reference QY/188 under Section 261A of the Planning and Development Act, 2000, as amended.

Under the heading, relevant national, regional and local policies Laois County Council quotes from Chapter 9 of its development plan on “Energy and Communications”. It quotes in particular, the Core Aim and Section 9.5 on Electricity, as quoted earlier in this report. In terms of regional policy, the submission quotes from the Midland Regional Planning Guidelines, 2010-2022, affecting the region in which the county is located and also from the immediately adjoining area covered by the South-East Regional Planning Guidelines 2010-2022. It is noted that amongst the key economic issues identified for the midland region under Section 1.7.1 of the Guidelines is the need to provide the critical enabling infrastructure needed to attract further investment into the region. Amongst the economic development policies identified at Section 3.5 of the Guidelines is EDP9 “**engage with and facilitate, where appropriate, the key infrastructural providers, in order to meet the efficient and timely delivery of key infrastructure, in a sustainable manner, necessary to support the regions growing and diversifying economy**”. The submission quotes extensively from Section 5.8.1 on electricity transmission, as set out earlier in this report, part of Section 5.10 on “Transport and Infrastructure Policies – Energy Provision”, namely

TIP31: “The policies, plans and programmes of the key energy agencies and the local authorities should be tailored to ensure that the energy needs of the future population and industry within the designated

growth towns and across the Midland Region can be delivered in a sustainable and timely manner” and

TIP32: “Support and promote the sustainable improvement and expansion of the electricity transmission and distribution network that supplies the Midland Region”.

The submission notes that there are numerous general and specific references to the proposed development in the South-East Regional Planning Guidelines 2010-2022. At Section 6.2.2, the regional authority endorses the EirGrid document Grid 25 for national electrical grid development from 2008-2025. Section 6.2.3.2 of the Guidelines on the National Transmission/Distribution Network, is quoted, as summarised earlier in this report.

In terms of national policy, the submission refers to the National Spatial Strategy, 2002-2020, the National Development Plan, 2007-2013, the Government White Paper on Delivering a Sustainable Energy Future for Ireland 2007-2020 and Grid 25 – a Strategy for the Development of Ireland’s Electricity grid for a Sustainable and Competitive Future, 2008.

Section 3.7 of the National Spatial Strategy, 2002-2020 is quoted insofar as it refers to achieving spatial balance through enhanced capacity for the movement of people, goods, energy and information, the building up of physical networks of infrastructure, including energy, and its acknowledgement that a feature of the most mature and successful economies is that they possess highly developed, well integrated infrastructure supporting movement, i.e. public and private transport and energy and communications networks. It regards reliable and effective energy systems as key prerequisites for effective regional development. Amongst the prime considerations in terms of spatial policies relating to energy is enhancing both the robustness and choice of energy supplies across the regions, through improvements to the national grids for electricity and gas. The trend of growing electricity demand in a liberalised market environment raises spatial planning issues in relation to

- Priorities for reinforcing the transmission and distribution networks.
- Locations where additional new loads and generation can be accommodated.
- Good local planning practice.

The National Development Plan, 2007-2013 notes that the ability of the economy to perform successfully depends critically on the supply of adequate affordable and environmentally sustainable energy. Security of supply is of paramount importance in ensuring the continued economic development of the country. Without an expectation and delivery of a secure supply of energy, investment and output will suffer. The Plan notes that during its lifetime, the main focus of investment by EirGrid will entail improvement of the transmission network for electricity to accommodate increased usage and enhanced security of supply.

The submission quotes the Government White Paper on Delivering a Sustainable Energy Future for Ireland 2007-2020. Amongst the underpinning strategic goals of this White Paper are ensuring that electricity supply consistently meets demand and delivering electricity to homes and businesses over an efficient, reliable and secure network. It envisages that substantial extension and upgrading of the electricity network infrastructure will continue over the medium-term in line with economic, social and regional development imperatives. The White Paper will ensure, under the National Development Plan, that the semi-state energy companies deliver the necessary infrastructure development and refurbishment on a timely basis to 2013 and beyond. Regional development requirements will be supported through the major electricity investment programme underway and planned by ESB networks in the high voltage transmission network and distribution network and connections to 2010 and beyond. Through EirGrid's Grid Development Strategy 2007-2025 and in the light of the All-Ireland Grid Study, the necessary action would be ensured so that electricity transmission and distribution networks can accommodate, in an optimally economic and technical way, the targets for renewable generation for the island to 2020 and beyond.

Grid 25, a Strategy for the Development of Ireland's Electricity Grid for a Sustainable and Competitive Future, 2008 is quoted, including its proposals for grid development in the midlands involving an additional investment of approximately €310 million through upgrading 225 kilometres of transmission network and new second build, tapping into the existing 400kV line to strengthen the 110kV network around Portlaoise to provide capacity to supply the continued strong growth in Kildare and Laois.

In relation to European sites and National Heritage Areas which might be affected by the proposed development, it is noted that the closest Natura 2000 site to the proposed substation at Coolnabacky is the River Barrow and River Nore SAC (site code 2162) at Stradbally, County Laois, about 4.5 kilometres to the northwest and the Ballyprior Grassland, County Laois, approximately

3.5 kilometres due east. A short section of the transmission line would traverse the River Barrow and River Nore SAC due north of Boleybeg, County Laois. It is noted that a Natura Impact Statement was prepared by the applicant and that this found that subject to correct implementation of all mitigation measures, the conservation objectives for the SAC would not be compromised either by the proposed development itself or by any cumulative effects. No significant impact is anticipated on any of the species and habitats for which the site is designated.

Timahoe Esker, about 400 metres to the south of the substation site at Coolnaback, is a proposed Natural Heritage Area and also a National Nature Reserve. This supports broad leaved woodlands and is regarded as one of the best examples of the few remaining intact eskers in County Laois. Subject to correct implementation of appropriate mitigation measures, it would not be unduly impacted by the proposed development.

In relation to protected structures, architectural conservation areas, etc., it is noted that the majority of architectural, archaeological and cultural heritage features were designed out of the proposed development. No protected structures or architectural conservation areas are in the vicinity of the proposed substation at Coolnaback, nor would the transmission line pass over or close to any such structures or areas. Nevertheless, it is recommended, should the Board decide to grant permission for this development, that any lands containing Recorded Monuments or newly discovered sites to which access was not permitted at the time of survey should be inspected by an archaeologist prior to commencement of construction works.

In relation to the availability and capacity of public surface water drainage facilities and any history of flooding relevant to the site, it is noted that there are no public surface water sewers at or directly proximate to the proposed substation at Coolnaback. A countywide flood risk assessment was carried out as part of the making of the county development plan. This shows that the substation at Coolnaback would be situated outside Flood Zones A and B. The transmission line itself, over short lengths, would traverse flood zones in an area associated with the Timahoe River to the southeast of the Coolnaback substation site, in an area associated with the Owenbeg River due north of Boleybeg and in an area associated with the Ironmills River due southeast of Ballinakill. However, the planning authority does not consider that this would be in contravention of the Planning System and Flood Risk Management Guidelines for Planning Authorities.

In respect of the assessment of landscape status and visual impact, the submission quotes Section 4 of the county development plan which states, with regard to overhead cables, substations and communication masts, that their impact on landscape character is a factor of their visual prominence, size and scale, as well as their location in sensitive landscapes such as archaeological sites or areas within scenic vistas. The convergence of a number of overhead cables or the massing of a large substation or number of masts is noted to adversely affect landscape character, depending on the state of the landscape in question. The submission notes the seven landscape character types in the county and that the majority of the transmission line would be situated in a Hills and Uplands Area. The development plan notes that from the tops of the hills in this area, there are panoramic views of the lowland landscapes of Laois and the adjacent counties. The hills also act as orientating features.

The submission notes that the substation at Coolnabacky would be located in a Lowlands Agricultural Area. The substation buildings are of a very large height and scale. However, having regard to their location at a substantial distance from the public road, their proximity to a large disused quarry with high banks, the presence of in-situ screening, the low lying topography of the field, the planned external treatment of the facades (cladding and stone), as well as additional landscaping and the installation of substantial berms, it considers that the visual impact of the buildings would not be unduly obtrusive. Its proposed mast structures are of such a height, scale and design as would cause visual impact in the local area and further afield. They would also impact on the nearest residential properties. The planning authority considers that given the prevailing landscape type in the area, characterised by large flat tillage fields, they could not be effectively screened. Accordingly, the planning authority recommends that some undergrounding of services should be considered, should the Board decide to approve the proposed development. Revised plans should be submitted to the planning authority prior to commencement of works.

The planning authority notes the makeup of the 400kV link from the proposed Coolnabacky substation to the existing Moneypoint -Dunstown 400kV line. It acknowledges that the line and structure positions were selected to minimise impact on the environment by paralleling an existing transmission line and avoiding locating support structures in hedges. The route is the shortest possible. Despite the fact that there is already a number of in-situ masts associated with the existing 400kV line in the area, it takes the same view of the proposed 400kV link as the proposed substation. Again, it recommends that some undergrounding of services might be considered should the Board be disposed to grant approval for this development.

The planning authority notes the works involved in connecting the existing 110kV Athy – Portlaoise overhead power line into the proposed Coolnabackey substation. It takes the same view of this element of the proposed development as it does to the masts at the proposed substation and the 400kV link to the existing Moneypoint – Dunstown power line. Again it recommends some undergrounding of services, in the event of permission being granted.

In relation to the proposed 110kV overhead line between Ballyragget and Coolnabackey substations the submission notes that this would consist of 26 kilometres of overhead line and two short lengths of cable at Ballyragget and Coolnabackey substations. There would be 143 double wood polesets from 13.7 metres to 21.7 metres in height and 17 lattice steel angle masts 18 metres to 24.5 metres in height, all supporting three electrical conductors and two earth wires. The planning authority considers that the proposed mast structures are of such a height, scale and design as to cause visual impact in the local area and further afield. They would also impact on the nearest residential properties. As the landscape is characterised by large flat tillage fields, it would be virtually impossible to effectively screen them. Again, the planning authority recommends that some undergrounding of services should be considered, in the event of the Board deciding to grant approval. The planning authority considers the timber polesets to be less obtrusive. Their timber construction would allow them to be assimilated into the landscape far more readily than the industrial type steel masts. Furthermore, the landscape type in which this overhead line would be located, “Hills and Upland Areas” is considered to be more receptive to the proposed development than the “Lowland Agricultural” landscape type at the Coolnabackey substation.

The planning authority comments, at a general level, that the photomontages are based on photographs taken at a time of extensive foliage. This would obviously be a lot less significant during the winter months. It requires clarification on the scale of the A3 route map as there appear to be discrepancies between the distances shown and the 1:2500 scale specified.

Laois County Council Road Design Section notes that the proposals are generally in accordance with the details discussed and agreed in the period August to September 2012. It has a number of requirements in relation to the proposed development. These include the following.

“A detailed Traffic Management Plan should be submitted and agreed in writing with the planning authority prior to commencement, in relation to the construction phase of the development.

A bond of €40,000 is required to address any repairs to the R426 strategic regional road which may result from the construction of the Coolnabacky substation. A road condition survey is required on this road between Timahoe Village and Money Cross, unless an undertaking is received that all construction traffic would access the site from the Money Cross direction, in which case the survey would only be required on the section between the site access and Money Cross.

Details of all permanent signage and road markings on the R426 strategic regional road should be submitted for acceptance by the County Council.

Details of the delineation of the site access from the adjacent farm access should be submitted for the written agreement of the County Council prior to commencement of construction.

A Stage Three Road Safety Audit should be submitted for the proposed development prior to opening. The recommendations of this Audit, the designer's response, the Audit Team's acceptance of the designer's response and the details of the measures to be adopted should be submitted to the County Council for consideration and approval. The Audit would not be deemed complete until all mitigation measures have been implemented.

There should be no risk of transformer oil spills or leakage outside the bunds. Details of the treatment of any spills or leaks outside the bunds should be submitted for the written agreement of the planning authority prior to commencement of development.

Details of the management of surface water from the concrete roadway within the substation including the treatment of oil spills, if any, should be submitted to the County Council prior to commencement of development."

The Environment Section of Laois County Council has reported in relation to the environmental carrying capacity of the subject site and surrounding area and the likely significant impact arising from the proposed development. It notes that an environmental report was prepared with the original submission addressing the impacts the development would have on a number of receptors, including ecology, soils, geology, water, air and climate and the interactions between these receptors. It is noted that the proposed route of the cable is partially within the protected area of the Nore Freshwater Pearl Mussel and it is important to ensure that discharges of silt laden waters or washings from concrete trucks do not enter any river or watercourse either directly or indirectly. The refuelling and servicing of construction machinery

requires to be strictly controlled to prevent accidental spillage of fuel or oils. Waste should only be removed by licenced contractors, particularly waste which may be hazardous, such as PCBs and other chemicals. The Environment Section has no objection to the granting of permission, as long as the mitigation measures indicated in the report are implemented.

The County Council's Water Services Section has also reported on this aspect of the proposed development. It refers to Map 1.12.4 in the county development plan showing Water Source Protection Zones. As there are no physical works proposed either within or traversing the Inner or Outer Water Source Protection Zone for the South East Regional Water Supply at Kyle and as all aspects concerned with the construction of the development is considered to deal adequately with any indirect impact that it might have on the protection zone, it has no objection to the proposed development.

In relation to the planning authority's view on the decision to be made by the Board, it acknowledges and supports the strategic importance of the proposed development as a critical element of physical infrastructure required to facilitate the future economic and social development of the county and the wider Midlands and South-East regions. It is recognised that the background and rationale for the proposed development is outlined in documents at county, regional and national level. Nevertheless, it recommends various amendments as set out earlier and its Roads Design Section seeks further information on a number of aspects.

In terms of community gain conditions, the planning authority recommends that such conditions be imposed in order to support local tourism, recreation and leisure initiatives. Such conditions should be **“in the form of direct provision of the specific project and an annual levy towards its on-going maintenance, or, alternatively, a once-off direct capital contribution towards provision of the specific project and an annual levy towards its on-going maintenance”**. A committee comprised of members of the local community, Laois County Council and the applicant would decide on the nature and extent of the specific community gain project to be developed.

In terms of development contributions, it is recommended that such contribution(s) should be imposed in accordance with the provisions of the Laois County Council Development Contribution Scheme. No special contribution conditions are recommended.

Kilkenny County Council

Kilkenny County Council has reported that it is generally satisfied that the project is consistent with the regional policy for the South-East and the County Council and City Council's local policy frameworks, namely the county and city and environs development plans.

The impact of the proposed development seems to have been mitigated as far as possible by using existing alignments and keeping new lines remote from residential, historical and ecological features within the landscape. While the site skirts an area of high amenity within Kilkenny, the planning authority, having considered the photomontages and route drawings, which include the positioning of the polesets and lines relative to dwellings, monuments and protected structures, is satisfied that no undue impact would arise on the landscape. The new Ballyragget (Moatpark) substation would be the biggest single element within Kilkenny. It would be well removed from residential development, the closest house being approximately 120 metres away. However, it would be within 170 metres of the River Nore SAC/SPA and 300 metres from the river itself. The substation would have a new septic tank and percolation area, but this appears to be designed in accordance with SR6 rather than the required EPA 2009 Code of Practice. There is nothing to show that a site suitability assessment was carried out. However, unless such an assessment showed the site to be completely unsuitable, it is not anticipated that the substation would have any significant impact on either the cSAC or SPA as no direct discharge is proposed.

The line crosses the River Dinin at polesets 48 and 49. This is part of the River Nore cSAC and the placement of these polesets could lead to some siltation during the anchoring process. It is recommended that the Board ensure that there are no undue discharges from the anchoring of either poleset.

The submission concludes that the project is of long-term importance to the county and to the South-East Region as a whole and, accordingly, from a strategic perspective, the planning authority supports the project. Within the county, any potential for negative impacts would be far outweighed by the benefits from increased energy security, allowing the South-East to attract the investment required for growth. The planning authority has no objection to the proposed development.

The Department of Arts, Heritage and the Gaeltacht

In terms of archaeology, the Department concurs with the recommendations outlined in the Cultural Heritage chapter of the environmental report lodged initially with the application. It notes that Tables 5.6.1 – 5.6.8 meet the requirements of the Department.

On nature conservation, the most important issue is to ensure that there would be no adverse impacts on the River Barrow and River Nore cSAC and SPA during the construction phase and in particular, on the freshwater pearl mussel species which are a qualifying interest of the cSAC and are an endangered species. The Board is referred to the detailed conservation objectives for this site which are available on the National Parks and Wildlife Service website. The Board should satisfy itself that the information submitted in the Natura Impact Statement is adequate to show that there would be no adverse impact on the integrity of the site with reference to the conservation objectives. In relation to Appropriate Assessment, the Board is referred to the Department's guidance document and to the EU Commission guidance on the **“Assessment of Plans and Projects significantly effecting Natura 2000 Sites. Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC.”**

The Department holds that where any additional information is deemed necessary, this should be requested as such and not conditioned as part of any planning permission. It is not possible to adequately assess the impact of the project without knowing the minimum standards and mitigation measures that would be in any construction methodology or plans. A condition for agreement of such plans in advance of construction would not be adequate. There must be certainty. The Board may wish to consult with an expert on freshwater pearl mussels or other relevant experts to ensure the mitigation measures contained in the Natura Impact Statement are adequate and may wish to add a condition to any permission that such an expert is taken on as part of the project. It is pointed out that licences would be required if there are any impacts on badger setts or birds' nests, including kingfisher nests. In order to apply for such licences or derogations, detailed surveys would be required of badger setts, bat roosts, otter holts and birds' nests. The environmental report indicates a possible impact on a badger sett, but that no otter holts were found. A re-survey would be required prior to construction, as animals can move around. The trimming of trees, indicated in the environmental report as being necessary every five years, should be carried out outside the bird nesting season.

Iarnród Éireann

Iarnród Éireann note that based on the submitted drawings, there is no crossing of operational rail lines and the crossings of old abandoned railway lines affect lines which are no longer in the ownership of CIE. Consequently, Iarnród Éireann has no comment to make.

Inland Fisheries Ireland

The observer states that it has no objection to the development, as proposed, subject to it being undertaken in accordance with the details as set out in the application. It considers that there is unlikely to be any serious long term adverse impact on the fisheries environment. It is noted that instream works required in salmonid waters would be carried out during the period from May to September. However, due to the lateness of salmonids spawning in the waters in question, works in rivers, streams and watercourses should not, except in exceptional circumstances and with the observer's approval be carried out during the period October to June inclusive. Should the Board be disposed to permit the development, a condition should be imposed to this effect.

In relation to temporary crossing structures over rivers and streams to allow for movement of plant, equipment and construction personnel, the observer requires that any or all watercourses requiring to be traversed should be effectively bridged, prior to commencement of works. It is pointed out that the design and choice of structure must, depending on the location, provide for passage of fish and macro invertebrates and the requirements to protect critical fish habitats, e.g. spawning grounds and wintering areas and prevent erosion and sedimentation. The preferred structure is the clear span "bailey bridge" type. The crossing of watercourses via natural or constructed fords is not acceptable. Should it be decided to grant approval, a condition requiring clear span structures should be specified.

Construction plant, vehicles, pumping equipment, etc. likely to be used in or adjacent to waters may previously have been used in waters containing invasive species. This issue does not appear to have been addressed in the planning documentation. High pressure steam cleaning is one method considered acceptable to prevent the spread of hazardous invasive species and pathogens. Should it be decided to grant approval, appropriate conditions in relation to this issue should be specified.

The Health Service Executive

The observer notes that concerns have been raised by the public regarding the potential contamination of groundwater, in particular at the Coolnabacky site where groundwater vulnerability ranges from moderate to high. It is recommended that the mitigation measures contained in Environmental Report are implemented in full. Appropriate monitoring of groundwater should be carried out on an ongoing basis.

The location(s) of any construction yard should be agreed with the relevant planning authority and should be subject to the same controls as any development.

A rodent control programme should be included in the Construction Environment Management Plan.

Public concern has been raised regarding the possible risk to groundwater from the maintenance of the transformers (oil handling, changing, storage and disposal). All mitigation measures as outlined in the Construction Environmental Management Plan should be fully implemented.

A person should be designated to deal with any community concerns on traffic, dust, noise, or other nuisance complaints in relation to construction yards.

All mitigation measures outlined in the environmental report on noise, traffic, air quality, dust, waste etc. should be implemented in full.

The National Roads Authority

The National Roads Authority notes that the project route traverses the N10 and N78. It has no objection in principle to the proposal, subject to the safety and standards of the national roads being maintained through appropriate best practice construction methods. In this regard, there is a need for greater clarity in relation to the location of mast BK101 in proximity to the N10. No structures should be located within the fenceline/landtake of this route.

The South-East Regional Authority

The submission from the South-East Regional Authority notes the project description, the technical data of its components, landowner and community notification, construction methodology, the evaluation of undergrounding as an alternative technology and the relevant content of the South-East Regional

Planning Guidelines, noting in particular PP06.3, PP06.5, section 3.2, objective A9, section 6.2.2 and section 6.2.3.2. The submission concludes that the proposed reinforcement project and its objectives are supported and planned for at a national, regional and local planning level and that the project is consistent with relevant policies and objectives contained within the South-East Regional Planning Guidelines, 2010-2020.

Charlie Flanagan TD

The observer has serious reservations about the proposed 400/100kV substation in the Ratheniska area covering almost 3 acres. The area is known for its natural beauty, active farming and considerable heritage. There are strong local concerns and dissatisfaction with the proposed installation of overhead lines across the rural landscape. There is an excessive number of over-large pylons. It is submitted that an environmental impact study is essential to assess and quantify the potential impacts of this **“huge project”**.

An oral hearing is requested.

Sean Fleming TD

The observer seeks the submission of an Environmental Impact Statement. The Board is referred to correspondence between the observer and the applicant, copied with the observation.

The title of the proposed development is the Laois Kilkenny Reinforcement Project. While Portlaoise is currently served by four separate 110kV overhead lines, Kilkenny has just two, so that the Kilkenny issue must be addressed by the applicant. The applicant has stated that the security of supply problems really only affect Kilkenny substation and are not a direct issue for Portlaoise substation. The observer has already pointed out in correspondence with the applicant that a preferable location for the new substation would be where the 400kV line intersects with the 110kV line in Tipperary, not far from Kilkenny. It is submitted that there is no need to bring the substation further north up country to the Portlaoise area when it is really needed near Kilkenny. Having made this point to the applicant, it was then stated that the project was essential for upgrading the supply into Kildare, yet there is nothing in this application about improving the supply to Kildare.

It is submitted that a decision was made to locate the proposed substation near Portlaoise and that a small study area was then drawn up to examine the most suitable site within it. It is submitted that the study area for a new substation and upgrading the power supply to Kilkenny should have been the

entire length of the 400kV line from Moneypoint. No satisfactory environmental grounds have been put forward for not undertaking such an assessment. The decision appears to have been based on a statement in GRID 25 which refers to **“tapping into the existing 400kV line to strengthen the 110kV line network around Portlaoise”**.

The scale, mass and level of facilities in the proposed substation have little to do with the Laois Kilkenny Reinforcement Project. There is no identification of the need for the various bays in the substation and their number.

It is submitted that the essence of GRID 25 is to erect 400kV pylons across the country to transmit electricity to meet the demand on the east coast.

The submission rejects the estimates by the applicant on previous occasions on the cost of placing cables underground. It is in contradiction of the practice of the wind energy sector which places the cables from its turbines underground. It is submitted that wherever substations or generating stations are located there should be a cordon of at least a kilometre where all cables are placed underground to avoid the spider’s web effect where overhead lines converge on the station.

The observation includes correspondence between the observer and the applicant, as well as a copy of a letter sent to the Board during the period of the pre-application process and which was not accepted by the Board. This letter suggests, inter alia, that the proposed development is not properly strategic infrastructure as defined in the three categories in the Act and should be dealt with at planning authority level.

John Whelan, Senator

The observation submits that the proposed siting of the substation at Coolnabacky on an important and exposed aquifer poses a serious risk and danger to a crucial water supply and to public health.

The consultation process suffered serious shortcomings and it is submitted that the community has been misled and even duped by the applicant. The applicant has failed to fully disclose its plans and objectives which are far more wide ranging than has been stated at any consultation meetings. It is submitted that the real purpose of the present proposal is to **“prepare for wholesale and large scale connectivity to the grid from a massive range of windfarms being proposed by private commercial interests all across Laois and the Midlands”**.

The observer considers that the proposed development should not only be refused, but should actually be withdrawn. Failing this, he requests that a full and open public oral hearing be scheduled.

The submission includes a copy of the Board's record of the first pre-application meeting in connection with this project, as amended by the applicant and returned to the Board.

Councillor James Deegan, Laois County Council

The observer objects to the visual impact the proposed power lines and pylons radiating out from the proposed substation at Coolnabacky would have on the immediate area. The concentration of power lines and pylons on an industrial scale in this rural area would affect the landscape, property values and the lives of people living in the vicinity. He proposes that the power lines should be placed underground for a reasonable distance from the substation, suggested as 5 kilometres.

An oral hearing is requested.

Councillor Pdraig Fleming, Laois County Council and other Councillors

This submission objects to the proposed development on the basis of injury to the scenic rural/agricultural landscape, degrading of the historical character of the area, interference with scenic views, e.g. that from "the Windy Gap", detrimental effect on natural habitats, adverse impact on tourism, property devaluation, risk to an underlying aquifer serving 1500 homes and several schools, and stress.

The submission requests that an Environmental Impact Statement be prepared in order to examine the impact of the project in detail and that an oral hearing be scheduled.

Chambers Ireland

The submission from Chambers Ireland is supportive of the proposed development and notes that it is a subset of the broader Grid Link investment programme in the south and east of Ireland. They view the proposal as a vital piece of infrastructural investment that would ensure that the future power needs of the south and east regions are met. They consider that it would provide global and competitive levels of energy infrastructure necessary to underpin future business and industrial investments. It would enable Ireland to meet its 40% renewable energy targets by facilitating the transport of power

from regions where wind energy is produced to locations where it would be consumed.

Michael Brennan

The observer has an address at Cellarstown West, approximately 3 kilometres northwest of the termination of the project at the Kilkenny substation. The observer objects to the continued passage of a power line through the foot of his back garden. Prior to the previous upgrading of this power line, it was aligned clear of his property. When he objected at the time, he was assured that in the event of a future upgrade, it would be realigned again to avoid his property. He considers that it should be aligned over agricultural land and not a residential site with the possibility, in the near future of a second house being sought on the lands. He would like to see the power line relocated to the field where it was previously situated.

Arthur Drennan and Others

The observers have addresses at Ratheniska, Stradbally.

The observers are concerned that the proposed development could give rise to permanent and catastrophic damage in terms of “drying out” and/or major pollution of their water supply arising from pollution with possible health consequences.

There is concern that the proposed development would seriously interfere with the nature reserve at Timahoe Esker.

The proposed substation would be visually intrusive and out of place in “**such a beautiful, historical and geological area**” of County Laois.

It is claimed that the applicant has held in the past that this is a development which is not suited to bogland. However, it appears that the substation is to be located on land that was previously bogland based on old maps and local knowledge.

The site was assessed in May 2012, whereas November to May might have been more suitable.

Patrick Drennan

This observer also has an address at Ratheniska, Stradbally and is chairman and organiser of the Ratheniska Group Water Scheme.

The observer is concerned in relation to health as the proposed development would be three quarters of a kilometre from the water source at Tubberding, Kyle which supplies 340 houses in the Ratheniska area and beyond.

Maria Fingleton

The observer lives in Dublin at present, but owns a house at Money Upper approximately 2 kilometres north-west of the substation site at Coolnabacky. She intends to return to live there in the short term.

The observation points out that the proposed site at Coolnabacky is in a valley of immense beauty between Timahoe and Ratheniska close to the Rock of Dunamais, Oakvale Monastic site, Timahoe round tower and Stradbally Demesne. The observer refers to Oughaval Woods (approximately 5 kilometres to the north-east of the substation site) from which there are views to the south to Ballyprior Hill and Cullenagh Mountain and the triple hills of Coolnacarrick, Loughaghoe and Grange Upper. The woods are accessed by the N80 Stradbally to Carlow road, just outside Stradbally, above the historic Oakvale where the Book of Leinster was written.

The observer expresses concern in relation to the health implications of the pylons, the visual impact of the substation with numerous pylons and heavy cables emanating from it, the 24 hour lighting and the presence of tonnes of oil in close proximity to a natural aquifer and people's homes.

Seamus and Stephanie Fingleton

The observation claims that the consultation process has been less than transparent and the full extent of the project has only become known with the lodgement of the application. The greatest concern is the unexplained significant redundant capacity with the future potential plans for this spare capacity undisclosed.

There are discrepancies in the project justification. Is it for quality and security of supply, as stated in the Stage 1 consultant's report, or to ensure quality of supply to the wider Kildare, Carlow and Kilkenny region, as stated in section 2.3 of the development report?

It is implied that the project is premature pending the emergence of a consumption demand which would justify provision of greater security and supply.

There is a lack of cost benefit analysis between Options 1 and 2.

The observation presents, in tabular form, a comparison of the elements involved in Options 1 and 2 and concludes that a very basic analysis would suggest that Option 2 would be more cost effective. However, the planning report favours Option 1 **“as it involves the least new circuit length and adds the greatest amount of spare network capacity for future growth”**. The real justification seems to be to add spare capacity for future growth, but there is nothing in the planning report to show why such spare capacity would be required, whereas the contrary would appear to be the case.

Within the new Coolnabacky substation there are connections for another 2 x 400kV and 3 x 110kV and enough space to build additional capacity. The new line infrastructure which this implies should be clearly outlined in the planning report. It is unacceptable that a strategic infrastructure project should be disclosed in an incremental fashion. The two spare 400kV connections in the Coolnabacky substation would need a 400kV line of more than 15 kilometres, a length, which itself, would require an Environmental Impact Assessment.

There are concerns that the proposed development would facilitate new wind generation capacity in the region.

In terms of consultation, the planning report indicates the state agencies that were met and how it addresses the concerns of these bodies. It failed to meet the Ratheniska, Timahoe and Spink Substation Group.

The public consultation meetings outlined in the planning report disclosed only very high level information and this was done on an incremental basis, requiring attendance at many meetings.

There has been a lack of public consultation on the choice of option 1 over option 2, the line connections which would arise from the additional spare capacity and the possibility of underground cabling.

The site at Coolnabacky is in a completely rural location, whereas an industrial development of this scale should be restricted to an industrial area. It would have a significant visual impact on the rural landscape.

The basis for option decisions on cost is not transparent in the planning report and it fails to outline how it accounts for social cost or downstream economic opportunity costs.

Overall, the project is based on a weak and inconsistent justification lacking robust analysis. There are inconsistencies and the justification for the project appears to be adding extra network capacity.

The letter from Stephanie Fingleton expresses concern that there are plans for a gigantic industrial scale electricity substation just a few kilometres from the observer's home. There would be a proliferation of new power lines in the area. The new development could facilitate the construction of massive wind turbines in the area. The observer has not been consulted on the project to date and feels as though she has been excluded from the process. The response to the seeking of information about the broader energy project and the purpose of the substation has been evasive.

Thomas Freeman

The observer has an address in Naas, County Kildare. The observation commences by submitting that the applicant has insufficient legal interest in the lands over which it is proposed to erect the new 110 kV overhead line between Ballyragget substation and the proposed Coolnabacky Substation. The observer notes that the applicant is EirGrid PLC with the **consent and approval** of the Electricity Supply Board (observer's emphasis). In a letter addressed to An Bord Pleanála, the Electricity Supply Board states **"in order therefore not to impede the discharge by EirGrid of those functions, ESB, as the licenced transmission owner and the person with sufficient legal interest in the property, the subject matter of the attached application, for the purposes of the Planning and Development Act 2000 (as amended) hereby conveys its consent to the making by EirGrid of this application for planning permission/approval which EirGrid considers necessary."** (Observer's emphasis). The ESB letter to the Board purports to validate the application by giving consent and approval to the applicant. However, the ESB cannot confer its statutory rights to the applicant, an independent statutory body.

A letter from the applicants to the Department of Communications Energy and Natural Resources, obtained under Freedom of Information, includes a legal opinion and confirms that it is unlikely that the applicant has been granted wayleave powers under section 53 of the (Electricity Supply) Act 1927. It is noted that no letters of consent have been submitted from the relevant landowners and therefore it is submitted that the applicant does not have sufficient legal interest in the land in order to carry out the proposed development.

The observation notes that the planning report identifies permitted developments in close proximity to the centreline of the overhead line. It is pointed out that the types of planning applications that would typically occur in the vicinity of the proposed development are single rural dwellings. The applicant holds that any future conflicts in this regard can be resolved through the ESB/IFA Code of Practice for Survey, Construction and Maintenance of Overhead Lines in Relation to the Rights of Landowners. The Code of Practice provides that in future if the line interferes with the viable development of land, other than its cultivation, **“and the Board is so satisfied”** it will deal with the landowner in accordance with various clauses also included in the Code. The Code of Practice is included with the application, despite the existence of a statutory framework for dealing with such eventualities set out in sections 19 and 20 of the Electricity (Supply) (Amendment) (No.2) Act 1934. The Act provides that a person must advise the Board of the intention to construct a building within the relevant area of any transmission wire and for the Minister to prohibit such construction by order, if it would involve risk of injury to the public or to the occupiers of the building. The statutory power to prohibit, restrict or otherwise control the erection of buildings under or in the vicinity of an electricity line thus lies with the Minister and not the ESB or EirGrid. The code of practice cannot supersede the statutory procedure. It is submitted that the applicant must clearly set out the criteria and mechanisms for the operation of sections 19 and 20 of the 1934 Act to allow such criteria and mechanisms to be assessed, considered and commented on by affected landowners, interested parties and An Bord Pleanála.

Jim Lowry and Others

The observers have an address at Moorevalley, Timahoe, County Laois.

It was the expectation that the new adult generation of the observers would settle down **“in this quiet rural community”**. The proposed development would be a monstrosity. It would be injurious to visual amenity, a cause of cancer and lead to total property devaluation. The existing pylon near the observers' home is only a fraction of the size of the proposed high density power lines.

John Mannion

The observer has an address in County Galway, but is a regular visitor to Ballyroan, approximately 10 kilometres from the substation site at Coolnabacky.

The observer describes, at length, the rural nature and charm of the area around Ballyroan, Ratheniska, Timahoe and Spink. The proposed substation would be a grey monstrosity in an area that can be brown in spring, green in summer and golden in autumn. It would be a 40 foot high eyesore. It would require 1,210 loads of concrete being brought through this quiet area. It would lead to road damage. It would endanger the aquifer.

Chris Miller

The observer has an address at Vicarstown, approximately 11 kilometres north of the substation site at Coolnabacky.

The observation claims that the proposed development would, together, with Element Power's Greenwire project, create an undesirable power hub traversing the local area in Vicarstown and damaging the visual amenity and landscape of east Laois.

Matthew O'Connell

The observer has an address at Boleybeg, Abbeyleix, County Laois, approximately 5.5 kilometres east of Abbeyleix.

The observer is concerned about the proximity of the proposed power lines to a house which he intends to erect at this location (Laois County Council reg. reg. 11/526). The poles would be located within the site and the lines would cross over the site and would be directly in the line of vision of the front door of the house. It is submitted that this would lead to devaluation of the house and detract from the visual amenity of the landscape. Concern is also expressed in relation to the electromagnetic field which would be generated.

Henry Ramsbottom and Others

The observers are family members with addresses at Ratheniska, Ballygormilly North, Moore Valley and Lamberton, all in the vicinity of the proposed Coolnabacky substation. There is concern that the proposed development would be located on the locally important aquifer which feeds the Kyle Spring, the water source for the local community at Timahoe, Stradbally, Vicarstown, Ratheniska, Ballyline and Dysart. The GSI Groundwater Source Protection Zones Report, included as an appendix with the observation, recommends that particular care should be taken when assessing the location of any activities or developments which might cause contamination at the Springs. It recommends that further testing be

undertaken to delineate the western border of the Zone of Contribution of the Kyle Spring. However, this has not been done with this application.

In terms of site suitability, it is noted that old maps show that the substation site was bogland in the past. Local experts state that it was previously subject to flooding. The applicants inspected the site for flooding in May 2012, whereas the winter months would have seemed more suitable.

The proposed development would endanger Timahoe Esker, a national heritage site.

The RTS Group

This submission consists of 169 letters from local residents and organisations opposed to the proposed development. The letters are a mixture of individually composed submissions and standard type letters. In the case of the latter, some also include added handwritten notes. The letters cover a wide range of issues. There is concern in relation to the pollution of groundwater from the siting of the proposed substation at Coolnabacky over an aquifer serving approximately 4,000 households and seven schools over a 2,000 square kilometre area through at least eight group water schemes. There is a lack of engineering drawings, e.g. for the foundations for the substation with implications for the underlying aquifer. The water table is just 2 metres from the surface. There is concern also in relation to private wells.

The public consultation process has been inadequate. Information days were held at excessively short notice remote from the local area and were used for information gathering rather than dissemination. There was no direct consultation with local residents. There was no public consultation on the EIA screening report. In the case of one landowner, no maps were issued and there was no contact despite the 400kV lines crossing the landholding in two places.

The true purpose of the proposed substation has not been revealed. The need has not been justified and has been superseded by a fall in demand for electricity. There has been a lack of clarity on the meaning of “future proofing”. This is not a substation but a midland hub with 15-18 bays. Its real purpose is to take power from proposed windfarms and transfer this power to the United Kingdom.

There would be health risks from electromagnetic fields. There would be danger from “stray” currents affecting horses and livestock and the operation of electric fences.

There would be a risk of fire and explosion at the substation itself and also arising from the proximity of the power lines to existing hay sheds and a grain store.

The proposed substation would constitute an industrial scale building in a rural setting and would be contrary to the Laois County Development Plan. It would be akin to a major power station, several times bigger than Croke Park. It would be ten times greater in size than an observer's house, permission for the latter having been difficult to obtain due to being in the area of the aquifer. It would interfere with the view from the Rock of Donamaise. It would have an unacceptable visual impact on Timahoe Esker, just one of two protected eskers, nationally.

The proposed development would lead to property devaluation in the area and would preclude building on several potential house sites. Huge pylons and lines would interfere with picturesque views from the local GAA club and would traverse the lands of observers.

The substation would be located on a floodplain with over 30 townlands draining into the site.

There has been a lack of a non-technical description. Not enough time or expertise has been available to the local community to study the application. There has been an imbalance between the resources available to the local community and those available to EirGrid.

The proposed development would affect wildlife including pheasants, buzzards, owls and hawks.

There would be a need for a Major Emergency Plan in the event of an accident.

There would be a risk to microlites using a local airfield and to persons on the ground from such microlites in the event of an accident.

Cost is not a sufficient justification for not placing the cables underground.

The proposed substation would destroy tourism in the local area.

The proposed development would be of no benefit to County Laois.

A large number of the letters request the holding of an oral hearing.

FURTHER WRITTEN SUBMISSIONS

Following the submission of the Environmental Impact Statement to the Board on 16th August 2013, and the re-advertisement of the proposed development, a number of additional written submissions were received by the Board. These were as follows.

Department of Arts, Heritage and the Gaeltacht

This submission notes that the greatest concern is in relation to any sediment release which might occur at construction stage into the River Barrow and River Nore Natura 2000 candidate Special Area of Conservation. Any additional sediment could negatively impact on the freshwater pearl mussels and particularly the Nore Freshwater Pearl Mussel. It recommends that in order to avoid such a situation, all the mitigation measures detailed in the EIS and NIS should be made a condition of any planning permission.

The Health Service Executive

The report from the Health Service Executive recommends that the mitigation measures proposed to protect the water environment be implemented in full, including on-going water quality monitoring, that a rodent control programme be included in the Construction Environmental Management Plan, that a person be designated to deal with community concerns and that all mitigation measures outlined in the Schedule of Commitments be adhered to in full.

The National Roads Authority

The National Roads Authority notes that the applicant has clarified the position of poleset BK101 in response to the Authority's earlier letter. The response clarified that the poleset would be retained in its existing position on county council owned land. The Authority welcomes this clarification.

An Taisce

An Taisce appreciates the strategic argument for the reinforcement project to enhance the electricity network. It considers that the impact on human beings and residential amenity has been wholly underestimated in the EIS. It is considered that cumulative impacts of this project together with planned, proposed and constructed wind turbines in the vicinity has not been adequately considered.

John Mannion

The letter from the objector is on similar lines to his original letter. He continues to be concerned about the importation of 1,210 loads of concrete and the effect of the proposal on a largely unspoilt rural area..

The Ratheniska, Timahoe and Spink (RTS) Substation Action Group

Three letters were received from the RTS Substation Action Group following the submission of the EIS.

The first letter claims that the non-technical summary has been inadequate and amounts to a “cut and paste” exercise from the main EIS report. The public is thus deprived of a proper opportunity to participate in the decision making process. They request the submission of an adequate non-technical summary complying with Article 5(1) of the EIA Directive 2011/92/EC.

The second letter from the Substation Action Group again refers to the seeking of the submission of an adequate non-technical summary and notes that they are not in a position, financially, to employ the required technical and legal consultants to represent them at an oral hearing. They claim that a decision on such expenses is necessary under the Aarhus Convention and the Charter of Human Rights.

The third submission is from a number of individual members of the Action Group, John and Anne Lowry, John Lowry, as Chairman of the Action Group, Ray Ryan and David Malone. There is again concern about the adequacy of the non-technical summary, the adequacy of the public participation process, the risk of flooding, the non-recording of many local wells and the lack of a contingency plan in the event of the contamination of the Kyle Spring. There has been a failure to record pine marten, red squirrels and kingfishers which have been seen in the area. The submission from David Malone of Environmental Action Alliance Ireland has concerns in relation to Strategic Environmental Assessment, the alleged failure of the EIS to meet with the requirements of Article 5 of the EIA Directive, the inadequacy of public participation, alleged failure to take appropriate precautions to protect the Annex II freshwater pearl mussels and infringement of Article 37 of the Charter of Fundamental Rights.

THE ORAL HEARING

An oral hearing was held in relation to this proposed development from 4th to 7th November and from 14th to 15th November, 2013. A recording of this hearing is available to the Board. Many of the participants spoke to written submissions and these, too, are available to the Board. Within my assessment, which follows, I note many of the salient points raised during the course of the hearing.

ASSESSMENT

A number of issues arise in considering this application, the Environmental Impact Statement and the Natura Impact Statement. I assess these issues under the relevant sub-headings which follow.

Legal Matters

The validity of the application

Both in the original written submissions and at the oral hearing, the validity of the application was questioned on the basis that it should, at the outset, have included an Environmental Impact Statement. One of the objections in this regard (Peter Sweetman) notes that the European Communities (Environmental Impact Assessment Amendment) Regulations, 1999 refers, at Schedule 1, Part 2 (3), to

“(b) industrial installations for carrying gas, steam and hot water with a potential heat output of 300 megawatts or more, or transmission of electrical energy by overhead cables not included in Part 1 of this schedule where the voltage would be 200kV or more.”

The threshold set out in the above, earlier, regulations is the same as that set out in Schedule 5, Part 2, Item 3(b) of the Planning and Development Regulations, 2001. Having regard to this threshold, it was concluded that the submission of an Environmental Impact Statement was mandatory in the present case and accordingly the Board sought the submission of such a statement as further information.

Article 99(1) of the Planning and Development Regulations provides that **“Where a planning application in respect of development of a class prescribed under article 93 is not accompanied by an EIS, it shall be invalid and the provisions of article 26 shall apply”**. This refers to developments for the purposes of Part 10 of the Planning and Development

Act, 2000 which require the submission of an Environmental Impact Statement and which are specified at Schedule 5 of the regulations of 2001. In my view, the reference to a planning application in article 99 is a reference to a conventional planning application to a planning authority under Part III of the Act of 2000. The present application is an application to An Bord Pleanála for approval of a development for the purposes of electricity transmission made under Section 182B of the Planning and Development Act, 2000, as amended. While it is clear that an Environmental Impact Statement should have accompanied the application, the Board in requesting further information has rectified this shortcoming. Following receipt of the Environmental Impact Statement, the Board required the applicant to re-advertise the application specifying that the Environmental Impact Statement had been lodged and allowing a six week period for the making of submissions/observations. An oral hearing was scheduled and held on a date subsequent to the termination of this six week period. I consider that the original application, together with the subsequent lodgement of the Environmental Impact Statement, its advertisement, the allowance of a period for the receipt of submissions from the public and finally the holding of an oral hearing accords with the requirements under article 6 of Directive 2011/92/EU in relation to the assessment of the effects of certain public and private projects on the environment.

Strategic Environmental Assessment

In the submission at the oral hearing by Environmental Action Alliance Ireland presented by its principal, David Malone, it was claimed that the process was flawed owing to deficiencies at Strategic Environmental Assessment (SEA) level. The submission noted that SEA streamlines and strengthens EIA as decisions taken at SEA level feed directly into the project level EIA. In relation to the present project, there were no decisions taken at SEA level that feed directly into the project EIS level. The submission referred to a tiered process implying that Strategic Environmental Assessment forms the top tier and Environmental Impact Assessment forms the lower tier.

“Grid 25” is a national high level strategy developed by EirGrid. As described by EirGrid, it outlines how it intends to undertake the development of the electricity transmission grid in the short, medium and longer terms, to support a long term sustainable and reliable electricity supply. It seeks to implement the provisions of the 2007 Government White Paper on Energy – “Delivering a Sustainable Energy Future for Ireland” – in terms of development of electricity transmission infrastructure. It indicates, at a broad level, planned new stations, planned new circuits and areas requiring future network development. Under Directive 2001/42/EC (the SEA Directive), Grid 25

constitutes a plan or programme. Article 2(a) of the Directive states that plans and programmes shall mean plans and programmes which are subject to preparation and/or adoption by an authority at national, regional or local level or which are prepared by an authority for adoption, through a legislative procedure by parliament or government and which are required by legislative, regulatory or administrative provisions. The Directive stipulates, at article 5, that an environmental report shall be prepared in which the likely significant effects on the environment of implementing the plan or programme and reasonable alternatives, taking into account the objectives and the geographical scope of the plan or programme are identified, described and evaluated. An environmental report was published for grid 25 and a strategic environmental assessment was undertaken. It sets the framework for future development consent of projects listed in annexes 1 and 2 of earlier directive 85/337/EEC, now Consolidated Directive 2011/92/EU. As stated in its title, the Laois/Kilkenny Reinforcement Project is such a project. It is specifically mentioned at page 119 of the environmental report for Grid 25. While the objector clearly has major difficulties with the SEA process in relation to Grid 25, the present development is a project as distinct from a plan or programme and thus falls under Consolidated Directive 2011/92/EU and must be the subject of environmental impact assessment. In my view, the Board must restrict its considerations in this regard to environmental impact assessment and the consideration of the adequacy of the SEA process is beyond its remit.

Public Notices

Much of the outline legal submission on behalf of the applicant presented at an early stage in the oral hearing concerned a typographical error in the public notice. This referred to paragraph (v) of the newspaper and site notices covering the sub-unit consisting of the 110kV overhead line between the proposed Ballyragget substation and the proposed Coolnabackey substation. This noted that the overhead line would consist of 143 double woodpole sets. In preparation for the oral hearing, the applicant realised that this number was, in fact, incorrect and that the proposed development would actually comprise 133 double woodpole sets. The incorrect number of double woodpole sets also appears in the application form, the planning report and environmental report submitted with the application and in correspondence, but the correct number is specified in the EIS and associated documentation. The oral hearing submission emphasises that the number of pole sets has been overstated. The maximum height of the double woodpole sets, at 22 metres, has been correctly described in the application documentation and in the public notices.

The submission notes that Section 182A(4) of the Planning and Development Act, 2000, as amended, requires the publication of a newspaper notice indicating the nature and location of the proposed development. The submission notes that the Board is not a planning authority and that therefore, the provisions of Article 26 of the Planning and Development Regulations, 2001, whereby the planning authority is obliged, on receipt of a planning application to consider compliance with the relevant statutory requirements, does not apply to the Board. Thus the application may not be invalidated because the public notice, by reason of its content or for any other reason is misleading or inadequate for the information of the public. The submission takes the view that given the wording of Section 182A(4), even with the typographical error, the notices undoubtedly indicate the nature and location of the proposed development. A number of court decisions are cited to support the applicant's view. These include the Supreme Court decision in **Monaghan UDC versus Alf-a-Bet Promotions Ltd. [1980] I.L.R.M.**, and the High Court decisions in **Springview Management Limited versus Cavan Developments Ltd. [2000] 1 I.L.R.M. 437** and **Blessington and District Community Council Ltd. versus An Bord Pleanála [1007] 1 IR273**. The submission notes that section 182A(4)(a) requires the publication of a notice stating the nature and location of the proposed development, but makes no express requirement to set out the extent of the development. It is submitted that the public notices may be inaccurate, but they are manifestly not misleading in relation to the statutory requirements.

The submission considers the issues of prejudice and materiality. It notes that the correct number, type and location of the 133 double woodpole sets were correctly identified in the planning drawings and in the EIS. All the townlands were correctly identified. It concludes that in all the circumstances, no prejudice can have been suffered in these circumstances where the number of poles was overstated.

I concur with the views expressed in the submission in relation to the overstatement of the number of polesets in the overhead line between the proposed Ballyragget substation and the proposed Coolnabackey substation.

There is a further inaccuracy in the public notices which has not been raised to date. Unit (vi) is stated to consist of an upgrade to the existing Ballyragget to Kilkenny 110kV overhead line. There is, in fact, no existing 110kV line between Ballyragget and Kilkenny. The existing overhead line between these locations is operating at 38kV, but has been built to 110kV standard. It has all the appearance of a 110kV overhead line. Although, unlike the overstatement of the number of pole sets in unit (v), this error understates the nature of the proposed development, nevertheless, in general, I take the same view as has

been taken in the case of the claimed typographical error in relation to the number of pole sets. There is a difficulty insofar as the overstatement of the existing voltage could be taken to imply that there would be no alteration in the magnetic and electric fields arising from this altered power line. However, this is not the case, as can be seen at figures A6 and A11 in appendix 5.1 of the Environmental Impact Statement.

The closest residence to this power line is shown to be at a distance of 16 metres, i.e. that adjacent to pole set BK96 as shown on Drawing PE687-D261-017-038-001. Although the two figures in Appendix 5.1 are to a fairly small scale (approximately 1:450 and 1:300, vertical, respectively), I estimate that the magnetic field at this location would rise from about 0.3 μT to 1.8 μT and that the electric field at this house would rise from about 0.15kV/m to 0.3kV/m. The implication of the increased magnetic field levels is that there could be an increased risk of childhood leukaemia in this house and others in close proximity to this upgraded power line. I elaborate on this issue under **“Human Beings and Population”** at pages 75 – 77 of this report.

Legal Interest

In a letter to the Board dated 22nd May 2012, originally in connection with the pre-application consultation under reference 11.VC0035 and copied with the original planning application, the secretary of the Electricity Supply Board (ESB) explains that the ESB is the licenced transmission system owner under Section 14 of the Electricity Regulation Act 1999. EirGrid is the licenced transmission system operator with the exclusive function to operate and ensure the maintenance of and, if necessary, develop a safe, secure, reliable, economical and efficient electricity transmission system. Under Article 18.1(a) of the European Communities (Internal Market and Electricity) Regulations 2000, both bodies are required to enter into an agreement for the purposes of enabling EirGrid to discharge its functions under the Regulations. This requirement resulted in the Infrastructure Agreement of 16th March 2006. Clause 7.6 of the Infrastructure Agreement provides that all activities connected with seeking and obtaining planning permission/approval and any other consents required by EirGrid to discharge its functions shall be its sole responsibility. The ESB is obliged under the legislation and the Infrastructure Agreement to facilitate EirGrid’s planning intentions in furtherance of its functions as transmission system operator. Accordingly, the ESB, as the licenced transmission system owner and the person with sufficient legal interest in the property, the subject matter of the application conveys its consent to the making by EirGrid of the application for approval.

One of the objectors, Thomas Freeman, submits that the applicant has insufficient legal interest to seek approval for the lands on which and over which the proposed development would take place. It is submitted that the letter from the ESB is a letter of “consent and approval” without any legal basis as the ESB cannot transfer its statutory rights to the applicant which is an independent statutory body. Such a consent cannot “endow” the applicant with the legal authority to carry out the development. The wayleave powers under Section 53 of the Electricity Supply Act have not been extended to the applicant under the delegation of powers to EirGrid.

In its outline legal submission, presented at the oral hearing, the applicant explains the situation. Under the Electricity Regulation Act 1999, as amended, the Commission for Energy Regulation (CER) issued a transmission system operator licence to the applicant. Accordingly, the applicant has assumed the role of transmission system operator from 1st July 2006. It is noted that Regulation 8(1) and (2) of the European Communities (Internal Market in Electricity) Regulations 2000 provides that the transmission system operator shall have the exclusive function of operating and ensuring the maintenance of and, if necessary, development of a safe, secure, reliable, economical and efficient electricity transmission system... and provides for the transfer of the relevant provisions of various specified Electricity Supply Acts necessary for the discharge of the transmission system operator’s functions from the ESB to EirGrid. Thus EirGrid, as transmission system operator, has an exclusive function to develop a transmission system.

The outline legal submission notes the restrictive connotation of a planning applicant derived from the case of **Frescati Estates vs. Walker [1975] I.R. 177**. The judgement stated that in order to be valid an application should be made either by or with the approval of a person who is able to assert sufficient legal estate or interest to enable him to carry out the proposed development, or so much of the proposed development as relates to the property in question.

The submission notes that in **Electricity Supply Board vs. Gormley [1985] I.R. 129**, the High Court found that the ESB had sufficient interest to support a planning application in respect of the development of power lines over lands they did not own or have an interest in. It would thus be an applicant within the restricted meaning of the word as set out in the **Frescati** judgement. The interest referred to in the **Gormley** case derives from Section 53 of the Electricity Supply Act 1927 which grants the ESB the power to place lines and supporting structures above or below ground.

The submission notes that EirGrid's position is similar but not identical to that of the ESB. Under Article 8 of the European Communities (Internal Market in Electricity) Regulations 2000, it has, inter alia, the exclusive function of developing a safe, secure, reliable, economical and efficient electricity transmission system. Like the ESB in **Gormley**, it enjoys a statutory power to develop the electrical infrastructure within its control. However, the ESB's powers under Section 53 of the Electricity Supply Act 1927 have not been extended to EirGrid and it thus does not have any power to enter on lands or to place transmission lines or other associated structures on land. Article 19 of the Regulations of 2000 provides that the construction and maintenance, as opposed to the development of the transmission system is a function of the ESB which remains the Transmission Asset Owner under this article.

Under Article 18 of the Regulations of 2000, EirGrid entered into "**the Infrastructure Agreement**" with ESB. This provides that "**all activities connected with seeking and obtaining planning permission (if needed) and any other consents required by the Transmissions System Operator to discharges transmission obligations shall be the sole responsibility of the Transmissions Systems Operator**". Accordingly, EirGrid, as the applicant for planning approval, is clearly carrying out its statutory development functions. It has sufficient interest in the application which cannot be considered frivolous or vexatious.

Public Participation

It is clear from the written submissions and from the oral hearing that there is a great deal of dissatisfaction with the level of public participation which has been facilitated by the applicant. The RTS Substation Action Group notes that the project first came to their attention from a small notice in the local newspaper in October 2009. No other notice was provided to locals by post or any other means. The project description was vague and contained no real information on what was involved. Following an initial reluctance on the part of the applicant to attend such a meeting, a meeting was organised in November 2009, but no information was forthcoming on the station, its location, number of lines etc. except that it was required to bring a 110kv line to Kilkenny. The Group sought information as to why the substation could not be located in a less populated area or in an industrial setting. This would be investigated.

A second meeting was held in December 2009 at which it emerged that the seeking of an alternative site had been restricted to the 3 kilometre study area. Enquiries about the number of lines, location, size of station and future plans met with the response that there would be an element of future-proofing,

but its extent was unknown at this early stage. However, this was not the case, as had been revealed to the Midland Regional Authority, with the applicant's 2008/2012 transmission plan revealing that there would be six bays in the 400KV station and 11 bays in the 110KV station. In August 2009, the applicant had informed the Board at a pre-application consultation meeting that the project would facilitate the integration of renewables onto the grid and facilitate new connections.

The failure to be fully forthcoming gave rise to the fear that the applicant was trying to disguise a very large national development as a small scale project. While further consultation days were held in Portlaoise and Kilkenny in June 2010, these followed just one day's notice in the local newspapers. Again, there was no notice to any householders in the area, by phone, e-mail or letter.

A Stakeholders' conference was held in Carlow, but nobody from the area was invited.

The applicant failed to inform the Group of the location for the proposed substation by Christmas 2010, contrary to an undertaking given earlier that year. Finally, following repeated contacts with the project manager, it was stated, in February 2011, that this would not be revealed, as the applicant feared the landowner would be intimidated.

In May 2011, EirGrid showed the site, but by this time the project was no longer just to support Kilkenny, but had expanded to include Kildare, Carlow, Wicklow and parts of the southeast. Maps and photographs of landowners' property, taken without their consent to access the land, were displayed on the applicant's website.

In September 2011, EirGrid staff members arrived at the farmyard of the Chairman of the Group, unannounced and uninvited. A conversation took place and, following this conversation, in the mistaken belief that it had been recorded, the applicant wrote to the Chairman claiming such recording was illegal and demanding that the recording and any copies thereof be destroyed. This intimidating behaviour is held, by the Group, to show that the applicants are far from a company which wishes to engage with people.

The Group, as well as an Oireachtas member sought, on numerous occasions, a map of the line to Ballyragget, but were refused. They were reduced to attempting to put together all the A4 maps which had been issued to individual farmers on the floor of their community hall in order to see the full route. Only in January 2012 did a map appear when the Group met the

Oireachtas Committee on Communications, Natural Resources and Agriculture.

The applicant's standpoint in relation to public participation is primarily set out in Volume 2 of the planning documents submitted at the outset with the planning application. Chapter 3 of this volume is on Project Development and Section 3.6 is on Stakeholder Consultation. Section 3.6.2 is entitled "The Public". It notes that at all times the project team endeavoured to engage with landowners and the general public in respectful, honest and open discussion. Local knowledge of landowners and local communities is stated to be invaluable to the project team and therefore their input is vital. The project team must merge this local knowledge with technological and environmental survey and assessment, experience and expertise in line routing and station design to come up with an optimum solution.

The sequence of engagement with the public is set out in this section.

In the week commencing 26th October 2009 a project description, together with a blank study area map was publicised in six regional newspapers. The purpose was to inform the wider public of the proposed project, to seek information and local inputs into the decision making process and also to publish the project contact details. A project website was set up, as well as a dedicated project specific e-mail address, phone number and postal address. It is noted that numerous contacts were made with the project team and meetings held with local stakeholders.

On completion of the Project Constraints Map and supplementary Description of Project Constraints report, another newspaper notice was published in the week commencing 14th June 2010. Public open days were held on 17th and 18th of June in Kilkenny and Portlaoise, respectively, wherein the public could meet with and discuss any aspect of the project with members of the project team. Feedback was assessed and considered in the route and site identification stage. This culminated with the "Stage 1 Lead Consultant's Report" which identified the consultant's emerging preferred route corridor and site.

A third series of newspaper notices was published in early June 2011 advising stakeholders that the Stage 1 report was available and seeking feedback on its findings.

A second series of public open days was held on the 9th, 10th and 24th June 2011 in Kilkenny, Portlaoise and Ballyragget to allow discussion of this Stage 1 Report and any other aspect of the project. An ENF specialist was on hand.

Information brochures were then distributed to local shops, credit unions, libraries and county council offices in Kilkenny, Ballyragget, Ballinakill, Timahoe, Stradbally and Portlaoise ahead of the open days. Persons who had contacted the project team previously were directly informed of the publication of the report and advised of the open days.

A fourth series of newspaper notices thanking people for their feedback during the Stage 1 consultation period was published at the end of June 2011 and also for the purpose of promoting awareness of the project.

From August 2011, landowners along the preliminary indicative Coolnaback to Ballyragget line route were issued survey packs advising them of the proposed project. They could outline concerns or make suggestions before the line route and structural locations were finalised. Lands were also surveyed during this period.

The Stage 2 Lead Consultant's report was published in February 2012. It identified the preferred site locations as well as the indicative overhead line routes. Further public open days were scheduled in February 2012 following the publication of newspaper notices in three local papers. Again, information brochures were dropped to local shops, credit unions, libraries and county council offices.

In March 2012, following a review of the feedback from the Stage 2 report consultations, further survey packs were issued to landowners along the line routes.

Six information clinics were then held in Portlaoise, Ballyragget and Kilkenny in late March and early April.

Landowners along the routes of the existing Ballyragget – Kilkenny and Portlaoise – Athy lines were notified of the intention to carry out walkover environmental and technical surveys through hand delivered letters at the beginning of June 2012.

I copy below a summary chart of the consultation process as set out at pages 41 and 42 of the applicant's planning report.

Event	Date	Description	Location
Newspaper Notices #1	w/c 26th Oct 2009	<ul style="list-style-type: none"> • Description of Proposed Project • Definition of Study Area 	Kilkenny People, Leinster Express, Laois Nationalist, Carlow Nationalist, Kildare Nationalist, Leinster Leader.
Newspaper Notices #2	w/c 14th June 2010	<ul style="list-style-type: none"> • Description of Proposed Project • Presentation of Constraints Recorded in Project Study Area • Advertise Open Days 	Kilkenny People, Leinster Express, Laois Nationalist, Carlow Nationalist.
Open Days #1	17th & 18th June 2010	<ul style="list-style-type: none"> • As above • Project Team available in person to discuss any findings • Attempt to incorporate any local knowledge 	Portlaoise Heritage Hotel, River Court Hotel Kilkenny.
Newspaper Notices #3	31st May to 6th June 2011	<ul style="list-style-type: none"> • Description of Proposed Project in four newspapers • Presentation of findings of Stage 1 Report • Advertise Open Days 	Laois Nationalist, Leinster Express, Offaly Express, Kilkenny People.
Open Days # 2	9th,10th, 24th June 2011	<ul style="list-style-type: none"> • To present Stage 1 Report • Project Team available to discuss any findings or answer any queries in relation to the project 	Portlaoise Heritage Hotel, River Court Hotel Kilkenny, Canon Malone Hall, Ballyragget.
Newspaper Notices #4	22nd-24th June 2011	<ul style="list-style-type: none"> • To promote awareness of the project • To thank people for inputs received during the consultation on Stage 1 Report. 	Laois Nationalist, Leinster Express, Offaly Express and Kilkenny People.

Newspaper Notices #5	13th and 14th, 20th and 21st February 2012	<ul style="list-style-type: none"> • Description of Proposed Project in three newspapers • Presentation of findings of Stage 2 Report • Advertise Open Days 	Laois Nationalist, Leinster Express, Kilkenny People.
Open Days #3	23rd and 24th February 2012	<ul style="list-style-type: none"> • To present Stage 2 Report • Project Team available to discuss any findings or answer any queries in relation to the project 	Portlaoise Heritage Hotel, River Court Hotel Kilkenny.
Information Clinics #1	28th-30th March and 3rd-5th April 2012	<ul style="list-style-type: none"> • To provide information about the project 	Portlaoise Heritage Hotel, River Court Hotel Kilkenny, Canon Malone Hall, Ballyragget
<p>This summary does not list any meetings with individuals, local stakeholder groups, or statutory stakeholders that took place. EirGrid were also present at local events such as the National Ploughing Championships in Athy in 2010 and 2011.</p>			

Section 3.6.2.1 of the Planning Report breaks down the coordination of interactions with the public into five items as follows: -

- Contact made through email, by letter or phone;
- Information received made available to all members of the project team for review;
- Lead consultant liaises with the EirGrid Project Manager to decide on the appropriate course of action;
- Member of the project team contacts the individual and becomes their personal point of contact for the duration of the project; and
- Project team always available to meet, on request.

In relation to landowners, Section 3.6.3 of the Planning Report notes that directly affected landowners and those at a distance of up to 50 metres on either side were notified of the proposal. A dedicated wayleave coordinator was appointed as the direct point of contact. It also notes that the wider

general community were kept informed of project development with opportunities for feedback and consultation.

Section 3.6.3.3 of the Planning Report details the survey interview stage and the survey interview process.

Section 3.6.4 of the Planning Report, on Feedback Received, notes that from the public open days, a period of approximately one month was generally given for the public to make submissions to the project team, but any information received after this time was also considered. The project team would then assess whether any of the feedback gave cause for a re-evaluation of the project, the need for alternatives to or modification of the project or a re-evaluation of the planned line route (i.e. minor deviations or the use of alternative routes).

Section 3.6.4.2 of the Planning Report notes that there was a steady response from the general public, continuing beyond the official consultation period ending on 9th March 2012. It notes that the majority of people responding were living along or in close proximity to the emerging preferred route and/or the 400/110kV substation site. There had also been on-going correspondence with a local opposition group located close to the 400/110kV substation area. Additional substation study areas (in the vicinity of Cullenagh Mountain were assessed, based on consultation with this group). In September 2010 and September 2011, the applicants proactively engaged with stakeholders by having a stand at the National Ploughing Championships in nearby Athy. It is noted that the EirGrid Project Development and Consultation Road Map illustrates the importance of public consultations at the various stages throughout the project development process.

During the course of the oral hearing, it was claimed that the public participation process failed to meet the requirements of the Aarhus Convention. This is a reference to the UNECE Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters. It was “done” at Aarhus in Denmark on 25th June 1998 and, while Ireland was a signatory, it was not ratified by Ireland until 20th June 2012. Annex 1 of the convention sets out those projects which are to be subject to its requirements. Paragraphs 1-19 of this annex set out specific projects, but the development, as proposed in the present project, is not among them. However, paragraph 20 specifies any activity not covered by paragraphs 1-19 where public participation is provided for under an Environmental Impact Assessment procedure in accordance with national legislation. It appears that the present project would fall under paragraph 20. Articles 6, 7 and 8 of the convention relate to public participation **in decisions**

on specific activities, on plans, programmes and policies relating to the environment and during the preparation of executive regulations and/or generally applicable legally binding normative instruments (my emphasis). In the case of a project such as the present proposal, the relevant article appears to be article 6. However, this appears to apply to the project, only after it becomes the subject of an application. The process leading up to the making of the application does not appear to be covered.

APPROPRIATE ASSESSMENT

Article 6(3) of the European Habitats Directive (92/43/EEC) states “**any plan or project not directly connected with or necessary to the management of the site, but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subject to Appropriate Assessment of its implications for the site in view of the site’s conservation objectives. In the light of the conclusions of the assessment of the implications for the site and, subject to the provisions of Paragraph 4, the competent national authority shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, having obtained the opinion of the general public**”. The Environmental Report submitted with the application and the Environmental Impact Statement include, at Appendices 6.2 and 8.2, respectively, a Natura Impact Statement. This had been preceded by an Appropriate Assessment Screening Statement as the first stage of a potential normal four stage Appropriate Assessment process. The screening statement is presented as Appendix 1 of the Natura Impact Statement.

The screening statement notes that four European sites were identified as occurring within 5 kilometres of the various elements of the project. It was determined that three of these sites (the River Nore SPA (site code 004233), Lisbigney Bog cSAC (site code 000869) and Ballyprior Grassland cSAC (site code 0002256) would not be impacted upon, either directly or indirectly, as a result of the proposed development and therefore could be excluded from Appropriate Assessment.

The River Nore SPA is noted to be 0.6 kilometres west of the Coolnaback to Ballyragget 110KV line at Moatpark. Its conservation objective is to maintain or restore the favourable conservation condition of a nationally significant breeding population of kingfishers. It is noted that the proposed development would avoid traversing the SPA. No direct impacts on the conservation interest of the kingfisher population are foreseen during the construction

phase. While indirect impacts could result from any major deterioration in water quality and subsequent effects on the birds' food source, considering the nearest works would be about 0.6 kilometres upstream and that no in-stream works are proposed, the potential impact was considered extremely unlikely. The use of best practice construction management techniques would prevent any deterioration of water quality within the SPA and therefore it was concluded that no significant adverse impacts were foreseen. Based on the flight behaviour and habitat preferences of kingfishers and the location of the Coolnabacky – Ballyragget line in relation to the SPA, it was considered that the proposed overhead line would not pose any significant collision risk during the operational phase.

The Lisbigney Bog cSAC is noted to be 1.7 kilometres west of the Coolnabacky – Ballyragget 110KV line at Loughill. It is designated for the protection of the EU priority habitat “Calcareous Fen with **Cladium mariscus**” and the snail “**Vertigo moulinsiana**”, which are listed in Annex I and Annex II of the Habitats Directive, respectively. It is held that the works associated with the construction of the line route in this area would be of such a local scale that any hydrological impacts would be temporary and restricted to those areas immediately surrounding the structural locations. It is concluded that based on the local hydrology and topography of the area, the conservation interest of the cSAC, the characteristics of the proposed development and its distance, no potential adverse impacts on the conservation interest of the site are foreseen.

The Ballyprior Grassland cSAC is noted to be designated for the protection of the EU priority habitat “semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco Brometalia*) (* important orchid sites).” The proposed development is noted to be located about 4 kilometres from this European site. The requirements of the grassland habitat for which it is designated are such that it would not be sensitive to any potential indirect impacts of the proposed development. Therefore, based on its conservation interest, the characteristics of the proposed development and its distance from the cSAC, no potential adverse impacts are foreseen.

In relation to the River Barrow and River Nore cSAC, it is noted that its qualifying interests are those species and habitats presented in Table 2 of the Appropriate Assessment Screening report. I copy this table below.

Qualifying interests of River Barrow and River Nore SAC (source: www.npws.ie).

	Habitat / Species code	Habitat / Species Type
Habitats	91A0	Old sessile oak woods with Ilex and Blechnum in British Isles
	91E0	Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae)
	3260	Water courses of plain to montane levels with the Ranunculion fluitantis and Callitriche-Batrachion vegetation
	1310	Salicornia and other annuals colonizing mud and sand
	1330	Atlantic salt meadows (Glaucopuccinellietalia maritima)
	1410	Mediterranean salt meadows (Juncetalia maritimi)
	4030	European dry heaths
	7220	Petrifying springs with tufa formation (Cratoneurion)
	6430	Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels
	1320	Spartina swards (Spartinion maritima)
	1140	Mudflats and sandflats not covered by seawater at low tide
	1130	Estuaries
	Species	1095
1096		Brook Lamprey (Lampetra planeri)
1099		River Lamprey (Lampetra fluviatilis)
1103		Twait Shad (Alosa fallax)
1106		Atlantic Salmon (Salmo salar)
1102		Allis Shad (Alosa alosa)
1355		Otter (Lutra lutra)
1092		Freshwater White-clawed Crayfish (Austropotamobius pallipes)
1029		Freshwater Pearl-mussel (Margaritifera margaritifera) ¹
1990		Nore Freshwater Pearl-mussel (Margaritifera durrovensis)
1016		Whorl Snail (Vertigo moulinsiana)
1421	Killarney Fern (Trichomanes speciosum)	

¹The status of the freshwater pearl mussel as a qualifying Annex II species for the River Barrow and River Nore SAC is currently under review (NPWS 2011a).

At Section 2.4 of the Appropriate Assessment Screening Report there is an assessment of the significance of the proposed development in relation to the River Barrow and River Nore cSAC. It is noted that there is potential for small

scale direct habitat disturbance where the proposed Coolnaback – Ballyragget 110KV line crosses the cSAC at Boleybeg. The design of the project avoids placing structures within the cSAC, but some tree chopping may be required at the river crossing. Improved Agricultural Grassland (GA1) surrounds the narrow riparian zone at this location. The riverbanks at this location are noted to consist of non-continuous lines of trees and shrubs, including alder and ash. The terrestrial habitats do not correspond with the qualifying habitats. It is concluded that the potential impact would not adversely affect the conservation interest of the cSAC.

The existing Ballyragget – Kilkenny line crosses the cSAC at two locations at Jenkinstown, just upstream of New Dinin Bridge. An existing poleset (structure BK49) requiring replacement is located within the cSAC and another (structure BK48) is shown to be located just north of the cSAC. The replacement polesets would be located further south and north, thereby increasing the distance between them and the semi-natural habitats of the cSAC. Works in the area might cause local disturbance and loss of improved grassland habitat, but based on the terrestrial habitats in the vicinity of the cSAC, it is concluded that this potential impact would not adversely affect its conservation interest.

The proposed Ballyragget – Coolnaback line would pass within 200 metres of the cSAC at Boleybawn and at an area east of Ballinakill. Structures at both these locations would be located about 150 metres from the boundary of the cSAC. In the case of one structure, BC65, this would be located in an area of improved grassland which might suffer some habitat loss or disturbance and some minor trimming of vegetation, but no impacts are foreseen on the terrestrial habitats within the cSAC. East of Ballinakill, structure BC53, an angle mast, would be located in an area of improved grassland. Any habitat loss or disturbance would be restricted to this habitat. The terrestrial habitats within the cSAC at this location do not correspond with the Annex I habitats for which the site is designated. No impacts are foreseen.

Following a review of the location and scale of the proposed development works together with the distribution and extent of qualifying terrestrial habitats (e.g. sessile oak woods, alluvial forests and dry heath) in the cSAC, potential impacts on terrestrial habitats elsewhere within it have not been identified.

The screening identified that there is potential for disturbance to otters should they be present within the cSAC in the vicinity of the line crossings. This is discounted as being unlikely to be of significance as all the construction works would take place in areas outside the riparian habitats of the cSAC.

The screening report notes that a number of aquatic species and their habitats would be sensitive to any deterioration in surface water quality, including floating river vegetation, salmon, white-clawed crayfish and the Nore freshwater pearl mussel.

During the construction phase there would be potential for sediment runoff via the surface water drainage system into the cSAC. There could also be contamination of surface water from concrete, fuel or other harmful substances. While best practice construction techniques would be used, additional mitigation would be required at a number of especially sensitive locations where significant works are proposed. It is concluded that based on the scale and location of the proposed development, there is potential for significant adverse impacts on the conservation interest of the River Barrow and River Nore cSAC. These potential impacts required further evaluation by way of Appropriate Assessment. Accordingly, a Natura Impact Statement was undertaken in respect of the River Barrow and River Nore cSAC, only.

The Natura Impact Statement notes that as part of the methodology, a number of ecological surveys and reports were carried out in order to inform the ecological impact assessment. These were primarily concerned with the “new build” elements of the project, e.g. the Ballyragget – Coolnabacky overhead power line and the Coolnabacky substation. These included the following:

- Coolnabacky substation site – construction phase
- Ballyragget substation site – construction phase
- Transmission structure (Poleset and Angle Mast) locations in close proximity to watercourses which feed into the River Barrow and River Nore cSAC – construction phase
- Conifer plantations that require felling along the new Ballyragget to Coolnabacky 110 kV line route – construction phase

The statement repeats the table of qualifying interests set out in the screening statement.

It is noted that the Nore freshwater pearl mussel (**Margaritifera durrovensis**) was only ever known from the Barrow, Nore and Suir main channels. It is now restricted to just 10 kilometres of the main Nore channel with most of the population between Poorman’s Bridge and the Glanbia Creamery above Ballyragget. The species is in very serious decline and is critically endangered. A number of the Annex II aquatic species are noted to occur in

watercourses in close proximity to the proposed development, including the river and brook lampreys, the Atlantic salmon and the freshwater white clawed crayfish. These species would all be sensitive to deterioration in water quality or habitat alteration arising from siltation.

The Appropriate Assessment screening is noted to have identified the main impact as arising from the possible temporary deterioration in water quality in the watercourses of the cSAC during the construction phase. There would be potential sediment runoff from excavations and tree felling. Contamination could arise from concrete, fuel or other harmful substances. Impacts during the construction phase could arise from the

- Coolnabacky substation site
- Ballyragget substation site
- Transmission structure (poleset and angle mast) locations in close proximity to watercourses feeding into the cSAC
- The felling of conifers along the Ballyragget – Coolnabacky 110KV line route.

In relation to the Coolnabacky substation site, the main sensitive ecological receptor is identified as a spring fed watercourse along the northwestern boundary of the site. This provides suitable habitat for Annex II species and feeds into the cSAC approximately 4.5 kilometres downstream to the northeast. Drainage ditches on the western and northeastern boundary of the site also feed into the watercourse. Table 2 of the Natura Impact Statement summarises the potential adverse impacts on the cSAC as arising from the considerable groundworks and the operation of machinery during the construction phase. This could give rise to the release of sediment or other harmful substances to watercourses surrounding the substation site. Mitigation would be required to protect the surrounding surface waters.

In relation to the Ballyragget substation site there is a similar table – Table 3. The possible source of impact is identified as the pollution of groundwater, as site investigations showed that drainage of the site is to groundwater which might discharge into the River Nore. The requirement for mitigation is to reduce/eliminate any risk to groundwater during construction/operation.

In relation to the transmission structure locations in close proximity to watercourses feeding into the cSAC, a number of new polesets, replacement polesets, new angle masts and replacement angle masts are identified in Table 4 as having potential adverse impacts on the cSAC. Fourteen such locations are identified in Table 4. In each case the nearest watercourse is at

or up to 20 metres away. Any release of sediment or harmful substances during construction would have a possible impact on the cSAC. The requirements for mitigation are protection of the surrounding surface waters which are likely to support Annex II species and feed into the cSAC.

In relation to the conifer plantations that require felling along the Ballyragget – Coolnabacky 110KV line route, it is noted that there is a requirement to fell a corridor 61.5 metres wide where the line passes through conifers. Two conifer plantations are affected, namely an 890 metre length located upstream of the Owenbeg River at Knockardagur between structures BC77 and BC82 and a 930 metre length at Garryglass between structures BC103 and 109. At Knockardagur, drainage would be from a network of forestry drains towards an unnamed watercourse which, in turn, drains to a designated section of the Owenbeg River about 1.5 kilometres downstream. At Garryglass, there would again be drainage via forestry drains to an unnamed watercourse and thence to the Owenbeg River about 1.5 kilometres downstream. Potential impacts from clear-felling arise from siltation and nutrient enrichment from the release of phosphorus and nitrogen from brash decay. There would be a need to remove the tree stumps along a 10 metre wide corridor in order to allow access by the wide tracked machinery importing the wooden poles weighing approximately 3 tonnes each. This can give rise to ground disturbance and sediment release.

Sedimentation can lead to the smothering of gravel beds with consequent loss of fish habitat and spawning and potential juvenile freshwater pearl mussel habitat. It can lead to the growth of filamentous algae on gravel beds, again leading to a loss of fish spawning areas and potential freshwater pearl mussel areas. Fish eggs can be lost and there can be mortalities in fish of all ages. Macro-invertebrates can be smothered. Although nutrient enrichment is less likely on the phosphorus absorbent mineral soils in which the forest stands are located, in the event of nutrients reaching the first order streams, there could be increased algal growth in the rivers leading to de-oxygenation of the water during the nocturnal cycle and reduced habitat for fish spawning, macro-invertebrates and freshwater pearl mussels. Accidental leakage of oil and fuels from construction vehicles could have a direct impact on fish, fish food and fish habitats and other aquatic species. Table 5 notes that the requirements for mitigation consist of the protection of surrounding surface waters which are likely to support Annex II species and feed into the cSAC.

Section 4.2 of the Natura Impact Statement covers cumulative impacts. No other major infrastructural projects are known to be proposed in close proximity that could potentially contribute to significant cumulative or in-combination impacts. Active quarries, farming and forestry could contribute to

cumulative impact. These operations, in combination with the proposed development could lead to significant cumulative impacts on the conservation interest of the cSAC. The various elements of the proposed development with potential impacts on the cSAC could, in themselves, in the absence of appropriate mitigation each contribute to a significant adverse cumulative impact on the conservation interest of the cSAC.

Mitigation measures are proposed at the Coolnabacky substation under two main headings, namely, Surface Water Protection and Water Table and Groundwater Protection. The former is subdivided into Erosion Control, Sediment Control, Risk Management, Emergency Plans and Procedures, Equipment, Training and corrective action, and Monitoring.

Drainage and runoff controls would be installed prior to starting site clearance and earthworks. It is noted that measures to prevent runoff flowing across exposed or excavated ground and becoming polluted with sediment are provided for in the design. This would primarily be through the use of existing site drains to channel runoff from upslope portions of a catchment around any construction areas or areas disturbed as a result of construction works. Roadways would be designed with minimum falls not exceeding 15%. The area of exposed ground would be minimised. Weather forecasts would be monitored prior to planning excavation works. Plastic sheeting would cover mounded excavated material and open excavations during periods of heavy rainfall. Silt fences would be provided at the toe of any significant storage area of excavated material.

The settlement ponds would be an integral part of sediment control and containment and the protection of watercourses. They are sized to provide an adequate treatment volume for the first flush from the developed station and would ultimately have an attenuation volume to limit surface water runoff to greenfield rates. This attenuation volume would provide additional treatment volume during the construction phase when sediment generation would be at its greatest. Surface water from the site would be discharged to existing vegetated drainage ditches which would provide further settlement and filtering prior to ultimate discharge to the adjacent watercourse.

Risk management to prevent or avoid such events as an unplanned bank collapse, a mud slide and unforeseen rainfall event can be constantly assessed through geotechnical risk management and monitoring of weather forecasts.

The contractor would prepare an emergency response plan and a set of procedures for events likely to cause pollution. A contingency plan during the

construction phase would be displayed at appropriate locations. Equipment, training and corrective action might include impermeable matting (plastic sheeting), silt fences (posts and geotextile material), mulching capability (organic materials, straw, woodchip, bark or other wood fibres and gravel) to stabilise or protect cleared areas and settlement tanks (portable proprietary settlement tanks that could be transported to the required areas).

On-going water monitoring at the discharge points and at the receiving waters would be a key indicator of the effectiveness of the erosion and settlement control measures and would trigger corrective action or additional measures.

In terms of watertable and groundwater protection it is noted that deep excavations below the watertable would be kept to a minimum in the foundation design. No extensive deep excavations requiring dewatering would continue for such a period as to cause a material difference in the local groundwater table level. Continuous monitoring of the local watertable would be undertaken at the time of any dewatering during the construction phase. Such dewatering and monitoring would be approved by the designers and project ecologist.

Chemicals, fuels and oil filled equipment would be kept in bunded areas when not in use, emergency spill kits would be provided and Sustainable Drainage Systems (SuDS) would be employed to ensure groundwater quality protection during the construction phase. In the operational phase, all oil filled equipment would be stored in impermeable concrete bunds. There would be no large scale batching of concrete on site. There would be no washing out of concrete supply trucks. Monitoring and emergency response measures would be employed for any escape of cementitious material.

Any foul waste generated during the construction and operational phase of the project would be collected and disposed of off-site by a licenced contractor.

In relation to the Ballyragget substation site, a similar range of groundwater quality protection measures would be put in place to those intended for the Coolnaback site, with the exception that foul waste during the operational phase would be treated on site via a septic tank system.

Mitigation measures in relation to structural locations in close proximity to watercourses are subdivided into those relating to polesets and those relating to angle masts.

As polesets would be constructed in just a single day per set, construction would be avoided on those days on which rain is forecast. Even in the event

of groundwater seepage, there would be no requirement for dewatering. Spoil per poleset would not exceed 40 cubic metres spread over an area not exceeding 20 square metres. Runoff from such a small area during predominantly dry conditions would be unlikely. Emergency sediment control measures would be available to the contractor in the event of a significant non-forecast fall of rain. These would be the same as those available for the two substation sites.

The risk of non-sediment related pollution during the construction phase would be minimal and could only be associated with oil leaks from construction plant and machinery. The normal range of good practice measures would be put in place to cover such an unlikely eventuality.

Angle mast foundations require a period of less than 2½ weeks per mast, largely due to the concrete setting time. Construction would be avoided at sensitive angle mast locations in proximity to watercourses when a significant amount of rainfall is forecast. In the event of groundwater seepage occurring, requiring dewatering, this water would be pumped through a portable settlement tank before discharge to the nearest drainage ditch. Existing vegetation would be used as a filter strip prior to discharge to the drainage ditch where conditions allow. The volume of spoil would not exceed 140 cubic metres per angle mast and much of this would not be required for backfilling, leaving 50-66 cubic metres for this purpose, with the remainder being removed from site immediately. The spoil heap would thus occupy an area of 36-46 square metres. The same measures would be employed in the event of non-forecast rainfall during the construction period as in the case of the polesets and the Coolnabacky substation.

The risk of non-sediment related pollution during the construction of the angle mast is considered to be minimal and would only arise from oil leaks from plant or machinery or from the escape of cementitious material during the foundation construction. The same range of measures would be undertaken to mitigate the risk and to respond in the event of an oil leak, as in the case of the poleset construction. The following measures would be undertaken to mitigate the risk of and respond to the escape of cementitious material during foundation construction.

- There would be no on-site batching of concrete, grout or cement mortar at the angle mast construction locations;
- No washing out of concrete delivery vehicles or dumping of excess concrete would be permitted at the angle mast construction sites;

- Concrete skips, concrete pumps and machine buckets would be positioned so as not to allow slewing over water while placing concrete (the use of skips and pumps not envisaged);
- Freshly placed concrete would be covered to avoid surface washing away in heavy rain; and
- Any spillages of cementitious materials would be cleaned up immediately and disposed of correctly.

In relation to the conifer plantation requiring felling along the new Ballyragget – Coolnaback 110KV line route, mitigation measures would include strict compliance with the Forestry and Freshwater Pearl Mussel Requirements Site Assessment and Mitigation Measures published by the Forest Service and the use of its Assessment Forms A and B. The contractor would be fully briefed on the ecological sensitivity of the site and would work in collaboration with an ecologist. Construction would adhere to the guidance document “Inland Fisheries Ireland” Southeastern River Basin District Maintenance and Protection of the Inland Fisheries Resource during road construction and improvement works, or the successor to this publication. In the event of the need to traverse any watercourse, such watercourse would be effectively bridged prior to commencement. Access tracks would be assessed by a qualified geotechnical engineer and ecologist to minimise surface disturbance and silt generation. Refuelling of vehicles would be off-site in a secure bunded area well away from any watercourse. All fuels and oils would be stored in secure bunded areas.

Sediment impact mitigation would take place through the use of brash from clear-fell as roading material. Existing forest drainage would be reinstated where damaged. Silt traps and silt fences such as geotextile membrane and straw bales would be placed in the forest drainage network to minimise silt loss. A buffer zone would be maintained between silt traps and watercourses consisting of natural vegetation to assist in silt interception. The use of pesticides to suppress growth beneath the established overhead line should be minimised.

On nutrient impact mitigation it is noted that potential nutrient release, particularly phosphorus, would be limited as the trees are not at maturity and the quantities of brash would be relatively small so that brash decay would be low. The forest stands are located on mineral soil types which generally absorb phosphorus further reducing the potential from nutrient impact. It is recommended that the brash should be windrowed 20 metres from any drain.

An ecologist would be present during the construction phase to ensure that all mitigation measures are adhered to and to monitor their effectiveness.

The Natura Impact Statement, in relation to residual impacts, states that these would be reduced from being possible, albeit unlikely significant, to becoming extremely unlikely short-term imperceptible negative impacts. No long-term impacts are foreseen.

Overall, it may be said that the mitigation measures recommended in the Natura Impact Statement are all tried and tested and amount to good practice during both the construction phase and operational phase of a project which, for the most part, does not directly impinge on the candidate Special Area of Conservation. In conclusion, I consider it reasonable, on the basis of the information available, that the proposed development, individually and in combination with other plans or projects, would not adversely affect the integrity of European site no. 002162 – the River Barrow and River Nore candidate Special Area of Conservation, in view of the site's conservation objectives.

Environmental Impact Assessment

Schedule 5 of the Planning and Development Regulations, 2001 sets out those developments which require the submission of an Environmental Impact Statement under section 176 of the Planning and Development Act, 2000. Schedule 5, Part 1, item 20 specifies “**construction of overhead electrical power lines with a voltage of 220 kilovolts or more and a length of more than 15 kilometres**”. While the 400kV element of the proposed development, i.e. the only part of the development exceeding a voltage of 220 kilovolts would, at 1.4 kilometres, fall far short of the 15 kilometre threshold, Part 2 of the Schedule, item 3(b) specifies “**industrial installations for carrying gas, steam and hot water with a potential heat output of 300 megawatts or more, or transmission of electrical energy by overhead cables not included in Part 1 of this schedule, where the voltage would be 200 kilovolts or more**”. Under section 172 of the Planning and Development Act, 2000, this means that the submission of an Environmental Impact Statement is required in respect of the proposed development. Accordingly, the applicant was requested to submit such a statement and an EIS was lodged with the Board on 16th August 2013.

The Environmental Impact Statement consists of three volumes, namely two A4 volumes encompassing the main text, including a non-technical summary, and a volume of appendices plus, a further A3 volume of appendices

consisting of photographs and photomontages which would have been impractically small at A4.

The main text of the Environmental Impact Statement is subdivided into 14 chapters as follows:-

1. Non-technical summary.
2. Introduction
3. Screening and scoping
4. Alternatives
5. Human beings and population
6. Landscape and visual impact
7. Cultural heritage
8. Ecology
9. Soils and geology
10. Water (hydrology and hydrogeology)
11. Material assets
12. Air and climate
13. Interrelationship between environmental factors
14. Schedule of commitments

The EIS contains the information which it is required to contain under Article 94 of the Planning and Development Regulations, 2001. It includes a description of the aspects of the environment likely to be significantly affected by the proposed development, including the items specified at Paragraph 2(b) of Schedule 6 of the Regulations. The Regulations specify these as

- human beings, flora and fauna
- soils, water, air, climatic factors and the landscape,
- material assets, including the architectural and archaeological heritage and the cultural heritage and
- the interrelationship between the above factors.

The direct and indirect effects of the project on the environment are identified throughout the EIS.

I have undertaken an Environmental Impact Assessment of the proposed development, having regard to the four factors listed above and to the contents of the Environmental Impact Statement and the matters raised in the written submissions and at the oral hearing and I have concluded that the proposed development would not be likely to have significant adverse effects

on the environment. In support of this conclusion, I elaborate on the topics raised in the Environmental Impact Statement which I consider likely to be significant or contentious under the relevant sub-headings which follow.

The Non-technical Summary

Following publication of the Environmental Impact Statement in response to the Board's request for further information, a letter was received from the Ratheniska, Timahoe and Spink (RTS) Substation Action Group. This letter held that the non-technical summary of the EIS contained a significant amount of technical data. It amounted to a "cut and paste" exercise from the EIS report. It did not contain a summary of the information required under Article 5(1) of the EIA Directive, as specified in Annex IB of the Directive. It was pointed out that the fundamental objective of the non-technical summary in an EIS was to allow the public concerned with the proposal to participate in the decision making process. It was alleged that the inadequate non-technical summary meant that members of the group could not effectively and efficiently participate in the decision making process.

Prior to the holding of the oral hearing, an agenda/order of appearance was circulated. In relation to the applicant's substantive submission, it was suggested that the presentation should follow the topic headings set out in the EIS with an emphasis on the matters which had been raised in the submissions from the planning authorities, prescribed bodies and observers. These issues were noted to include, inter alia, the adequacy of the non-technical summary of the EIS. This issue was taken up by the observers, and in particular, the RTS Substation Action Group. The observers aimed to demonstrate that the non-technical summary was totally inadequate to inform them of the nature and extent of the proposed development and its likely impact on the environment.

During the course of the oral hearing, the observers adopted the technique of questioning the expert witnesses on behalf of the applicants by quoting from their presentations to the hearing and then asking whether or not the information had been contained in the non-technical summary. This line of questioning continued for a full day, albeit with lengthy digressions to clarify and tease out other matters.

The questions were wide ranging. By way of example, it was determined that the following information, contained in the main part of the Environmental Impact Statement, the other planning documentation or in the expert witness submissions at the oral hearing, was not contained in the non-technical summary of the EIS:-

- The number of bays in the Coolnabacky substation.
- Photographs
- The Area of Concern shown on figure 2 of the Mario Duarte submission.
- The weak points in the network in the Area of Concern identified in section 5.7 of the Mario Duarte submission.
- The implications of an outage on the Dunstown – Kellis 220kV circuit identified at section 5.8 of the Mario Duarte submission.
- The Transmission Planning Criteria mentioned at paragraphs 2.1 to 2.3 of the Mark Norton submission.
- The expected operational life of over 50 years mentioned at paragraph 3.4 of the Mark Norton submission.
- The development of new technologies, equipment and standards in relation to electricity transmission mentioned at paragraph 3.2 of the Mark Norton submission.
- Not proposed in order to connect renewable power generation (para. 4.8 of Mark Norton submission).
- The technical implications of placing the 400kV line underground.
- The Project Development and Consultation Road Map.
- Existing construction of Ballyragget to Kilkenny 38kV power line to 110kV standard.
- The map of constraints included in the EIS.
- Drip trays and bunding details.
- The main dimensions of the buildings.
- The depth of the foundations.
- Details of alternative wastewater treatment systems.
- The height of the 400kV pylons.
- Explanation of ELF electric and magnetic fields and their strengths beneath the power lines.
- Summary on electric and magnetic fields as included in EIS.
- Close consultation with landholders and stakeholders.
- The number of wires converging on the substation.

Following the questioning which identified the foregoing perceived shortcomings of the non-technical summary, the objectors were requested to curtail this line of questioning and to concentrate any remaining questioning in this regard to the shortcomings which they perceived as being most serious in the non-technical summary. The following omissions were then identified:-

- An indication of any difficulties encountered in compiling the EIS.

- The risks of accident, having regard to substances or technologies used.
- Existing land use.
- The absorption capacity of the natural environment.
- The characteristics of potential impacts.

Article 5 of Directive 2011/92/EU (the EIA Directive) requires that in the case of projects which, under Article 4, are to be made subject to an environmental impact assessment in accordance with that article and Articles 6-10, member states should adopt the necessary measures to ensure that the developer supplies in an appropriate form the information specified in Annex IV in as much as

- (a) The Member States consider that the information is relevant to a given stage of the consent procedure and to the specific characteristics of a particular project or type of project and of the environmental features likely to be affected.
- (b) The Member States consider that a developer may reasonably be required to compile this information, having regard, inter alia, to current knowledge and methods of assessment.

Annex IV of the Directive specifies the information referred to in Article 5(1). It specifies the information under eight headings. The seventh heading is a non-technical summary of the information provided under headings 1-6.

The wording in Article 5 and Annex IV of the current Directive is identical to that which appeared in the superseded Council Directive 85/337/EEC. The superseded directive was given effect through Section 172 of the Planning and Development Act, 2000, as amended. This in turn refers to the Planning and Development Regulations, 2001. Article 94 of these regulations requires that an EIS should contain

- (a) the information specified in Paragraph 1 of Schedule 6,
- (b) the information specified in Paragraph 2 of Schedule 6 to the extent that
 - (i) such information is relevant to a given stage of the consent procedure and the specific characteristics of the development or type of development concerned and of the environmental features likely to be effected, and

- (ii) the person or persons preparing the EIS may reasonably be required to compile such information having regard, among other things, to current knowledge and methods of assessment, and
- (c) a summary, in non-technical language of the information required under paragraphs (a) and (b).

As noted by the applicants during the course of the oral hearing, instruments of the European Union must be given a purposive interpretation and not a mechanical interpretation. There is no requirement under either the EIA Directive or the Planning and Development Regulations, 2001 to adopt, verbatim, the headings set out in either document.

In general, I consider that the observers have an unreasonable expectation of the level of detail to be included in a non-technical summary. The non-technical summary should be just that, it should provide an overview of the proposed development and the environmental issues which arise. The non-technical summary can be fairly criticised for its lack of illustrative materials in the form of maps and diagrams. During the course of the oral hearing there were frequent references to the Project Development and Consultation Road map (see Figure 3.1 on Page 16 of the Stage 1 Planning Report). This was also displayed on the wall of the auditorium during the hearing. Despite the non-inclusion of such graphics, I consider that the non-technical summary is by no means unusual in this regard and should be deemed acceptable. Although the principal dimensions of the proposed buildings, their site areas and the maximum height of the 400kV pylons might have been included in the description of the project, this detailed information had already been given in the public notices. It would be highly unusual to specify the depth of foundations in a non-technical summary.

The non-technical summary was criticised in relation to its section on human beings and population (Section 1.4) in which the only reference to Electric and Magnetic Fields (EMF) is a single sentence noting that such fields, produced by the transmission lines in this project would all be below the limits as specified by the relevant bodies. However, the main body of the EIS is even briefer in this regard noting, at Section 5.1, only that a report on EMF is included as an appendix (Appendix 5.1). This appendix consists of a 51 page report including 10 graphs plotting the falloff in magnetic or electric fields with distance from the centreline of the five different power line components. The non-inclusion of any detail in relation to EMF either in the non-technical summary or the main body of the EIS is a reflection of the complexity of the topic. Unusually, the report in Appendix 5(1) includes an executive summary. It was felt by the objectors that this might usefully have been included in the

non-technical summary. However, the conclusion reached in this executive summary is that set out in the single sentence in the non-technical summary. I consider that this should be regarded as acceptable.

Alternatives

Alternatives are considered at chapter 4 of the Environmental Impact Statement. This chapter addresses the need for the reinforcement project and notes that while the proposed development would specifically span between counties Laois and Kilkenny, it would address and alleviate security of supply and quality of supply concerns in a wider “Area of Concern” including counties Carlow, Kildare and Wicklow also. The EIS identifies the weaknesses in the existing grid within the “Area of Concern”. It evaluates four technical alternatives (section 4.3). They are as follows: -

1. The present proposal
2. A 220/110kV injection at the existing Dunstown 400/220kV substation, a new 110kV circuit between Dunstown and Monread substations, a new 110kV circuit between Dunstown and Pollaphuca substations and a new 110kV circuit from Kilkenny to Carlow substation.
3. A new Maynooth – Monread 110kV circuit, a 15 MVar capacitor bank in Carlow 110kV substation and two new 110kV circuits between Carlow and Kilkenny and Kilkenny and Lisheen via Ballyragget.
4. A new 220/110kV station in Kilkenny looped into the existing Great Island – Kellis 220kV line and a new 110kV circuit between Carlow and Portlaoise.

All four options were found to meet the network requirements to ensure a suitable level of reliability and quality of supply in the “Area of Concern”. However, options 1 and 2 were preferable to options 3 and 4 from an economic and efficiency perspective and option 1 was preferred to option 2 on the basis that it involved the least new circuit length and added the greatest amount of spare network capacity for future growth.

Alternative technologies considered for the Coolnabacky substation consisted of either Air Insulated Switchgear (AIS) or Gas Insulated Switchgear (GIS). GIS was favoured on the basis of cost and technical aspects, as well as its smaller size and consequent reduced environmental impact.

The possibility of placing the Coolnabacky to Moneypoint – Dunstown 400kV connection and the 110kV Coolnabacky – Ballyragget circuit underground was investigated as a possible alternative. However, the policy of the applicant is to use underground cable when all of four conditions apply. These are

1. An overhead line is not environmentally and/or technically feasible.
2. A technically and environmentally acceptable route for an underground cable can be found.
3. The effect on the transmission network due to the electrical characteristics of the underground cable is acceptable and the relatively poorer “availability” of the underground cable relative to that of an equivalent overhead line is tolerable and
4. The relatively greater cost of the underground cable can be justified.

It was found that all of the four policy conditions did not apply in the case of either circuit.

Alternative substation locations were considered at Cullenagh, Abbeyleix, Cashel and the “EirGrid substation study area”, i.e. the chosen area. The four substation study areas were assessed in terms of vehicular access, topography, flooding history/drainage, existing planning permissions, settlement pattern, infrastructure, environmental constraints, connection potential and cost. The chosen study area was selected having regard to physical, environmental, technical and social factors and the ability of the receiving environment to accommodate a substation having regard to the previously mentioned criteria.

Following identification of the study area and the mapping of constraints, nine suitable land folios were identified as being potentially suitable for the proposed substation. These were whittled down in a two stage process to the site chosen at Coolnabacky. Details of the selection process are set out in the Stage 1 Lead Consultant’s Report, Appendix G.

Following the selection of the Coolnabacky substation site, three alternative route corridor options were identified to link it with the proposed substation at Ballyragget. These were a western corridor of 28 kilometres, a central corridor of 26 kilometres with a number of sub-variants and an eastern corridor of 44 kilometres. Each of the environmental disciplines within the applicant’s study team considered the three corridor options, independently, but all concluded that the central corridor was the most preferable. The final line route within the 1 kilometre wide route corridor was chosen primarily to avoid houses and other constraints. It also attempted to avoid many changes of direction in order to minimise the number of steel angle pylons and maximise the number of straight runs using polesets. Minor modifications also occurred as a result of landowner engagement and walkover and desktop studies.

It was suggested during the course of the oral hearing that the real reason for the selection of the Coolnabacky substation site was that this was the only land folio on which there was landowner agreement. However, this was strongly denied by the applicant.

Overall, I consider that the consideration of alternatives has been comprehensive and that the final selection is reasonable.

Human Beings and Population

The topic of human beings and population is covered at chapter 5 of the Environmental Impact Statement. In terms of the receiving environment, this chapter includes sections on the general planning background, population structure and change, economic activity, tourism and amenities and land use.

In relation to potential impact, it is noted that in order for the area to continue to attract investment and to support agricultural and rural enterprise, physical infrastructure, including energy, broadband and transport will continue to play a key role. The proposed development would assist in ensuring that energy would not become a barrier to potential investment.

The proposed new route avoids centres of population such as Abbeyleix, Timahoe and Ballinakill. While there would be nine houses within 15 metres, 27 houses within 100 metres and 75 houses within 150 metres from the centre line of the proposed overhead line, the majority of these are shown (section 5.4.3) to be proximate to the existing Ballyragget to Kilkenny and Athy to Portlaoise lines and just 16 between 100 and 150 metres of the proposed Ballyragget to Coolnabacky line and none within such distances of the 400kV link to the Moneypoint to Dunstown 400kV line.

On the potential impact on tourism and amenities, Failte Ireland is claimed to have noted that the proposed route corridor would be likely to have the least impact on the tourism amenity value of the area, as it avoids a number of tourism assets including the designated high amenity area, Timahoe Round Tower and Esker and the Abbeyleix wood complex. It is noted that views from the Rock of Dunamase southwards towards the proposed route would be obscured by areas of high ground around Hewson Hill.

In terms of residual impact, the EIS notes that this has been minimised through the design process and the routing of the line and the careful site selection of the substation. Due to the nature of the receiving environment and the careful line routing and design processes, it is claimed that the proposed development would not have any significant impacts in terms of

human beings. It would have the potential to realise positive overall economic and social benefits for the area.

As recorded earlier in this report, chapter 5 of the EIS notes, in section 5.1, that an Electromagnetic Field (EMF) report is included as an appendix (Appendix 5.1). Apart from the brevity of the reference to EMF in the non-technical summary, the implications of the proposed development, in terms of EMF, was a source of major concern in the written submissions and during the oral hearing. The Electromagnetic Field Report comprises 51 pages, including ten graphs plotting the fall-off in magnetic or electrical fields with distances from the centreline of the five different power line components.

This report, at Appendix 5.1 of the EIS, includes a section on the conclusions of international review bodies including the International Commission on Non-Ionising Radiation Protection (ICNIRP) and the World Health Organisation (WHO). It is noted that overall, the published conclusions of the various scientific review panels over the past 13 years have been consistent. The WHO review, which has been the most comprehensive weight of evidence evaluation to date, noted, inter alia, that consistent epidemiological evidence suggested that chronic low intensity ELF magnetic field exposure is associated with an increased risk of childhood leukaemia. However, the evidence for a causal relationship was limited and therefore exposure limits based upon epidemiological evidence were not recommended, but some precautionary measures were warranted.

The EMF report notes that some epidemiology studies reported that children with leukaemia were more likely to live closer to power lines or have higher estimates of magnetic field exposure compared to children without leukaemia, but that other epidemiology studies did not report this statistical association. When a number of relevant studies were combined in a single analysis, no association was evident at lower exposure levels, but small differences in the proportion of children with leukaemia and the proportion of matched healthy controls that had average magnetic field exposure greater than 3-4 mG (milligauss or 0.3-0.4 microtesla μT) suggested a possible relationship or association. This pooled analysis provided some evidence for an association between magnetic fields and childhood leukaemia. However, because of the uncertainty associated with observational epidemiology studies, the results of this pooled analysis were considered to provide only limited epidemiological support for a causal relationship. Chance, bias and confounding could not be ruled out with reasonable confidence. Considering all the evidence together, the WHO, as well as other scientific panels, classified magnetic fields as a **possible** (report's emphasis) cause of childhood leukaemia, i.e. there could

be a statistical association, but other explanations could not be ruled out as the cause of that statistical association.

In the same year (2007) an expert group on behalf of the Department of Communications, Marine and Natural Resources noted that there was limited scientific evidence of an association between ELF magnetic fields and childhood leukaemia. This did not mean that such fields caused cancer, but the possibility could not be excluded. Laboratory research had not supported this possibility and overall, the expert group considered the evidence to be weak. Nevertheless, it was considered that the evidence should not be discounted and so no cost or low cost precautionary measures to lower people's exposure to these fields were suggested. The Department of Communications Marine and Natural Resources recommended that where possible new power lines should be sited away from heavily populated areas so as to minimise 50Hz field exposure.

The EMF report identifies nine specific measures which were adopted by the WHO in its report of 2007. In the present proposal, precautionary goals have been achieved by re-conductoring existing lines, reducing the fields from the adjacent 400kV lines by recommending a line phasing that reduces the magnetic field away from the lines and paralleling an existing 110 kV transmission line. It is pointed out that the applicant regards the protection of the health, safety and welfare of its staff and the general public as a core company value in all of its activities.

Despite the averred adherence to the precautionary principle, it appears that the proposed upgraded power line from Ballyragget to Kilkenny could have an adverse impact on those living closest to it in terms of magnetic field radiation. The text at page 7 of the EMF report and its table A-2 shows that the calculated magnetic field value at 50 metres from the centre of this upgraded power line would be 0.2 μT . Figure A-6 shows the calculated magnetic field profile for the existing and upgraded power line from Ballyragget to Kilkenny. This is at a small scale, but I estimate that the magnetic field would fall off from 10.6 μT below the centreline of the power line to the level of 0.3 μT at a distance of about 45 metres. These levels are for average loading, but I note that table A1 shows that the average load would be 67 MVA, whereas the peak load would be 223 MVA. (The latter figure might be for a few hours or days per annum). The present existing levels are 4 MVA and 18 MVA, respectively. Assuming that a distance of 45 metres from the centreline is correct for a magnetic field value of 0.3 μT , it appears that there would be four houses within this distance of the upgraded power line from Ballyragget to Kilkenny. One of these houses would be as close as 16 metres. Having regard to the precautionary principle, I do not believe that the Board can be

satisfied that the proposed upgraded power line from Ballyragget to Kilkenny would not possibly have an adverse impact on the health and safety of persons occupying these houses.

Landscape and Visual Impact

Chapter 6 of the Environmental Impact Statement considers the landscape and visual impact implications of the proposed development. Although the EIS, at Section 6.1 claims to analyse the existing landscape character and significance of the proposed development along the route corridor of the proposed 110kV electricity transmission line, as well as the associated substations and upgrading of existing lines, it is clear from reading the remainder of the text and the maps and photographs that it also covers the new 400kV line linking the proposed Coolnabackey Substation with the Moneypoint to Dunstown 400kV line.

Section 6.2 of the EIS sets out the methodology. The landscape impacts were analysed on the basis of

- The capacity of the existing landscape to absorb the proposed development.
- The proximity of sensitive viewpoints (e.g. scenic routes) and visual receptors.
- The location and height of the proposed electrical structures.

Visual impacts were evaluated taking into account

- The potential level of visual intrusion.
- The potential for visual impact, dependent on the proximity and elevation of structures to a sensitive viewpoint/visual receptor.

Section 6.3 of the EIS, on the receiving environment, notes that the area through which the power line would pass represents the transition between the Central Plain and the outliers of the Castlecomer Plateau. The core of the area is stated to contain complex small scale landscapes formed by the incisions of the River Nore and its tributaries. Four principal types of landscapes are identified. The Central Plain Lowlands are noted to be abundant throughout the centre of Ireland and comprise fairly level ground - usually pasture and tillage - on lighter soils with occasional areas of bog and wetland. They have lower visual absorption capacity in areas with higher agricultural capability where fields are larger and hedges lower. River valleys are noted to be common with very localised landscapes usually not more than

0.5 km on either side of the river. They often have very high degrees of visual robustness arising from their topography and dense vegetation. Transitional Areas are those where the lowlands blend into the uplands. They usually have smaller fields, less fertile soil, less intensive land management and complex patterns of vegetation. They have a relatively high capacity to absorb visual effects. The area to the east of Ballinakill is one such area. The final landscape type is Uplands. Elevation, exposure, little or no tall vegetation and few man-made structures result in such areas being generally more visually vulnerable than other landscape. However, the final route does not pass through or immediately adjacent to any upland areas.

The EIS notes the landscape provisions of the county development plans for Counties Laois and Kilkenny and includes relevant maps from both development plans at Figures 6.1 – 6.3.

The EIS subdivides the area through which the new line from Ballyragget to the Dunstown – Moneypoint 400 kV line would pass into five landscape units. From south to north they are

The Northern Environs of Ballyragget to the Southeastern Environs of Ballinakill.

The Southeastern Environs of Ballinakill.

Ballinakill Environs to Boleybeg Crossroads.

Boleybeg Crossroads to the Eastern Environs of Timahoe,

The Eastern Environs of Timahoe to the Money – Coolnabackey Environs.

They are shown in map form at Figure 6.4. They are based on differences in terms of proximity to major settlements, proximity to roads with views, the height and extent of surrounding uplands, the size of fields and their types of boundaries and the types and height of vegetation. The EIS includes a series of photographs taken from viewing points along the public roads surrounding the site. These have been developed into photomontages to show the visual impact of the proposed development. They are included in Chapter 6 and also, at a larger size (A3), in Appendix 6.1 of the EIS. The EIS (Section 6.4.2) notes that a route was developed to minimise, but not remove all visual and landscape effects. Residual effects would remain. The analysis of such residual effects is noted to concentrate on views that illustrate the range of areas with the potential to give rise to worst-case impacts on the general landscape. They are generally located in areas where

- a large number of structures are potentially visible from a single viewing point;

- the line route crosses, or is in close proximity to, a scenic route;
- the line route crosses a national or regional road;
- the line route is potentially visible across a wide expanse of open countryside of a dominantly natural character;
- the line route crosses a skyline ridge;
- the line route is in close proximity to a river or lake at a point where there is visibility from public roads; or
- the line route crosses a visually conspicuous upland area.

In the landscape unit from the Northern Environs of Ballyragget to the Southeastern Environs of Ballinakill, it is noted that the works associated with the construction of the substation at Ballyragget adjacent to the existing substation would cause significant but localised changes to the appearance of the immediate vicinity, particularly to the graveyard immediately north of the substation on account of the removal of trees. Effects would be highly localised. Overall, it is claimed that the existing long-established settled, working character of this landscape would not be significantly altered as there are already man-made dwellings, roads, utilities and agricultural structures. In terms of effects on the appearance of the area, it is submitted that the project would not be obtrusively visible when seen looking eastwards from the N77 or the R432. It would not conspicuously break the skyline and would be seen against established backgrounds of forestry and to generally align with field boundaries in the upper fields. There would not be significant visibility from most of the sensitive (listed) views along Cromwell's Road and other high level scenic drives in the area owing to intervening topography and forestry, but sections of the overhead line between structures 7 and 27 would be visible along two stretches of road north of Ballymartin Cross Roads.

The impact on the area is illustrated in views 2 – 13. Of the potential worst-case scenarios in these views, namely views 2, 3, 4, 5, 6, 12 and 13, in my opinion, the proposed development turns out to be highly and obtrusively visible in only three cases, namely views 4, 5 and 6. Views 4 and 6 refer to the proposed Ballyragget Substation.

View 4 is taken from the R432 diagonally across a field to the south of the proposed substation site. In the original photograph, the Glanbia dairy plant is visible at the left of the frame. In the photomontage, the proposed 110 kV building and the side walls of the transformer enclosures are strongly visible as an industrial structure in a rural landscape, albeit that these new structures block the view of the existing Glanbia dairy plant. The incoming lines from the proposed Coolnabackey substation are also visible as is the overground/underground interface mast. The EIS notes that the substation

building would contrast significantly with the established appearance, scale and building form and would be locally visually conspicuous. The effect would occur in combination with the increased size and visibility of the new lines. However, it is also noted that the affected area would be confined to within the immediate environs of the substation site by the screening effects of mature trees and hedges. I have confirmed this on the ground and that the view is only available for a short distance where the road boundary consists of a low wall and gateway.

View 6 is also from the R432, this time to the north of the proposed Ballyragget substation, and is taken diagonally towards the southwest across an existing graveyard with a high road boundary wall. Again, the modern industrial-type structures of the 110kV building and the side walls of the transformer enclosures would be clearly visible. The EIS makes the same comments and again, I note this view is limited by the boundary hedgerows which provide screening on the west side of the R432, albeit that the walled graveyard has a walled road frontage of about 90 metres.

View 5 is on the opposite side of the R432 looking east across the fields as the existing 38kV line leaves the Ballyragget substation towards the Kilkenny substation. In the photomontage, the number of overhead lines is shown to increase from 3 to 10. A pole set is shown much closer to the road, as is a double-armed angle mast. The EIS notes that the proposed development would give rise to conspicuous local effects on the appearance and character of the landscape constituting an intensification of an established effect. It would significantly alter the character of an existing working landscape.

In relation to the second landscape unit, the Southeastern Environs of Ballinakill is covered in views 12-17. (There is an overlap between the two adjoining landscape units so that views 12, 13 and 17 are common to both). In addition to views 12 and 13, the remaining views 14-17 are also selected as potential worst cases. However, intervening hedgerows, mature trees and topography variously screen out the impact of the proposed power lines in all but view 16. This is towards the settlement just east of Aranmills Bridge, approximately 1.3 kilometres to the southeast of Ballinakill. The EIS notes that the upper portions of two structures of the proposed development would be visible in the context of an established settlement centre. It is claimed that the proposed development would give rise to locally conspicuous effects on the appearance and character of the landscape, but that this would constitute an intensification of an established effect. I note, in this case, that the structures would be timber polesets and in my view, despite the fact that five overhead lines would cross to the east of the settlement, the effect would not be unduly obtrusive.

In relation to the third landscape unit, the Ballinakill Environs to Boleybeg Cross Roads, this is covered in views 17-20 (again there is an overlap in the views with the adjoining landscape units, views 17 and 20 appearing in the previous and succeeding units). Views 18, 19 and 20 are subdivided into further sub-views taken from the same camera positions. All of these locations were selected on the basis of their potential worst-case visual impacts. However, owing to the presence of intervening hedgerows and trees, only views 18a and 18b are deemed to give rise to locally conspicuous effects on the landscape. The views are in two directions from a location on a minor road in the townland Boleybawn, approximately 3 kilometres east of the village of Ballinakill. It was chosen as an area with little roadside screening from where the line would be visible against the skyline. In both instances, the EIS claims that these effects would alter the established character which is of a working landscape in which man-made structures are currently visible. While the reference to man-made structures is very true of the view in one direction where there are substantial industrial-scale intensive agricultural buildings, it is scarcely true of the view in the other direction where the man-made structures appear to consist only of fence posts. Nevertheless the structures in question would be timber pole sets, with only one angle mast visible in the distance. On this basis, I consider that the proposed development would not be unduly obtrusive.

The fourth landscape unit runs from Boleybeg Cross Roads to the Eastern Environs of Timahoe. Again, there is overlap between this unit and the adjoining units to the south and north, so that viewpoints 20 and 26, respectively, are applicable to these adjoining units, also. The alignment is described as crossing elevated and afforested lands containing low levels of roads or dwellings. This is claimed to result in very low levels of effect on the surrounding landscape and no effect on the historic settlement of Timahoe or its environs. The proposed development would locally contrast with the largely undeveloped uplands. All of the viewpoints were selected as potential worst-case examples. However, only in the cases of views 20b and 23, could it be claimed that the power line would be highly noticeable. In these cases the five wires are shown to cross directly across the road and, in the case of view 23, the poleset is shown to be located in close proximity to the road. However, in no instance is there an angle mast in close proximity to the road and the support structures in the vicinity of the roads are timber polesets. Again, on this basis, I consider that the power line through this landscape unit would not be unduly obtrusive.

The fifth landscape unit is shown to run from the Eastern Environs of Timahoe to the Money-Coolnaback envions. In terms of visual impact, it is the impact

of the proposed development within this landscape unit which has been the subject of greatest criticism both in the written submissions and during the course of the oral hearing. It is covered in viewpoints 26-35. At a general level, the impact is described in Section 6.4.3.1.5 of the EIS. It is held that west of the R426, the route would be only intermittently visible from less travelled roads containing relatively few houses to the south and west and at a distance from the R427 in the context of the existing 400kV line. East of the R426 there would be a locally significant landscape effect due to the combination of the existing 400kV and 110kV lines, the proposed sub-station and the proposed 400kV link. It is admitted that the proposed development would give rise to significant intensification of effects on the appearance and character of the landscape in the area between the new sub-station and the existing 400kV line. These effects would very significantly intensify **“the developed character of this working landscape in which large man-made structures are currently visible in the foreground and middle distance”**. Seven of the viewpoints, nos. 26b, 27, 30a, 32, 34, 35 and 36 were selected as potential worst-case positions.

As in the case of the other landscape units, it transpires when the photomontages are constructed at the various locations, that only in a few cases can it be said the proposed development would have a seriously adverse visual impact. In the cases of viewpoints 26b, 27, 30a and 32 the proposed development would, variously, be well screened by vegetation (26b), have timber polesets set back from the road (27 and 30a) and be seen over quite a distance from the viewer (32 – approximately 1.7 kilometres) so as to ensure that the proposed development would not be unduly injurious to visual amenity. However, viewpoints 34, 35 and 36 are towards the new 400kV link between the existing 400kV line and the proposed Coolnabackly substation. This new link crosses an area of relatively flat and large open fields. The description of view 34 in the EIS notes that expansive views are available across open countryside of tillage fields set among mature trees with distant views of afforested upland areas. Existing large transmission structures are noted to be currently visible in this area. This is a reference to the existing 400kV Moneypoint – Dunstown power line and towards the right of the frame, scarcely noticeable in the photograph, the Athy – Portlaoise 110 kV line with its timber polesets. Following completion of the proposed development, the EIS notes that the upper portions of nine structures would be visible in the foreground and middle distance, some against the skyline. An existing single circuit intermediate tower on the existing 400kV line is shown to be removed together with a length of power line and to be replaced by two single circuit angle mast 37.25 metres in height to the west and 32.25 in height to the east. From these two angle masts, the rerouted 400kV power lines are shown to converge at a further distance of about 280 metres on a

double circuit angle mast 55.5 metres in height and then to continue onwards, linking three double circuit intermediate masts 57.75 metres in height at distances of 280 metres, 320 metres and 330 metres. The existing 110 kV line is shown to increase in height with the addition of two earth wires. The EIS recognises that the proposed development would give rise to significant intensification of effects on the appearance and character of the landscape. It is claimed the effects would very significantly intensify **“the developed character of this working landscape in which large man-made structures are currently visible in the foreground and middle distance”**.

In the case of view 35, taken from a minor cul-de-sac public road approximately 550 metres to the northeast of the new 400kV alignment, the existing single circuit 400kV line shown to recede from the viewer is greatly intensified with the effect of the two single circuit angle masts and the new power lines tracking southeast, with the new 55.5 metre double circuit angle mast just visible at the left of the frame. As in the case of view 34, intervening hedgerows and mature trees would screen views of the lower parts of the proposed development, but again the EIS recognises that the proposed development would give rise to an intensification of existing significant effects on the appearance and character of the landscape.

During the course of my site inspections, I have examined the positions chosen for the viewpoints and have found them to be reasonably representative and to have been chosen as locations with the potential to create worst-case scenarios from the standpoint of injury to visual amenity. I have confirmed that they do not appear to have been chosen as locations where the natural screening vegetation or intervening screening topography is at its best. As recognised in the EIS, a frequent criticism of photomontages is that the baseline photography is taken at a time of year when foliage is at its densest or if taken in winter, the lighting is too dark and the images indistinct. The EIS has sought to overcome such criticism by presenting a number of the baseline photographs retaken in the late spring, when it is noted that foliage is still absent, but lighting levels are optimum. This is shown in Appendix 6.3. All of the viewpoint locations are considered in this appendix. A table is presented in which the likelihood of foliage on vegetation substantially screening visibility is rated. In most cases this likelihood is rated from none to slight. In just two of the 42 locations is the foliage on the vegetation rated as substantially screening visibility. These are locations 13 and 37 (samples c and h in Appendix 6.3). In the case of view 13, summer herbaceous vegetation on the left of the image is thought likely to provide additional screening. In winter there would likely to be slightly (20%) more visibility of one poleset and the lower conductors. In the case of viewpoint 27, again it is held that summer foliage would be likely to provide additional screening. In

winter there would be likely to be slightly more visibility of the polesets at the centre and right of the image and the lower conductors.

In respect of the views to be preserved and protected and areas of high amenity as set out in Appendix F of the Kilkenny County Development Plan 2008 – 2014, as already noted, the EIS holds that there would not be significant visibility from most of the views along Cromwell's Road and other high level scenic drives in the area, owing to intervening topography and forestry, but it is recognised that sections of the overhead line between structures 7 and 27 would be visible along two stretches of the road north of Ballymartin Cross Roads. This is illustrated in Appendix 6.3 of the EIS. Photographs and photomontages are presented, two of them from vantage points on Cromwell's Road and a third from a continuation of this road to the south of Ballymartin Cross Roads. The two viewing positions on Cromwell's Road are approximately 1.2 kilometres and 0.5 kilometres north of Ballymartin Cross Roads. They look out over the broad plain of the River Nore and its tributary the Owenbeg River. There is a fall of about 220 metres from the level of the road which is approximately 300 metres.

The photomontages show the proposed 110 kV Ballyragget to Coolnabackey power line gradually diverging away from the road in a southwesterly direction. The power line is shown to be supported by a series of timber polesets with an angle mast visible at a distance of about 1.5 kilometres. Here it may be perceived in the context of the existing substation and the Glanbia milk processing plant. The EIS notes that the northernmost view has resulted from recent improvements in pasture which have removed tall gorse and saplings to expose panoramic views. The new structures would be visible from this location and would be seen in the context of a working landscape that contains many visible man-made structures (field boundaries, houses and agricultural buildings). At this point, the road and power line would be at their closest. Beyond this to the north, vegetation and topography screen views from the road. The more southerly of the two views from Cromwell's Road is noted to show a view across a longer section of road with open views. The same comment is made in relation to the proposed development being seen in the context of a working landscape. While it appears that the power line would, in fact, be located closer to Cromwell's Road further north, I have confirmed that vegetation and topography would screen the alignment from the road. I do not consider that the proposed development would be unduly obtrusive in what is undoubtedly a view which is worthy of retention.

The third viewpoint from the continuation of Cromwell's Road, to the south of Ballymartin Cross Roads is, as shown in the EIS, screened by rising topography on the west side of the road.

In some of the written objections and during the course of the oral hearing, concern was expressed that the northern part of the proposed development, including the Ballyragget – Coolnabacky 110kV power line, the Coolnabacky substation and the 400kV link-in to the proposed substation would be visible from favoured local viewing points. These include Oakvale, Windy Gap, the Rock of Dunamase and Timahoe. Oakvale and Windy Gap are located on the N80 Portlaoise – Carlow Road to the south of Stradbally and approximately 5 kilometres to the east of the proposed Coolnabacky substation and new 400kV power line. As is the case with the existing 400kV power line, approximately 4 kilometres to the northwest of Windy Gap, the proposed power line would be scarcely noticeable at this distance. Furthermore, the ridge line which intervenes to the west of these viewpoints would ensure that the proposed development would be fully screened from view. The Rock of Dunamase is located about 4 kilometres from the northern end of the 400kV link-in power line and 5 kilometres north of the proposed Coolnabacky substation. Again, at this distance, the proposed power line would be scarcely noticeable and the substation would be indistinguishable from a large agricultural structure. In any case, the intervening topography of the three hillocks in the townlands of Dysart, Aghnahilly and Grange Upper and including Hewson Hill, rising to 261 metres by comparison with about 150 metres for the Rock of Dunamase would ensure that the proposed development would not be visible from the Rock. The point was made during the course of the oral hearing that the proposed development would be visible from these three hillocks, but pathways shown on the Ordnance Survey map, in fact pass through woodland, so that it is virtually impossible to see even the existing 400 kV line, at a minimum distance of about 2 kilometres, let alone the proposed development which would recede further from this existing power line. It is unclear as to where the concern arises in terms of the alleged visibility of the proposed development from Timahoe. The round tower might appear to offer a vantage point, but there is no access, internally, to the tower. The proposed Ballyragget to Coolnabacky power line would be at a minimum distance of about 2 kilometres to the west of the village, with the proposed substation and 400kV line about 2.5 kilometres to the north of the village. At these distances and having regard to the intervening topography, I cannot see that the proposed development would be visually obtrusive.

In the written submissions and during the course of the oral hearing, the possibility was raised that a spider's web effect would be created with the convergence of three 110kV power lines plus the 400kV power line on the proposed Coolnabacky substation. There would also be the possibility that further power lines might converge on the substation in the future. The possibility of placing the power lines underground as they approach the

substation was raised in the written submission from Sean Fleming T.D. and also at the oral hearing. It was also raised by the planning authority and I posited it as a possible condition in the event that the Board should decide to grant permission for this development. The feasibility of placing cables underground on the lead-in to the substations was amongst the technological alternatives considered in a paper presented by Aidan Geoghegan, a technical specialist engineer in the Transmission Asset Management Section of EirGrid, at the oral hearing. Responding to the suggestions which had already been made in written submissions, his presentation noted that the undergrounding of the final approach or “run-in” of a new circuit into an existing substation which already has a multiplicity and congestion of existing overhead lines is in line with EirGrid’s guidelines for the use of underground cables on the transmission system. There are thus numerous examples at the 110kV level of such undergrounding. However, since the 400kV network was introduced in Ireland approximately 30 years ago, there has never been a case where a new 400kV overhead line needed to be connected into an existing substation and there are therefore no examples in Ireland of such undergrounding. In the case of the 110kV circuits, where undergrounding has been adopted, the length of the cable run-ins would be relatively short, typically hundreds of metres and rarely in excess of a kilometre. There were certain operational and safety risks attached to inserting an underground cable into an overhead line circuit, but this risk was acceptable at the 110kV level, if the cable section was short and constituted a “run-in” to a substation. The single transition from the overhead line to underground cable could be implemented using a cable interface mast, an illustration of which was shown to be little different from a conventional open lattice angle mast. Such an interface would not be possible on a 400kV circuit and instead an interface compound would be required. Photographs of such compounds in other countries show them to be similar to small open air substations.

There was a strong reluctance on the part of the applicant to contemplate the possibility of placing the 400kV line underground. The 400kV line forms a critical part of the National Electricity Infrastructure. To date, over its lifetime of more than 25 years, the existing Moneypoint – Dunstown 400kV overhead power line has operated with 100% reliability. While overhead line circuits experience marginally more permanent (as distinct from transient) faults than underground cable circuits, the Cigré Report - Update of Service Experience of HVU Underground and Submarine Cable Systems, 2009 showed that the average repair time for an underground cable fault was 25 days, by comparison with less than a day for overhead lines. Depending on the assumptions, the submission to the oral hearing estimated that the cost of placing the power line underground would range from 3.7 to 7.9 times that of adopting an overhead line (Section 3.11).

Responding to the suggestion that the Board might wish to impose a condition requiring that the 400kV link would be placed underground, the applicant held that this would amount to introducing two relatively weak links into what is, at present, a strategically important 400kV overhead line forming part of a strong and important network. Such an insertion would not meet the applicant's statutory criteria in terms of planning the transmission network as well as the development as currently proposed. It would not be the best technical solution.

I also mooted the possibility of placing the 110kV power lines underground on the approaches to the Coolnabacky substation for a distance of 1 kilometre from the substation. Again, the applicants were opposed to such a proposal on the basis of reduced reliability and the increased time for repair in the event of breakdown. Again they were concerned that there would be greater environmental impact from the construction phase in the digging of the trenches and the unavailability of the lands thereafter for either building or certain types of vegetation. The latter appeared to be a reference to afforestation rather than normal arable crops.

I am not convinced of the increased environmental impact of the construction phase of placing the power lines underground. While there would undoubtedly be an increased adverse environmental impact from the trenching, access and other construction works this would seem to be short-term and the land could largely be restored thereafter. I am not convinced, either, by the argument against placing the power lines underground in terms of the long-term unavailability of the lands thereafter for building or vegetation. Building would also be precluded in the vicinity of the overhead power lines and in terms of vegetation there appears to be little demand for afforestation in the vicinity of the proposed Coolnabacky substation. It was clarified during the course of the oral hearing that it would be necessary to have an interface compound in the case of the 400kV power line in order to run it underground towards the proposed substation. Examples of such compounds were presented to the oral hearing and can be seen at page 28 of the Technological Alternatives submission. In total, two such compounds, even in close proximity, might be less visually obtrusive than the five double circuit masts ranging in height from 55.5 metres to 57.8 metres which would no longer be necessary if the power line was placed underground. However, any such interface compounds would be within 350 metres of the R427, whereas the pylons would recede from the alignment of the existing 400kV Moneypoint – Dunstown power line up to a distance of about 1.8 kilometres.

In my view, the continued reliability of the existing 400kV Moneypoint – Dunstown 400kV overhead power line is of critical importance. The ready accessibility of the new 400kV loop into the proposed Coolnabacky substation would be of vital importance in ensuring the continued reliability of this line. Notwithstanding the strong concerns of the planning authority in recommending that this power line be placed underground, I take into consideration the precedent which already exists in the area with the Moneypoint – Dunstown 400kV power line. The proposed 400kV loop would pass through an area defined as a Lowland landscape character type in the current Laois County Development Plan and which is noted therein to cover the largest proportion of the county. While the development plan notes that it is crucial that future development of this landscape character type is carried out sensitively and with particular reference to the rural nature of the landscape, I consider that it is probably better able to absorb a development of the type proposed, particularly having regard to the precedent already set in the vicinity. As already noted, the proposed power line would recede from the R427 to its north. It would also gradually diverge from the R426 to its west, increasing in distance from about 740 metres in the case of mast 3 at its northern end to 1,200 metres in the case of mast 7 at its southern end.

It appears that the 110kV power line would not suffer from the disadvantage of needing an interface compound to transition from overhead line to underground cable. In this case, this could be achieved by means of an interface mast, an example of which is illustrated at page 26 of the oral hearing submission on Technological Alternatives. This would be little different from a steel angle mast where the 110kV overhead power lines change direction. However, again I note the proposed 110kV power lines generally recede from areas of public view (roads). The much lower timber polesets are very much less visually obtrusive than the steel support masts proposed for the 400kV line. I would suggest that such power lines are generally perceived as an established part of the countryside.

Overall, in terms of the visual impact of the northern part of the proposed development, it is important to note the distance of the proposed power lines and the substation from the nearest places of public view. The EIS correctly identifies the potential viewing points and those where there would be an actual view. The proposed Coolnabacky substation would, at its closest, be just over a kilometre from the R426, but would, from this location on the road, as shown in photomontage 29, be entirely screened by hedgerow trees in the middle distance. Similarly, an apparent viewing point from the Timahoe to Stradbally Road sees the proposed substation, at a distance of about 1,100 metres, screened by intervening trees in the middle distance and background. I consider that the substation would be sufficiently far and/or screened from

any places of public view and from any favoured areas of local amenity such as Hewson Hill or the Windy Gap as to ensure that its visual impact would be minimised. I take the same attitude to the issue of the creation of a spider's web effect with the existing, proposed and possible future power lines converging on the substation. The centre of the web would be sufficiently far from public viewing areas as to ensure that it could not be seen. It would be likely to be really noticeable only from the air. I consider that the only place where there would be likely to be an awareness of the concentration of power lines in the area would be from the R427 to the north of the take-off point for the new 400 kV overhead power line link from the existing Moneypoint – Dunstown power line. Here the existing and upgraded Athy – Portlaoise 110kV power line would be visible directly beside the new 400 kV link. However, I consider that the 110 kV power line would be so much less conspicuous than the 400kV line that to require that this be placed underground would be futile.

In relation to the remaining power lines, the 110kV line from Kilkenny to Ballyragget is, for the most part, effectively an upgrade of the existing power line. It was confirmed at the oral hearing that the new polesets would extend upwards only for a short distance out of the substations at either end to accommodate the earth wires, but that the majority of the power line would be of a similar height and design to that existing. The new power line from Ballyragget to Coolnabacky has been aligned in a manner which avoids ridgelines or, where this is not the case, e.g. to the south of the point where it crosses R430 Abbeyleix to Carlow Road, where the natural vegetation in the vicinity of the road provides screening and assimilation. Protected views, as from Cromwell's Road, would not be unduly compromised.

Cultural Heritage

An initial assessment of the cultural heritage features present in the Project Study Area was carried out in order to highlight any areas of potential archaeological sensitivity and to identify all recorded cultural heritage sites that might influence the route or site selection process. These are reported on in Appendix D-2 and I-2 of the Lead Consultant's Stage 1 Report. They were considered when identifying potential substation sites and circuit routes. Following the selection of the preferred route, a further desktop assessment was carried out, including a thorough examination of 1st and 2nd edition Ordnance Survey mapping. Archaeology, architecture and cultural heritage were considered to include

- Sites listed in the Sites & Monuments Record (SMR)

- Record of Monuments & Places (RMP)
- Register of Historic Monuments (RHM)
- National Monuments in the ownership or guardianship of the State or in Local Authority ownership
- Sites listed in the Archaeological Inventory of County Laois
- Archaeological sites listed on the National Monuments Service website www.archaeology.ie
- Sites listed in the Record of Protected Structures (RPS)
- National Inventory of Architectural Heritage, Buildings of Ireland www.buildingsofireland.ie
- Sites reported in Excavations Bulletins
- Any previously unrecorded sites detected during field inspection

Figure 7.1 in the EIS shows all national monuments along or in the vicinity of the power line. A series of tables in Chapter 7 shows the proximity of various archaeological features to the proposed power lines, masts, polesets and access tracks. Field systems are noted to be 20-25 metres and 22 metres, respectively from the power line (Tables 7.4 and 7.9). A possible ring fort is noted to be 19 metres from poleset BC12 and 20 metres to its construction access track (Table 7.10). In one instance a construction access track between polesets BC5 and BC6 is noted to traverse a levelled field system. The extent of the field system is not known (Table 7.9). While no protected structures or their curtilages would be traversed by the proposed overhead line or would be located within close proximity of polesets or angle masts, a number of newly recorded sites of local heritage merit were noted from the first and second edition OS maps in the case of the overhead line between Ballyragget and Coolnabacky. The power line or its access tracks would variously be on or near the sites of limekilns or existing bridges. In the case of the uprating of the Ballyragget to Kilkenny overhead power line the slight relocation of the poleset BK12 would reduce its proximity to a ring fort from 21 metres to 17 metres (Table 7.23) and limekilns would be 2 metres from poleset 30 and 6 metres from poleset 27 while the former Great Southern and Western railway line would be 6 metres from poleset 3 (Table 7.24).

Section 7.5 on mitigation notes that the detailed appraisal process, i.e. constraints report, route selection report and assessment of the preferred route has resulted in no profound or significant impacts on the archaeological, architectural or cultural heritage. While it is recognised that a number of mitigation measures are required, the majority of archaeological, architectural and cultural heritage features were “designed out” of the proposed development. It finds that any lands containing recorded monuments and newly discovered sites to which access was not permitted at the time of

survey should be inspected by an archaeologist prior to commencement of construction works. A list of detailed mitigation measures are recommended on a unit by unit basis at subsections 7.5.1 to 7.5.8. Provided these mitigation measures are adopted, residual impacts, as shown in the tables in subsections 7.6.1 to 7.6.8 are, at worst, likely to be low–medium.

I consider that the findings of the EIS in relation to cultural heritage are reasonable. There was some argument during the course of the oral hearing in relation to the description of some of the items of archaeology, but I consider that the items in question were sufficiently far removed from the proposed power line as to ensure that any impact, which could only be visual, would be negligible.

Ecology

The topic of ecology is covered at chapter 8 of the Environmental Impact Statement. At the commencement of this chapter, it is noted that a number of ecological surveys and reports were carried out which helped to inform the Ecological Impact Assessment. These included

- an ecological constraints report dated October 2010 and included in the Stage 1 Lead Consultant's Report at Appendix D4.
- the Coolnabacky substation site selection report included in the Stage 1 Lead Consultant's Report at Appendix G.
- winter bird surveys undertaken from March to April 2010 and from October 2010 to April 2011 and included in the Stage 1 Lead Consultant's Report at Appendices D7, D8 and D9 and the Stage 2 Report at Appendix D.
- an ecological assessment of potential route corridors and route corridor selection dated March 2011 set out in the Stage 1 Lead Consultant's Report at Appendix I1-16.
- an Environmental Impact Assessment Screening Report.
- an Appropriate Assessment Screening Report .

It is noted that a precautionary approach was taken throughout the route and site selection process with the aim of avoiding, where possible, potential impacts on identified ecological receptors. The main ecological constraints of the project were identified at the earliest possible stage.

The study area, ranging from the proposed Coolnabackey substation site to the existing ESB substation at Scart, County Kilkenny, is subdivided into three sub-areas in the EIS (section 8.1.4). The northern part of the study area, including the northern part of the proposed Coolnabackey to Ballyragget line is noted to be dominated by low-lying landscape intensively managed for agriculture. The central part of the study area to Ballyragget is characterised by the Castlecomer Plateau with ground extending up to 330 metres underlain by shales and sandstones. The southern part of the study area is a low-lying rural landscape intensively managed for agriculture with improved grassland and arable crops.

Following the identification of the preferred substation site and preferred route corridor between Coolnabackey and Ballyragget a review of aerial photography and other GIS data sets was undertaken to identify areas of potential ecological interest. These in turn became the subject of field surveys in September to October 2011, June to July 2012 and in June 2013. It was found that there were populations of wintering waders and wild fowl from wetland sites in the wider region. A report on their occurrence is included as Appendix 8.1 of the EIS.

Where access was permitted by landowners, a multi-disciplinary walkover survey was undertaken in areas identified for detailed ecological survey. The survey consisted of a habitat survey, bird surveys, a mammal survey and a fisheries survey.

On the assessment of impacts and impact significance, impact types were classified as positive, neutral or negative. Impact magnitudes were subdivided into six categories, namely, no change, imperceptible impact, minor impact, moderate impact, substantial impact and major impact.

The EIS considers the proposed development in terms of the eight components specified in the public notices. It considers the predicted impacts on key ecological receptors and these are summarised in a series of tables (8.24, 8.26, 8.27, 8.28, 8.32, 8.35 and 8.38).

Mitigation is considered at section 8.5 of the EIS. Mitigation is categorized into avoidance, reduction and remedy. Following mitigation, the residual impacts in each component are seen, at worst, as being at the level of "imperceptible negative". In the case of each of the eight components of the proposed development, there is specific mitigation relating to birds, bats and mammals. In each case, it is recommended that site preparation, including all vegetation clearance should be restricted, as far as possible to time periods

outside the bird and bat breeding season, i.e. March to September. In the case of unit 5, the new 110kV overhead line between Ballyragget and Coolnabacky, is it found necessary to recommend that bird flight diverters should be installed. This would be at the position where the line crosses the Owenbeg River at Boleybeg. It is thought probable that the river would be used as a commuting route by waterbirds, even though few were recorded. It is recommended that spiral type markers be adopted and that such markers should be fitted on the earth wires at 5 metre intervals. An example of such a diverter is shown in figure 8.4.

Once the precise felling requirements become known where the power line passes through woodland areas, bat surveys would be undertaken on specific mature trees due for felling. Any such trees containing bats would only be felled following the granting of a derogation licence from the National Parks and Wildlife Service.

No evidence was found of otters during field surveys in relation to unit 5, the proposed 110kV overhead line between Ballyragget and Coolnabacky or unit 6, the proposed upgrade of the existing Ballyragget to Kilkenny overhead line. However it is recognised as a possibility that otter territories could become established in proximity to the line route prior to construction commencing. Accordingly, further pre-construction surveys are recommended at watercourses and adjacent habitats in close proximity to structure locations. Should an otter resting or breeding site be identified, appropriate measures and procedures would be followed in consultation with the NPWS. There was, likewise, no evidence of badgers, but again the same precautionary approach is recommended.

Overall, I consider that the proposed development would be acceptable from an ecological stand point. The impacts of construction, operation and decommissioning are, as noted in the non-technical summary, likely to be imperceptible, provided construction, management and restoration on decommissioning follow best practice procedures and the proposed mitigation measures are adopted.

In the course of the chapter on ecology, reference is made to the potential impact of the proposed development on the River Barrow and River Nore Special Area of Conservation (site code 002162). The proposed development is in close proximity to this cSAC and in two instances actually crosses it, namely, at the Avonbeg River at Boleybeg and at Jenkinstown over the Douglas River just upstream of New Dinin Bridge. The EIS notes that a Natura Impact Statement was undertaken and that this was included in the

original submission to the Board. I consider this Natura Impact Statement elsewhere in this report.

During the course of the oral hearing, one of the observers, Peter Sweetman, seemed to take the view that the Board could not consider granting permission for this development as it might impinge on the integrity of nearby tufa deposits. The positions of these tufa deposits are shown on Figure 4.1 of Appendix 10.1 of the Environmental Impact Statement on the topic of Site Investigation and Hydrogeological Assessment for the proposed Coolnabacky substation. One is located immediately to the northeast of the site of the proposed substation at an existing stream and the other is located away from the site further downstream to the east by a distance of 450 metres. These are more properly known as “**petrifying springs with tufa formation (Cratoneurion)**” and are as such, a priority habitat under Annex 1 of the EU Habitats Directive. According to the observer, in view of the proximity of the proposed development to this priority habitat, at least a screening for appropriate assessment should have been carried out in this regard. In my view, in terms of appropriate assessment, the Board must consider whether or not a proposed development is likely to have an effect on the integrity of a European site. Under Irish legislation, a European site is defined at section 177R of the Planning and Development Act, 2000, as amended. It is a candidate site of Community importance, a site of Community importance, a candidate Special Area of Conservation, a Special Area of Conservation, a candidate Special Protection Area or a Special Protection Area. It is not simply a priority habitat under Annex 1 of the Habitats Directive. I am of the view that the Board is not precluded from making a decision on this application in the absence, at a minimum, of a screening for Appropriate Assessment.

Hydrology and Hydrogeology

The possibility that the underlying aquifer would be contaminated as a result of the proposed development and, in particular, the proposed substation, was a major concern in the written objections to the proposed development and also during the oral hearing. The Kyle Spring is the main source of drinking water supply in the area. Its water comes from the underlying aquifer. The topics of Water (Hydrology and Hydrogeology) and Soils and Geology are covered at Chapters 10 and 9 of the Environmental Impact Statement, respectively. Appendix 10.1 of the Environmental Impact Statement on Site Investigation and Hydrogeological Assessment for the substation indicates (Section 2.3) that the Kyle Spring is located approximately 2 kilometres to the southeast of the substation site. It functions as a public water supply and is stated to have an abstraction rate of 1,591 cubic metres daily. It is noted to

be a source protection zone and to be part of the EPA Groundwater Monitoring Programme. It is situated in gravels. The source protection zone is shown on Figure 2.4 in this part of the appendix and is stated to be approximately 1.2 kilometres from the site, at its nearest point.

Figure 9.1 of the Environmental Impact Statement is based on the EPA ENVison database. It shows the soil group underlying the substation site to be alluvium. In the immediate vicinity, notably to the south, are soils classified as BminSP. This is shallow poorly drained material, derived from mainly calcareous parent materials, in this case, surface water Gleys (shallow) and groundwater Gleys (shallow). The permanent or intermittent waterlogging which has given rise to these Gleys may be due to a high watertable, to a perched watertable caused by the impervious nature of the soil itself, or to seepage of runoff from slopes (EIS Section 9.3.1.2).

The subsoil map, shown in Figure 9.2 of the EIS is, again, based on the EPA ENVison database. The subsoil is shown to consist of undifferentiated alluvium. Glaciofluvial sands and gravels form the subsoils in the immediate vicinity of the site, again, notably to its south.

The EIS states (Section 7.3.1.3) that during intrusive site investigations, sand and gravel deposits were encountered beneath the topsoil to between 0.9 – 1.9 metres below ground level. They were typically brown to orange-brown with sub-rounded cobbles of limestone. It is confirmed that sand and gravel deposits were encountered at all locations. (Although the four supplementary boreholes drilled earlier this year towards the western, northwestern, northeastern and eastern site boundaries indicated clay beneath the topsoil). The EIS notes that clay deposits were encountered from 0.9 metres below ground level and proved to a maximum depth of 8.5 metres below ground level in original borehole 2. I estimate that original boreholes 1, 2, 3, 4, 5, 6 and 7 were drilled within the proposed area for the substation compound. These were drilled to depths of 6.5 metres, 8.5 metres, 5.8 metres, 6.44 metres, 7.4 metres, 5.9 metres and 5.8 metres, respectively. The clay is noted to have consisted of grey to brown-grey firm to stiff clay with sub-rounded gravel and cobbles of limestone.

Geological Society of Ireland (GSI) records are noted to show that the substation would be underlain by Lower Carboniferous limestone – the Ballyadams Formation. These are pale grey thick bedded pure fossiliferous limestone. It comprises water bearing units of pure limestone and dolomitised limestone and Calp. The dolomitisation is noted to be incomplete so that there may be areas of un-dolomitised limestone which would act as aquitards. (EIS Section 9.3.1.4).

On hydrogeology, the EIS (Section 10.3.2.2) notes that a Regionally Important Karstified (diffuse) bedrock aquifer and a locally important sand/gravel aquifer underlie the proposed substation site. The bedrock aquifer refers to the Ballyadams Limestone Formation. This is shown in Figure 10.3 to extend to the northeast and southeast of the substation site. The underlying bedrock is stated to be at a depth exceeding 8.6 metres below ground level at this location. The gravel deposits in the area would also act as an aquifer when sufficiently thick, permeable, saturated and extensive. The substation site is located on the boundary of a Locally Important sand and gravel aquifer. Figure 10.4 shows this aquifer extending to the south of the substation site. The EIS notes that in the earlier site investigation, the thickness of the sand and gravel deposits varied and ranged from 0.9 to 1.9 metres across the site.

The gravel aquifer extending to the southwest of the site also includes eskers and gravel pits, indicating that a greater thickness of sand and gravel may be expected in the area. The tufa deposits to the east of the substation are on the boundary of the gravel aquifer and are associated with discharge zones at the aquifer boundary. However, the sand and gravel deposits at this site were not found to be saturated during the earlier site investigation. In most cases, groundwater strikes were not recorded in these deposits and, due to the presence of low permeability clay deposits beneath the sand and gravel, the inflow volumes of groundwater during drilling was minimal. As the sand and gravel was found to be not saturated, this indicated that the quantities of groundwater present are not significant. Subsequently, four additional boreholes were drilled close to the periphery of the site near its western, northwestern, northeastern and eastern boundaries, up-gradient and down-gradient of the predicted groundwater flow direction. The ground conditions are noted to have consisted of soft to stiff sandy gravelly Clay and silty sandy Clay to approximately 3 metres below ground level. Below this level, low permeability stiff to firm boulder Clay was encountered. While Boreholes 1, 2 and 3 were drilled to 4 metres, 5 metres and 4 metres, respectively, Borehole 4, i.e. that close to the easternmost extremity of the site, was extended down to 9 metres. In this borehole, the boulder Clay was found to extend to 8.6 metres below ground level, beyond which the returns were of angular rock, suggesting boulders or bedrock. No fast inflow groundwater strikes were recorded during the site investigation. Data loggers were installed to record the static groundwater levels at hourly intervals. Based on data to date, at the time of submission of the Environmental Impact Statement, the groundwater level at the site was found to be typically less than approximately 1 metre below ground level. This is confirmed in the data submitted from Boreholes 1 – 3 at Appendix 10.1. (No data is provided for Borehole 4). Permeability tests carried out at each groundwater monitoring well (borehole) indicated that the

hydraulic conductivity was typical of silt and clay soils. The water present in the deposit was thus considered to represent pore water, rather than groundwater. The sand and gravel deposits at the centre of the site, which might have been expected to have a higher permeability, were also found to be unsaturated in the earlier investigations.

In general, it is expected that the groundwater gradient will follow the topography of the area. It is noted that gravel aquifers will discharge to the nearest watercourse, in this case the Timahoe River approximately 600 metres to the southeast of the substation site. Due to the presence of a proven significant thickness of low permeability Clay deposits beneath the Sand and Gravel deposits there would not be hydraulic continuity between these deposits and the bedrock aquifer beneath the site.

Section 10.4.3 of the Environmental Impact Statement considers the potential impact of the proposed substation on the hydrological and hydrogeological environment. For the construction phase these potential impacts would consist of increased runoff and sediment loading, contamination of local watercourses and groundwater, flood risk, dewatering and localised alteration of the groundwater flow, rate and direction.

Increased runoff could result from the introduction of impermeable surfaces and soil compaction. The surface water runoff and sediment loading could impact local drainage patterns and/or cause siltation of existing surrounding watercourses. The potential impact is considered to be medium-term – moderate.

Contamination could arise from spillage or leakage of oils and fuels in storage, in use by construction machinery, or from refuelling machinery. It could also arise from the use of concrete and discharges from sanitary facilities. The potential impact on local watercourses and groundwater is held to be medium-term – significant.

In terms of flood risk, construction of the substation would lead to hard-standing surfaces and thereby increase surface water runoff. There would be a potential localised impact on flow regimes in existing watercourses leading to the flooding of adjacent lands. The risk is deemed to be short-term – slight.

In terms of dewatering, the excavation would extend through the sand and gravel deposits into the underlying clay deposits. The former have been found to be unsaturated so that groundwater inflow would be limited and likewise, the need for dewatering. With low permeability clay at the base of the excavations, any groundwater in the more permeable sand and gravel

deposits could be isolated during dewatering, if necessary. The potential impact from dewatering is considered to be short-term – slight.

The construction of the substation could temporarily change the groundwater flow, rate and direction should excavations extend below the watertable and should pumping be required to enable the pouring of concrete. However, the site investigations suggest that minimal dewatering will be necessary. The potential impact is considered to be short-term – slight.

During the operational phase of the substation effluent from the sanitary facilities on site could give rise to water pollution if not adequately treated. There is the potential for leakage from the transformers which could lead to localised contamination if it entered the water environment. Periodically there would be machinery on site with the possibility of leakages of oil, petrol or diesel which could cause contamination of groundwater if it entered the underlying soils or landscaped areas within the station compound. The potential impact on the water environment is considered to be long-term – moderate.

Section 10.5.1 of the EIS covers mitigation measures in relation to hydrology and hydrogeology at the proposed Coolnabacky substation site. In order to mitigate against increased runoff and sediment loading, any drains carrying a high sediment load during the construction phase would be diverted through the settlement ponds. These would be located between the area of construction and the nearest field drain. Surface water runoff would not be discharged directly to local watercourses. The drainage system and settlement ponds would be constructed as a first step before major site clearance activities commence. Excavations would remain open for as little time as possible before the placement of fill. Silt traps, such as geotextile membrane, would be placed in the existing drainage network around the substation site and along the proposed access road prior to the establishment of the settlement ponds and access road construction in order to minimise silt loss. Swales would be located along the access road. Weather conditions would be taken into account when planning construction activities in order to minimise the risk of runoff. All oils, solvents, paints and fuels to be used during the construction period would be stored within temporary bunded areas to 110% of the capacity of the largest tank/container within the bund plus an extra 30 millimetres for rainwater ingress. Filling and drop points would be located entirely within the bunded area. Drainage from within the bunded area would be diverted for collection and safe disposal.

There would be no concrete batching facility on site. Only the chutes of concrete delivery trucks would be cleaned on site and it would be clearly

indicated that any other washing on site is prohibited. Wash-down water from exposed aggregate surfaces and cast in place concrete and from the washing of the delivery truck chutes would be trapped on site to allow sediment to settle out and reach neutral pH before clarified water would be released to a stream or drain system or allowed to percolate into the ground. In order to minimise the vulnerability of groundwater during the removal of soil/subsoil at construction stage, all ground works would be completed in an appropriately managed manner to be set out in the Construction and Demolition Waste Management Plan.

The riparian zone would be protected by means of a buffer in accordance with the requirements of the Department of the Marine and Natural Resources as shown in Table 10.18 of the EIS. This table implies a buffer zone of at least 10 metres. A 25 metre buffer zone would be applied around the tufa deposits on the periphery of the site.

In the event that a machine cannot be refuelled at a refuelling point, fuel would be delivered in a double skinned mobile fuel bowser with appropriate precautions to deal with accidental spillages.

Water monitoring would be undertaken during the construction phase at a point upstream of the site discharge points, at the outlet from the proposed settlement ponds, downstream of the site discharge point, and, in the case of groundwater, up-gradient of the construction site at new Borehole 1 and down-gradient of the construction site at new Borehole 4.

While site investigations indicated that the need for dewatering is likely to be limited, should this be required on an on-going basis, a low permeability barrier would be installed around the excavation walls. This would ensure that any potential for drawdown that could affect the water environment would be minimised.

The proposed surface water drainage system would ensure that there would be no increase in surface runoff from the proposed substation and therefore, no increased flood risk.

In terms of the localised alteration of groundwater flow, rate and direction, it is noted that the construction of the substation would temporarily change the groundwater regime, should excavations extend below the watertable and should pumping be required to enable the pouring of concrete. Mitigation measures would entail minimising the time for excavations, avoiding unnecessary pumping and dewatering if lowering of the groundwater table is required. Groundwater exclusion techniques would be used such as drainage

or sheet piling to reduce the need for dewatering and to avoid the unnecessary drawdown of the watertable outside the excavations. Locally excavated material would be reinstated surrounding the foundation base immediately following construction. Aggregate would be imported rather than quarried on site.

For the operational phase of the proposed substation, oil storage and the transformers would be stored in designated areas with an impervious base. The bunded volume would be 110% of the capacity of the largest tank/container within the bunded area plus an extra 30 millimetres for rainwater ingress. Filling and drop points would be located entirely within the bunded area. Drainage from these areas would be diverted for collection and safe disposal. Surface water generated in the bunded areas would discharge to the ponds via a Class 1 Full Retention Oil Separator. In the event of an environmental incident occurring, the ESB Networks Emergency Response Procedure would be activated. Again, refuelling of equipment and the addition of hydraulic oil or lubricants to vehicles/equipment would take place off site, where possible. If this should prove not possible, a double skinned mobile fuel bowser would be used during refuelling procedures with appropriate precautions against accidental spillages.

A major concern of many of the objectors to the proposed development both in the written submission and during the course of the oral hearing was the possibility of the contamination of the local drinking water supply. This originates from a groundwater source and is taken from the Kyle and Orchard Springs. Kyle Spring is approximately 2 kilometres to the east-southeast of the proposed site of the Coolnabacky substation compound. Orchard Spring is approximately 3 kilometres to the southeast of the proposed substation compound. Kyle Spring supplies Stradbally and Ballylynan. Orchard Spring supplies Timahoe.

A report on the groundwater source protection zones for the springs was carried out by the Geological Survey of Ireland in collaboration with Laois County Council in 2000. This recorded an abstraction rate of 1,591 cubic metres per day for Kyle Spring and 214 cubic metres per day for Orchard Spring. Under the heading "Conceptual Model", the report notes that Kyle Spring apparently issues from the Ballyadams Limestone Formation. It holds that since this formation is generally karstified, the spring could be classed as a karst spring. However, it is noted to have a relatively consistent flow rate and hydrochemistry, making it more characteristic of a gravel spring. Since the spring emerges from an alluvial gravel area, the report concludes that the groundwater flows out of the limestone and then through the gravel for some distance before emerging at the spring. The streams which cross the alluvial

flat flow in artificial channels of considerable age. From this the report concludes that they are not in hydraulic connection with the gravel/limestone aquifer in the area. Hence the report envisages that groundwater from the south and west may flow beneath the Timahoe/Bauteogue River en route to the spring. The report notes that the spring is not being pumped excessively and that the system is not being stressed. The groundwater would thus still move in the direction of the regional groundwater flow. If the groundwater catchment closely reflects the surface water catchment then flow would be expected to be largely northwards (i.e. not from the direction of the proposed substation site).

The report shows the zone of contribution and the groundwater protection zone for the Kyle Spring extending to the south and southwest of the spring location. At their closest point, these are approximately 1.2 kilometres to the southeast of the proposed substation site. Although the report includes, amongst its conclusions and recommendations that as the western boundary of the zone of contribution to Kyle Spring is based on topographic evidence and assumed groundwater flow direction, and the local area is very flat lying, additional water level measurements, and possibly a tracing test should be undertaken at this boundary, or just beyond it, to help to refine the boundary, I consider that the proposed substation site is sufficiently far from the derived zone of contribution and the inner groundwater protection zone as to ensure that the proposed substation would not have a detrimental impact on the local water supply from Kyle Spring or Orchard Spring.

In the written submissions and, again, at the oral hearing, there was criticism of the failure of the applicant to survey local springs. In one instance it was claimed that there were 14 springs in the locality serving farms. The EIS (Section 10.3.2.2.1) notes that the GSI Well Card Index and locates just two wells in the townlands of Killavalley and Bauteogue, about 1 kilometre northeast of the proposed substation. However there was no information in relation to the depth of groundwater, the yield or the use of each well. Notwithstanding the fact that the applicant does not appear to have undertaken a survey of local wells, it is my view that having regard to the construction methods envisaged and the proposed mitigation measures, that the risk of contamination of any wells in the locality is negligible. I note also that the Health Service Executive has recommended on-going monitoring of groundwater at the site and that the applicant is agreeable to such monitoring. I note also that the applicant proposes an emergency response in the event of fault developing at the substation although this would be remote and based in Portlaoise and was not to the satisfaction of the objectors.

The issue of flood risk was raised both in the written submissions and at the oral hearing. As noted earlier, in a letter of objection, Henry Ramsbottom noted that “local experts” had stated that the substation site at Coolnabacka had previously been subject to flooding. He submitted that while the applicants had inspected the site for flooding in May 2012, the winter months would have seemed more suitable. The RTS Substation Action Group had noted that the site was located in a floodplain with over 30 townlands draining into it.

During the course of the oral hearing, one of the objectors, Ray Ryan, noted that oral history suggested that there had been flooding at the proposed substation site in the field which had been known as Lowry’s Bog. In his own yard in Coolnabacka there had been up to 4 feet of water in the last 25 years. He claimed that there was a history of flooding at the site and surrounding fields in the past 25 years. There was a failure to evaluate the oral history of flooding arising from the Timahoe River and the Honey Stream.

Asked, during the course of the oral hearing, what the flood surface level of the Timahoe River was by comparison with the site, the applicants responded that official records showed that there had been no flooding of the site. It was clarified that this was a reference to the Office of Public Works. When it was suggested that this was based on an on-going and incomplete survey and that the site was off the beaten track and might not be reported to the OPW, it was stated that oral history of flooding is taken into account by the OPW and that anecdotal evidence is considered by the OPW, but no submissions had been received in relation to the Coolnabacka site. The OPW have had a period of consultation open to the public for many years, but again there have been no submissions in relation to flooding in that area.

It was suggested, by the objectors, that the methodology was flawed as the local farmers who would have been well aware of flooding in the area would not necessarily approach the OPW. There had been flooding in the area over the last 5 years with the need to rescue animals.

The applicants noted that the Timahoe River is downstream of the site, with the Bauteogue Bridge parapet 5 metres below the level of the site, so that there would need to be 5 metres of water above this level in order to flood the site. The applicants were adamant that there was no record of flooding of the site. They pointed out also that the substation was of a flood resilient design. It would have sustainable drainage systems such as surface water attenuation and would not contribute to flooding in the area.

The applicants conceded that they had not spoken to local residents in relation to flooding. The flood risk assessment had been carried out in accordance with the Guidelines. It was agreed that if it was known that there was a greater than 1 in 1,000 year flood risk at the site, it should be deemed unsuitable for this development. However, there was no evidence of a flood risk at this site.

The observers produced two witnesses stating that the field in which the substation would be located had flooded in the past. In one case it was stated that it had regularly been flooded in the early 1950s to the extent that cattle had to be removed from the site in the winter. One of the witnesses stated that there had been flooding subsequent to arterial drainage having been completed.

The applicants claimed that it was only possible to deal with the current situation on the site. They noted that arterial drainage had been undertaken and that the site was very well served by drainage ditches surrounding it. The site had been visited regularly over the past year and at all times was very dry. There was no evidence of flooding. There is no vegetation on site to suggest that it is wet or marshy land. There may have been past instances of ponding from immediate rainfall, but, as far as the applicants are concerned, there is no evidence of flooding having taken place as a result of river overflow.

The issue of flooding is mentioned at Section 10.3.2.1.2 of the Environmental Impact Statement. It refers to Appendix F of the Drainage and Infrastructure Report for the Coolnabacky Substation that accompanies the EIS. This is, in fact, a reference to Appendix F of the Coolnabacky 400/110KV substation Drainage and Services Report, included as Tab 1 of the Supplemental Environmental Documents in the Environmental Documents making up Volume 3B of the original submission to the Board.

At Chapter 2, the report notes the provisions of the Flood Risk Management Guidelines published by the Department of Environment, Heritage and Local Government in 2009. It notes that the Guidelines classify developments into three vulnerability classes in terms of the effects of flooding. These are “highly vulnerable”, “less vulnerable” and “water compatible”. It is noted that essential infrastructure, such as electricity substations, falls into the highly vulnerable class. It notes that the Guidelines classify land areas within three flood zones based on the probability of flooding. Zone A is the highest risk with a 1 in 100 year or 1% or greater chance of flooding from rivers. Zone B is at moderate risk, with its outer limit being defined by the 1 in 1,000 year or 0.1% flood risk from rivers. Zone C is the low risk area with less than a 1 in

1,000 year chance of flooding from rivers. Essential infrastructure should only be located within flood zone C.

The report notes that the Coolnabackey substation site would be located in a field devoted to grassland and surrounded by hedges and ditches, some containing water.

Chapter 4 of the report considers flooding risk. This is based on five criteria, as follows:-

- Available Predictive Flood Risk Mapping
- Fluvial Risk – Inundation from flow from neighbouring watercourses
- Pluvial Risk – Flooding due to direct rainfall
- History of Flooding
- Impact of presence of the substation on the existing flood risk regime at the site.

The report notes that a Preliminary Flood Risk Assessment, a requirement of the EU “Floods” Directive is being undertaken by the OPW on a national basis. This is being undertaken through reviewing records of historic floods, assessing areas vulnerable to future flooding and through consultation with relevant bodies (local authorities, government departments and agencies). The Assessment considered flood risk from rivers, the sea and estuaries, direct rainfall and groundwater. Maps from the draft Assessment are available for public consultation online. Map 183 includes Coolnabackey. The draft mapping identifies the approximate extents of the “Indicative 1% annual exceedance probability (100 year)” and extreme event zones. The proposed site lies outside the indicative 1% AEP (100 year) and extreme event zones. The report recognises that the OPW note that the flood extent maps are based on broad scale simple analysis and may not be accurate for specific locations.

The report notes the proposed site location is approximately 0.6 kilometres northwest of the Timahoe River and approximately 5 kilometres upstream from its confluence with the Stradbally River. The field within which the substation would be located is surrounded by drainage ditches on its northwest, northeast and southeast boundaries. These eventually drain southeastwards to the Timahoe River. The Timahoe River is included within the Barrow Drainage District and the surrounding lands were subject to arterial drainage but this is not considered to have benefitted the field in which the substation would be located. The report holds that, given the relative elevation of the site to the Timahoe River and its 0.6 kilometre distance from

the river, the risk of flooding to the substation is minimal. Likewise, the risk of flooding from the field drainage network is considered to be minimal. The site is considered to be located in Flood Zone C.

In terms of pluvial flood risk, the report notes that drainage on the site would mimic greenfield runoff characteristics. Sustainable drainage systems would be employed in order to achieve this. The site surface water drainage system would be designed to best practice to provide protection from surface runoff (pluvial flooding) due to direct rainfall.

On groundwater flood risk, the report notes that groundwater can sometimes present a risk of flooding due to the fact that high groundwater levels can prevent surface water from infiltration below ground level during extreme rainfall events. This can result in ponding. However, based on the findings in the Factual Report on Ground Investigation set out at Appendix 7.1 of Volume 3B of the Environmental Report, and “the fact that there are no structures below ground level” the likelihood of groundwater flooding affecting the site in general is not considered significant.

In terms of the impact of the development on the current flood regime at the site, it is again noted that all surface runoff would be attenuated to greenfield runoff rates. This would be achieved through the use of flow control devices and attenuation ponds.

Referring to loss of floodplain, the report notes that the site is not located in a floodplain.

The issue of historic flooding was reviewed through examining the OPW website www.floodmaps.ie. This site is a record of all available flood records held by the OPW, all local authorities and other relevant state organisations such as the EPA and the Department of Environment, Heritage and Local Government. The OPW interviewed all area engineers in Laois County Council and the Council made available its documentary records on past flood events in compiling this website. It represents the current definitive database of historic flood information in the county. It shows no record of flooding in the application area, as shown in the extract from the website included in the report.

The proposed development would be capable of coping with the increased rainfall which is predicted as a result of Global Warming. This is thought to be of the order of 5-10% by mid-century. The SUDS drainage system would accommodate this increase.

Notwithstanding claims by local individuals suggesting that the field in which the substation site would be located has been subject to flooding in the past 5 years and continuing back to the early 1950s, I consider, having regard to the research undertaken by the applicant and the data available from the OPW, that, on balance, the site at Coolnabacky is unlikely to suffer from flooding. The draft Preliminary Flood Risk Assessment map from the OPW shows the extent of flooding of the Timahoe River. It also shows many areas of pluvial flooding, i.e. that with an indicative 1% AEP event. Although there are many such areas in the vicinity of the site, none are directly within it. The extensive designation of such areas of pluvial flooding on the map suggests that such information is being brought to the attention of the OPW, contrary to the assertions of the objectors.

Even in the highly unlikely event of the site flooding I consider that this could possibly have serious environmental consequences only during the construction period. It should be possible to timetable the construction so as to curtail any elements which would be likely to give rise to serious pollution so as to avoid a forecast severe weather event. Once the substation is operational, the plant and tankage would seem to be sufficiently well sealed and robust to avoid the risk of severe pollution arising in the event of the site being flooded.

Traffic

The issue of traffic generation is covered in the chapter on Material Assets in the Environmental Impact Statement. It is noted that the main development activity in relation to construction traffic volumes would be associated with the proposed Coolnabacky substation, the upgrade of the Ballyragget substation and to a lesser degree, the upgrade at the Kilkenny substation. A number of individual short access routes into locations off the public road would be required for the polesets and mast locations, but traffic volumes would be minor for each site. Normal construction activities would take place during the weekday daytime period and would involve working on or near to the public road, the haulage of materials and the movement of workers into/out of the development sites.

Traffic on the three regional roads involved, the R426 for Coolnabacky, the R432 for Ballyragget and the R712 for Kilkenny was observed to be free flowing and uncongested at all times. Traffic on the local county roads was generally low at all times and associated with houses, small businesses and agriculture. There was little heavy goods traffic on these local roads although dairy tankers were present, occasionally. Traffic counts were undertaken on the R426 just south of the entrance position to the proposed substation at

Coolnabacky, on the R432 just north of the proposed substation site at Ballyragget and on the N77 north of Ballyragget approximately 600 metres south of the Glanbia dairy site. Counts were taken in June/July 2012 and as this was a school holiday period, additional counts were taken on the Ballyragget sites from the 11th to 17th April 2013. The results showed little difference for the two periods although there was an increase of 22% in HGV traffic on the N77, bringing its percentage of traffic as a whole up from 9.6 to 11.65.

On the R426, the 85th percentile vehicle speeds were 89.6kph northbound and 81.7kph southbound, resulting in extrapolated sightlines of 177 metres to the south of the access and 151 metres to the north of the access. A number of relocated entrance positions were considered (EIS Appendix 11.2) and an optimum position was selected approximately 25 metres to the south of the position of the centreline of the existing entrance. This would achieve sightlines of 142 metres to the north and 65 metres to the south along the R426. In view of the very limited operational use of the proposed access, it was agreed with the planning authority that these sightlines, from a 3 metre setback, would be acceptable, without the cutting of hedgerows, but with the agreed felling of a tree on the north side. The entrance arrangement is shown on drawing no. 60241205-001-RevA in Volume 1A of the original planning application.

Based on the 85th percentile of vehicle speeds, the sightlines for the Ballyragget substation were calculated at 139 metres. However, the planning authority advised sightlines of 145 metres based on the 80kph rural speed limit which applies to regional roads. This might require the removal of a mature tree and part of a block wall projecting from the cemetery on the north side of the entrance and the removal of conifers and the setting back of the palisade boundary fence along the frontage of the substation site. Details are shown on Drawing 60273241-002-RevA.

A major traffic implication of the proposed development would be the transportation of the two new 400kV transformers which would be located in the proposed Coolnabacky substation. Each of these would measure 8.4 metres by 3.6 metres by 4.5 metres and would weigh 222 tonnes. They would be imported via Dublin Port. They would be transported by highly specialised equipment consisting of an extra long haulage tractor and purpose designed trailer unit. Transportation would take place along a designated route on closed roads and under Garda escort. A route has been selected from the Port to the M50, then to Junction 9 (Red Cow) and then along the N7/M7 to Junction 16 (Portlaoise East). The final part of the route would be along the R425 and R426. The transformers would be unloaded on the R426 and

prepared for direct transportation to the proposed Coolnabacky substation site. The use of this 124 kilometre delivery route would involve temporary measures such as removal of street furniture and signage and sand bagging where there would be overruns on kerbs or islands.

Numerically, the most significant traffic volumes would be associated with the civil works at the proposed Coolnabacky and Ballyragget sites and, to a lesser extent, at the Kilkenny site. There would be deliveries of imported engineering fill, crushed stone and concrete, reinforcements and also transport of material offsite as waste. To access the Coolnabacky site, traffic would use the M7 motorway exiting at Junction 16 (Portlaoise East) and continue via the R425 and R426 regional roads. This would avoid travelling through the built-up area of Portlaoise. There would be a lesser number of large deliveries from the south. This would be routed via the M8 or M7, again to M7 Junction 16, thereby avoiding the towns of Durrow and Abbeyleix and the village of Ballyroan. Table 11.3 shows the maximum number of additional HGV movements which would take place during the construction period would be 40 per day and that while this would be an increase of 81.6% in such movements, this figure plus the additional 30 car movements predicted for the same period would result in an overall increase in traffic levels of just 5.15%.

Approximately 3,500 cubic metres of inert material would be excavated from the Ballyragget site. This would be transported to the Coolnabacky site using the R432 into Ballyragget, the N77 from Ballyragget to Abbeyleix and the R425, R427 and R426. This would require 400 vehicle loads or 800 vehicle movements or 30 trips in each direction, daily, for a period of less than 6 weeks, based on a 5 day working week. This would result in an increase of just over 5% in daily traffic.

The traffic implications for the construction of the overhead lines would be small. Each steel tower would generate 3-4 HGV movements for foundation works and 2-3 HGV movements for the tower erection. Polesets would give rise to 2-3 HGV movements. Overhead line equipment, including poles, would be delivered to the work sites by road and would come from the existing ESB Killeel storage yard near Naas in County Kildare. The impact of overhead line construction on traffic flows would generally be insignificant. Access routes to the individual mast and poleset locations are shown on a series of aerial photographs included in Chapter 2 of the EIS (Drawing nos. PE687-D261-039-001-000 to PE687-D261-039-017-000).

In relation to mitigation, it is noted (subsection 11.2.6) that a traffic management plan would be prepared and included as part of the Construction Environment Management Plan. This would involve normal mitigation

measures including instructing construction and delivery vehicles to use only the approved and agreed means of access and movement restricted to designated routes.

The EIS concludes, on residual impacts (subsection 11.2.7) that there would be a low short-term impact on the R426 and R432 regional roads during construction works at the new substations. However, it is submitted that it could be understood in the context of the temporary nature of the construction works and the road safety improvements that would comprise an integral element of the overall development proposal. There would be a slight impact on traffic on the R712 during construction works at Kilkenny substation. The additional construction traffic volumes associated with each angle mast and poleset location would be for a very limited duration and would be well within the capacity of the road network. Overall the impact would be low and of short duration.

I concur with the conclusions of the EIS on traffic.

CONCLUSION

In conclusion, I consider that most of the objections raised against the proposed development, both in the written submissions and during the course of the oral hearing have been overstated. While there are clearly genuine concerns in relation to visual impact, risk of contamination of local water supply and electromagnetic radiation, it is difficult to avoid the suspicion that a fear of what might be facilitated by the proposed Coolnabackey substation has been a prime driver behind the objections to this application. Notwithstanding the stated purpose of the proposed development as a Laois/Kilkenny electricity reinforcement project it was held that spare bays within the substation (referred to by the applicant as “future proofing”) would enable the connection of wind farms into the grid. This is understandable having regard to the fact that at the time of the oral hearing, there were two live planning applications for wind farms in the vicinity, namely a development of eighteen 85 metre high wind turbines to the east of Ballyroan Village and the southwest of Timahoe Village at Cullenagh Mountain (Laois County Council Reg. Ref. 13/268) and a development of 8 wind turbines up to 100 metres in height to the east and northeast of the village of Ballinakill (Laois County Council Reg. Ref. 13/262). The former has now been refused by the planning authority and is currently on appeal (PL.242626), while the latter has been withdrawn. However, these are not permitted developments and, even if ultimately granted planning permission, they would still be dependent on receiving a connection authorisation from the Commission for Energy Regulation. There is very considerable uncertainty over these wind farms, or, indeed, any other

wind farms which have not even reached planning application stage. It is unreasonable to expect that they would be factored in to considerations of the present project.

During the oral hearing, there also appeared to be concern that the proposed development would facilitate one of the even larger wind farms designed to export electricity to the United Kingdom. It was clarified towards the end of the oral hearing that this would not be the case and that these projects are standalone and would export electricity via their own power lines rather than through the national grid and the East – West Interconnector. The websites of both companies proposing major wind energy projects for electricity export to the United Kingdom, Mainstream Renewable Power (Energy Bridge) and Greenwire, confirm the likelihood that that part of County Laois in the vicinity of the present proposal would be included in their projects, but they also confirm that they would export the electricity independently and would not be dependent on the national grid.

In relation to the visual impact of the proposed development, the proposed double circuit pylons for the 400kV loop line would undoubtedly be very large, even relative to the existing single circuit pylons of the Moneypoint – Dunstown 400kV line. However, there would be just 3 of these largest pylons and the power line would extend for a total distance of just 1.4 kilometres. They would extend away from the position where they would be open to the greatest level of public viewing, namely the R427. They, and the proposed substation at Coolnabacky, would be screened from the popular local recreational areas of Oughaval (Oak Vale), Windy Gap and the Rock of Dunamase by the intervening topography. While there may well be a case for placing 400kV power lines underground where they would otherwise be highly visible passing through areas of high scenic amenity, I do not consider that this applies in the present case.

It appears that the substation at Coolnabacky can be constructed without undue risk to local groundwater sources. The development could be carried out and operated satisfactorily from an ecological standpoint. The new parts of the power line have been aligned to avoid housing, as far as practical. For the most part, the proposed development would be comfortably within the widely accepted international standards in relation to electromagnetic radiation.

Overall, I consider that the proposed development should be regarded as acceptable. However, having regard to the precautionary principle, I have concerns in relation to the upgrading of the existing power line between Kilkenny and Ballyragget. It appears that several houses in the vicinity of this

power line would be subject to magnetic field exposure at a level which could give rise to an increased risk of childhood leukaemia. Rather than recommending refusal on this basis, I consider that it would be preferable to seek clarification on this matter with the applicant by way of further information.

RECOMMENDATION

Having regard to the foregoing, I recommend that the applicant be written to, pursuant to Section 182A(5)(a) of the Planning and Development Act, 2000, as amended, as follows.

“Having regard to the documentation lodged with the application and the Environmental Impact Statement lodged as further information, and, in particular, the information contained in Appendix 5.1 of the Environmental Impact Statement, and having regard to the precautionary principle, the Board is concerned that a number of residences adjacent to the route of the upgraded overhead power line between Kilkenny and Ballyragget would be exposed to an average magnetic field greater than 3mG. You are requested to comment on this matter and, in the event that any remedial measures are proposed, including the realignment of the power line, to provide details of these measures commensurate with the level of detail and scale of drawings in the application to date. The Board is also concerned that this “unit” of the proposed development may not have been adequately advertised in the public notices insofar as it is described as “an uprate to the existing Ballyragget – Kilkenny 110kV overhead line” whereas, in fact, this line, although claimed to be constructed to 110kV standard, is operating at 38kV. Accordingly, the public may be unaware of the full implications of this “unit” of the proposed development. You are requested to comment on this matter, also.”

Andrew C. Boyle,
Senior Planning Inspector.

31st January, 2014.
cr/ym