6 Landscape and Visual Impact

6.1 Introduction

This chapter is a landscape and visual impact assessment of the proposed Apple power supply in the townlands of Rathmorrissy and Toberroe, which is being proposed to serve the Apple data centre development at Derrydonnell, Athenry, Co. Galway.

The objective of the assessment is to appraise the existing landscape character of the site and its wider setting, to assess the likely landscape and visual impacts arising from the proposed development. The proposed development will comprise the construction of a 220kV electrical power supply and substation for the proposed Apple Data Centre (under appeal). It is proposed that two separate connections will be brought to the proposed substation, one from the Cashla Tynagh Line and one from the Cashla Prospect Line. These connections will involve the construction of seven new tower structures. In addition, three existing tower structures will also be removed as part of the works. A new 220kV substation will be constructed within the site of the proposed Apple data centre. In general, the power supply to the site will be underground. However in the location of the motorway and to the west of the new Rathmorrissy interchange, sections of overhead cables will be required. The proposed development is described in detail in **Chapter 3** Site and Project Description.

Potential cumulative impacts are addressed in **Section 6.5**.

The assessment was carried out by Brady Shipman Martin.

6.2 Methodology

The visual assessment of the site was carried out between June and November 2015.

The methodology used to assess the impacts of the development on the landscape is based on the Guidelines on information to be contained in Environmental Impact Statements (Environmental Protection Agency, 2002) and Draft Revised Guidelines (EPA, 2015). The methodology used for the landscape assessment entailed:

- A desktop study of the site in relation to its overall context, both locally and regionally.
- The use of aerial photography.
- Visiting the site and its environs to assess the following:
  - Quality and type of views in the area.
  - The extent of the visual envelope, i.e. the potential area of visibility of the site and proposed development within the surrounding landscape.

The character and quality of the surrounding landscape was assessed in relation to the position of buildings in the vicinity of the site, the proportion of residential and agricultural development, special landscape features, cultural and historical associations and landform.

This chapter should be read in conjunction **Figures 6a** and **6.0 – 6.6** which include a site context and a site visibility map showing the site boundary, the visual envelope and the locations of the views being discussed, in addition to photographs of the existing views and the computer generated accurate visual representations or photomontages of the proposed development. Landscape proposals associated with the development are shown on the following **Figures 6.5** and **6.6**.

The terminology used to define impacts is outlined in **Table 6.1,** below.

Table 6.1 Impact Significance Terminology

Impact Level	Definition
Imperceptible	An effect capable of measurement but without noticeable consequences.
*Not significant**	An effect which causes noticeable changes in the character of the environment but without noticeable consequences.
Slight	An effect which causes noticeable changes in the character of the environment without affecting its sensitivities
Moderate	An effect that alters the character of the environment in a manner that is consistent with the existing and emerging trends
Significant	An effect which, by its character, magnitude, duration or intensity alters a sensitive aspect of the environment
*Very significant**	An effect, which by it's character, magnitude duration or intensity, significantly alters the majority of a sensitive aspect of the environment.
Profound	An effect that obliterates sensitive characteristics

(Guidance on the information to be contained in Environmental Impact Statements, EPA. 2002).
*Note; 'Not significant' and 'Very significant' definitions introduced in Draft EPA Revised Guidelines on the information to be contained in Environmental Impact Statements, 2015.

These ratings may be viewed as neutral, positive or negative, where:

- Neutral represents a change that does not affect the quality of the environment.
- Positive represents a change that improves the quality of the environment.
- Negative represents a change that reduces the quality of the environment.

6.2.1 Landscape and Visual Impact

The following Guidelines have been referenced in preparing this assessment.

- *Guidelines on the Information to be contained in Environmental Impact Statements*, EPA (2002) and *Draft Revised Guidelines* (2015).

- *Landscape and Landscape Assessment, Consultation Draft of Guidelines for Planning Authorities Department of Environment and Local Government,* (June 2000).
- *Guidelines for Landscape and Visual Impact Assessment (GLVIA3rd Edition),* The Landscape Institute / Institute of Environmental Management and Assessment, Routledge, 2013.

For the purposes of this work "Visual Impact" has been interpreted as meaning landscape and visual impacts (or effects), as commonly understood in the process of landscape and visual impact assessment where:

- **landscape impacts** means impacts or effects on "the landscape as a resource in its own right". (GLVIA3 Para 2.21)
- **visual impacts** means impacts or effects on "specific views and on the general visual amenity experienced by people". (GLVIA3 Para 2.21)

Impacts on character relate to changes in the particular identity of coherent landscape areas. Impacts on views are considered where there are particular or noticeable views, which would be affected by the development.

Impacts on the character of the landscape include responses which are felt towards the combined effects of the new development. The significance of impacts on the perceived landscape character will depend mainly on the visual experience of the landscape and on the number of people affected, but also on judgements about how much the change will matter. Other factors will also affect the experience, including sounds, smells, feelings, etc., experienced by those concerned.

6.3 Description of the Receiving Environment

6.3.1 Existing Environment

The study area is located approximately 12km east of Galway City, approximately 4km southwest of Athenry and approximately 5km north east of Oranmore (see **Figure 6a**), just to the northeast of the commercial forestry plantation (Derrydonnell Wood) in the townlands of Palmerstown and Toberroe, County Galway, which is the subject of a separate planning application (under appeal) for the Apple Distribution International data centre development (Planning Reference Number 15488).

The landscape of the surrounding area is generally flat to gently undulating agricultural grasslands defined principally by vernacular stone walls. There are occasional stands of coniferous forestry and areas of semi-natural scrub and wetlands. The local roads are strongly influenced by linear residential development. There are a number of overhead power transmission lines traversing the landscape and which converge on the Cashla substation in the townland of Barrettspark, approximately 2km to the northwest.

The site is located approximately 300m south of the M6 (Galway-Dublin) motorway. The route of the M17/M18 motorway, is currently under construction with the Rathmorrissy/M6 interchange site clearance and earthworks underway,

immediately adjacent to the proposed development. The junction will allow free flow traffic movement between the M17 Galway/Rathmorrissy to Tuam, M18 Oranmore to Gort and M6 Galway to Dublin road schemes. The R348 (Athernry-Oranmore road) lies approximately 1km to the south. The surrounding land use includes agricultural (pastoral in nature), with clusters of sporadic, linear residential development along the local and regional roads.

The agricultural landscape is partially bounded by stone walls and small to medium sized hedgerows, with a large commercial forestry plantation to the west at Derrydonnell, which is the proposed site of the Apple Distribution data centre. Over the past number of years, large stands of these commercial forest areas have been harvested, leaving large areas of clearfelled forestry and remaining stands of commercial forest.

6.3.2 Landscape Character

The *Galway County Development Plan 2015-2021: Landscape Character Assessment* has identified 25 regional character areas for County Galway. The site is located within 'Area 3 - East Central Galway (Athenry, Ballinasloe to Portumna)'. Generally, Area 3 is described in the Plan as 'flat, coarse grassland, occasional plantations of coniferous forestry between 1-3km square in size, fields defined principally by stone walls'. There are no areas of particular scenic value.

The generally flat topography of the landscape, with a combination of primarily agricultural landscape with extensive network of distinctive stone boundary walls, copses of woodland, intermittent hedgerows and scattered trees, areas of semi-natural scrub and wetlands, provides an attractive interlocking mosaic of landscape elements within this landscape. The local roads are strongly influenced by intense linear residential development. Major road and power infrastructure, including the M6 and existing high voltage power lines, introduce an industrial element to the character of the landscape. There are no visually significant water bodies in the area.

Due to the flat nature of the landscape, there are occasional distant views of the uplands of west Galway/Connemara, the Burren to the south and the Gort hills to the south east. Mid and near views are interrupted by slight rises in the landform, blocks of coniferous woodlands, hedgerows and dense liner residential housing.

6.3.3 Landscape Value

The landscape values are the response of the perceptions that communities have of the landscape they inhabit.

It is noted that there are no areas of particular scenic value although the stone walls are quite distinct. None of the scenic routes or sensitive landscapes (designated in the County Development Plan) were noted within the study area. There are no tree preservation orders relating to the site.

6.3.4 Site Significance

The relevant policies and objectives for Heritage, Landscape and Management for Galway County are outlined in Chapter 9 of the Development Plan. The following policies and objectives are relevant to future development:

"Policy LCM 1 – Preservation of Landscape Character:

Preserve and enhance the character of the landscape where, and to the extent that, in the opinion of the Planning Authority, the proper planning and sustainable development of the area requires it, including the preservation and enhancement, where possible of views and prospects and the amenities of places and features of natural beauty or interest.

Objective LCM 1 – Landscape Sensitivity Classification:

The Planning Authority shall have regard to the landscape sensitivity classification of sites in the consideration of any significant development proposals and, where necessary, require a Landscape/ Visual Impact Assessment to accompany such proposals. This shall be balanced against the need to develop key strategic infrastructure to meet the strategic aims of the plan, and having regard to the zoning objectives of serviced development land within the Galway Metropolitan Areas.

Objective LCM 2 – Landscape Sensitivity Ratings:

Consideration of landscape sensitivity ratings shall be an important factor in determining development uses in areas of the County. In areas of high landscape sensitivity, the design and the choice of location of proposed development in the landscape will also be critical considerations."

The *Landscape Character Assessment* (2015-2021) describes the area as having a 'low' landscape value Class 1 (low) with pockets of Class 2 (moderate) landscape sensitivity. There are no areas of Class 2 within the study area. Generally *'Area 3, East Central Galway (Athenry, Ballinasloe to Portumna)',* within which the proposed development is located, is described as flat, coarse grassland, occasional clumps of coniferous forestry between 1-3km square in size, fields defined principally by stone walls. It is noted that there are no areas of particular scenic value although the stone walls are quite distinct.

The LCA notes the following in relation to development within Area 3;

- "*The landscape is flat therefore height restrictions should apply to built development to avoid long distance visual intrusion*
- *Development is prohibited in the areas (primarily bogs) that carry a nature designation. Development in the class 1 area should be either set close to existing medium sized blocks of forestry or screened by either new commercial forestry or woodland*
- *Due to the rural nature of the area scattered development which cannot be screened by forestry should be of natural stone or rendered finish of a colour that is sympathetic to the colours of the landscape. Stonewalls are a distinct element of the character area and should be constructed to match traditional style around new development*."

6.3.4.1 Designated Conservation Sites

There are no areas designated as proposed Natural Heritage Areas (pNHAs), Candidate Special Areas of Conservation (cSACs) or Special Protection Areas within the study area. The rare and protected Wood Bitter Vetch (*Vicia orobus*) grows on the Derrydonnell site (refer to **Chapter 10** *Ecology/Biodiversity* for further detail).

6.3.4.2 Scenic Evaluation

There are no designated scenic landscapes within the study area.

6.3.4.3 Designated Scenic Routes

There are no designated scenic routes within the study area.

6.3.4.4 Landscape Sensitivity

Landscape sensitivity is a measure of the landscape's ability to potentially accommodate a degree of change without unacceptable detrimental effects on its character. Chapter 9 of the Galway County Development Plan has developed five landscape sensitivity classes. The study area is identified as being located in a Class 1 – Low Sensitivity area.

The proposed development will be located within an open agricultural landscape containing existing overhead electricity towers and within an existing woodland setting. The flat to gently undulating topography and scattered woodlands of the locality ensures that the site is not visible in long range views from the north, east or south, and the separation of distance and intervening vegetation and development integrates the site into the landscape from the long views from the west.

The principal sensitivities of this site essentially relate to its visual influence and proximity to nearby residential properties and public roads to the north and east, including the M6 and the M17/18 motorway currently under construction.

6.3.5 Visual Envelope

The visual envelope is the extent of potential visibility of the existing site to or from a specific area or feature in the landscape and is defined by topography and vegetation. The approximate visual envelope of the site is indicated on **Figure 6a.**

From the north, the site's visibility is limited to within 2km at a ridge line reaching a high point at Knocknacreeva. Views may be seen from residential properties at Caherbriskaun, Knocknacreeva, Caraunduff and Rathmorrissy and from the M6 Motorway.

From the east, the site's visibility is limited to within 2km by topography, hedgerows and woodland. Views may be seen from a group of linear residential properties at Rathmorrissy.

From the south, the site's visibility is limited to less than 2km by topography, hedgerows and woodland. Views may be seen by groups of linear residential properties at Derrydonnell along and off the R348 Regional Road.

Given the nature of the relatively flat topography, the visual envelope extends to a wide area to the west, particularly along the M6 and R446 road corridors where views are not obscured by local topography, woodland and buildings. Views may be seen from groups of linear residential properties at Derrydonnell Beg, Derrydonnell North, Mountain West, Palmerstown and Lisheenkyle West.

6.4 Potential Impacting Elements of the Proposed Development

A detailed description of the proposed development is available in **Chapter 3**, *Site and Project Description* (**Section 3.4** *Main Features of the Proposed Development*).

In brief, the proposed development is the construction of a 220kV electrical power supply and substation to supply power to the proposed Apple Data Centre (currently under planning appeal). See the landscape plan of the site of the proposed Apple data centre in the following **Figure 6.5**.

Figure 6.5 Landscape Plan of Site of Apple Data Centre [Note: Phase 1 of the proposed data centre (under appeal) is also shown on this figure]

6.4.1.1 Impacting elements of the proposed scheme

It is proposed that two separate looped connections will be brought to the proposed substation, one from the Cashla Tynagh Line and one from the Cashla Prospect Line. These connections will involve the construction of seven new tower structures. In addition, three existing tower structures will also be removed as part of the works. In general, the power supply to the site will be underground. However in the location of the motorway and the new Rathmorrissy interchange, sections of overhead cables will be required.

There will be a need to clear internal forestry under the footprint of the proposed substation (c. 8 hectares), as well as a width of existing perimeter forestry at the eastern boundary of the Derrydonnell site.

The main elements of the proposed development that have the potential to give rise to Landscape and Visual impacts are outlined below:

- Construction of a 220kV electrical substation measuring approximately 545m long x 152m wide within the Apple Data Centre site. This will be divided into a customer substation and transmission substation with air insulated switchgear, 48no. 30m high steel lattice lightning protection towers, internal access roads, single storey control building, transformers and backup diesel generators surrounded by 2.6m high perimeter security fencing.
- Construction of 11 No MV substations.
- Retirement/removal of 2 No. towers on the Cashla-Prospect 220kV line to the southwest of the Rathmorrissy interchange (under construction) and 1 No. tower on the Cashla-Tynagh 220vV line to the northwest of the interchange.
- Construction of 7 No. new towers (up to 33m in height):
  - 3 No. on the Cashla-Prospect line
  - 4 No. on the Cashla-Tynagh line
- The proposed 220kv cables will be laid underground from the 4 No. towers on the southwestern side of Rathmorrissy interchange, requiring the provision of 4 No. securely fenced cable sealing compounds with terminal tower. The underground cables will travel west for up to 1.4km to the proposed 220kV electrical substation at the Apple Data Centre site and will require removal of a width of some 50-60m of some of the younger, semi-mature forestry at this location.

The proposed development will have a number of associated features which may give rise to landscape and visual impacts, namely:

- Removal of existing vegetation and commercial forestry plantation under the footprint of the proposed 220kV electrical substation and at the boundary of the Apple Data Centre site, covering an area of approximately 11.5 ha. It should be noted that this is commercial forestry which would be subject to harvesting in the short to medium term.
- Alterations to ground levels utilising soils and materials on site.
- Construction activity, contractor's compounds and stockpiles.

- Lighting.
- Site fencing and boundary treatments.

The proposed development will have primary and secondary impacting elements which will have the potential to impact on views and the landscape character.

6.4.2 Potential Impact on Landscape Character

The Rathmorrissy townland has undergone locally significant landscape character change within the past with the construction of the M6, which is continuing with the construction Rathmorrissy interchange with the M6, as part of the construction of the M17/18 (under construction). The presence of a number of existing overhead powerlines, and towers converging on the substation at Cashla are a strong influence on the character of the area.

6.4.2.1 Potential Construction Impact on Landscape Character

The site is located in an area on the approach to Galway from the east via the M6. This area has existing development in the form of a motorway, high voltage power lines and linear residential settlement within the landscape, and given the scale and nature of the proposed development, the landscape is sufficiently robust to accommodate this development.

The relocation and construction of towers and new alignments of overhead cables will have a locally **slight negative impact** on the landscape character of the site during construction. The construction of the electrical substation within the Apple Data Centre site will be substantially screened from the wider landscape due to the perimeter forestry around the site. The presence of temporary construction cranes may occasionally be visible above the tree line. Small portions of the lightning protection masts may also be visible from certain vantage points from the local access roads, residential properties and M6 road to the north and east of the site. Removal of a width of approximately 44m of young perimeter forestry may allow oblique long range views into the proposed 220kV electrical substation from sections of the future, elevated section of the Rathmorrissy interchange.

The impact on landscape character is expected to be greatest during the construction stages of the new and relocated towers. There will be a slight and negative impact on the amenity views from the elevated lands to the north east, from the lands to the east and from the M6.

There will be no significant impacts on landscape character during the construction of the proposed development.

6.4.2.2 Potential Operational Impact on Landscape Character

Upon completion of the development, there will be a change in the appearance of the site. The proposed development will have a **slight negative impact** on the character of the surrounding landscape.

6.4.3 Visual Impact Assessment

Visual impact of any development can generally arise through visual intrusion and/or obstruction. No visual obstruction will occur with intrusion in a number of views. This visual intrusion will impact on a number of on residential properties in the immediate surrounding area and passing road users, primarily on the M6 and local access roads to the north and east. Derrydonnell forest will screen views of the development from the south. The additional towers will be visible from a small section of the R438 road and cluster of residential properties close to the south east corner of Derrydonnell forest, however with the intervening distance of c.1.3km, the visual impact is considered to be **slight** and **neutral**.

To assist and illustrate the visual impact assessment, a number of key view locations were identified with photomontages prepared. Reference should be made to **Figure 6.0** for the location of the viewpoints, as well as the relevant photomontage impressions where these are referenced (**Figures 6.1A.1** to **6.4B.3**).

For each viewpoint location, there is a photomontage of the following:

1. View as existing: No development
2. View as proposed: Power Supply/Grid Connection: including new towers, cables and 220kV on-site substation.
3. View as proposed, Power Supply/Grid Connection with Phase 1 Data Centre: Eastern data centre building, logistics building, various generators, smaller buildings, site works, tree removal/planting etc., as shown on the Phase 1 planning application drawings, in combination with the subject planning application for the power supply/grid connection, including new towers, cables and 220kV on-site substation.
4. Cumulative view and impact: Power Supply/Grid Connection with Phase 1 Data Centre as above, together with all future datacentre buildings, as well as the completed Rathmorrissy interchange.

Many of these elements are screened behind existing intervening topography and vegetation. Where screened, these built elements are illustrated with corresponding coloured lines on the views, whilst those elements which will be visible are represented as they will be seen in views. All new trees shown in photomontage views are shown at approximately 5 – 7 years growth at a height of 5-6m.

Photomontage Viewpoints 1A and 1B – Local access road at from Caraunnduff to Lisheenkyle at M6 overbridge looking east and southeast (Figures 6.1A.1, 6.1A.2 and 6.1A.3; 6.1B.1, 6.1B.2 and 6.1B.3)

The location of this viewpoint is approximately 300m beyond the northern boundary of the site, on an elevated bridge over the M6 motorway looking east and southeast. The motorway is a locally dominant feature in this agricultural landscape. The existing towers and transmission lines are also a significant feature of the views. The Derrydonnell forest edge provides an important and

attractive element of the landscape. There are a number of single and two storey residential dwellings along the road.

Views east (view 1A) will notice the changes to the tower configuration and additional towers and cable sealing compounds leading to slight to moderate visual impact with the clustering of towers. The construction of the Rathmorrissy interchange will also contribute to the sense of change in the landscape.

Views south (view 1B) towards Derrydonnell forest will remain substantially unchanged with the proposed electrical 220kV substation and proposed and future data centre buildings screened by the perimeter woodland. As one moves along road, there may be sporadic, sequential views of lightning protection masts in gaps in the perimeter trees, however, impacts will be **slight** to **imperceptible**.

Photomontage Viewpoint 2 – Rathmorrissy at M6 overbridge looking west (Figures 6.2.1, 6.2.2 and 6.2.3)

The location of this viewpoint, view 2, is approximately 1.25km to the east of the site close to the M6 motorway. There are a number of single and two storey residential dwellings along the local road leading to this elevated overbridge, with open and uninterrupted views towards the site. The existing Cashla-Tynagh and Cashla-Prospect transmission lines and M6 are prominent elements of the landscape, with Derrydonnell forest acting as the visual backdrop. The landscape is currently undergoing change with the construction of the Rathmorrissy interchange.

The changes to the existing transmission lines and construction of new towers close to the Rathmorrissy interchange will be visible, however given the intervening distance, the impacts are considered to be **slight** and **negative**, with clustering of the towers. The substation will be substantially screened by the perimeter woodland at Derrydonnell, leading to **imperceptible** impacts.

During construction, temporary cranage will be visible above the treeline which will lead to a **slight, negative temporary** visual impact.

The proposed and future data centre buildings will be screened by the perimeter woodland at Derrydonnell forest, as will the proposed substation. The greatest change will come from the completed Rathmorrissy interchange under construction, which is significant in its visual impact with the construction of elevated, grade separate roads and bridge structures.

Photomontage Viewpoint 3 – Local road at Rathmorrissy looking west (Figures 6.3.1, 6.3.2 and 6.3.3)

The location of this viewpoint, view 3, is approximately 1km to the east of the site with the M6 to the north. There are a number of single and two storey residential dwellings along the local road, with open and uninterrupted views towards the site. The existing Cashla-Tynagh and Cashla-Prospect transmission lines and M6 are prominent elements of the landscape, with Derrydonnell forest acting as the visual backdrop. The landscape is currently undergoing change with the construction of the Rathmorrissy interchange.

The changes to the existing transmission lines and construction of new towers and cable sealing compounds close to the Rathmorrissy interchange will be visible. The impacts are considered to be **slight** to **moderate** and **negative**. The substation will be substantially screened by the perimeter woodland at Derrydonnell, although upper elements of the lightning protection masts may be visible above some the trees, leading to **slight, negative** impact.

During construction, temporary cranage will be visible above the treeline which will lead to a **slight, negative temporary** visual impact.

The proposed and future data centre buildings will be screened by the perimeter woodland at Derrydonnell forest, as will the proposed substation. The greatest change will come from the completed Rathmorrissy interchange under construction.

Photomontage Viewpoints 4 and 4b – Caraunduff/Caherbriskaun looking south (Figures 6.4A.1, 6.4A.2, 6.4A.3 and 6.4B.1, 6.4B.2 and 6.4B.3)

The location of this viewpoint is approximately 250m north of the existing M6, from a local road, in the area of Caraunduff, Caherbriskaun and Knocknacreeva. The M6 motorway, existing overhead powerlines and forestry edge of the Derrydonnell site are visible to the south.

This area is at a higher elevation than the site and contains a number of single and two storey residential dwellings. The two photomontages views at this location look south east towards the Rathmorrissy interchange (view 4) and Derrydonnell site (view 4b), respectively.

The relocation of two of the existing towers and construction of four new towers at the Rathmorrissy interchange will be visible from this area, leading to **slight to moderate, negative** visual impact, due to a visual 'clustering' of towers within the area. The perimeter woodland at Derrydonnell will substantially screen the proposed electrical substation building, resulting in an **imperceptible** to **slight** impact. As one moves along road, there may be sporadic, sequential views of lightning protection masts in gaps in the perimeter trees at Derrydonnell, however impacts will be **slight** to **imperceptible**.

Similarly, the cumulative visual impact arising from the proposed and future data centre buildings and Rathmorrissy interchange will be **slight** to **imperceptible** due to the intervening topography and vegetation.

During construction, temporary cranage will be visible above the treeline leading to **slight, negative temporary** visual impact.

6.5 Cumulative Impacts

This section addresses the cumulative impacts of the following projects on the landscape character and visual environment.

- The proposed Apple power supply plus the Phase 1 of the Data Centre.

- The proposed Apple power supply, plus the full build out of the Apple data centre as per the overall site masterplan (refer to **Figure 6.6**), the existing M6, and the M17/M18 and Rathmorrissy Interchange (under construction).

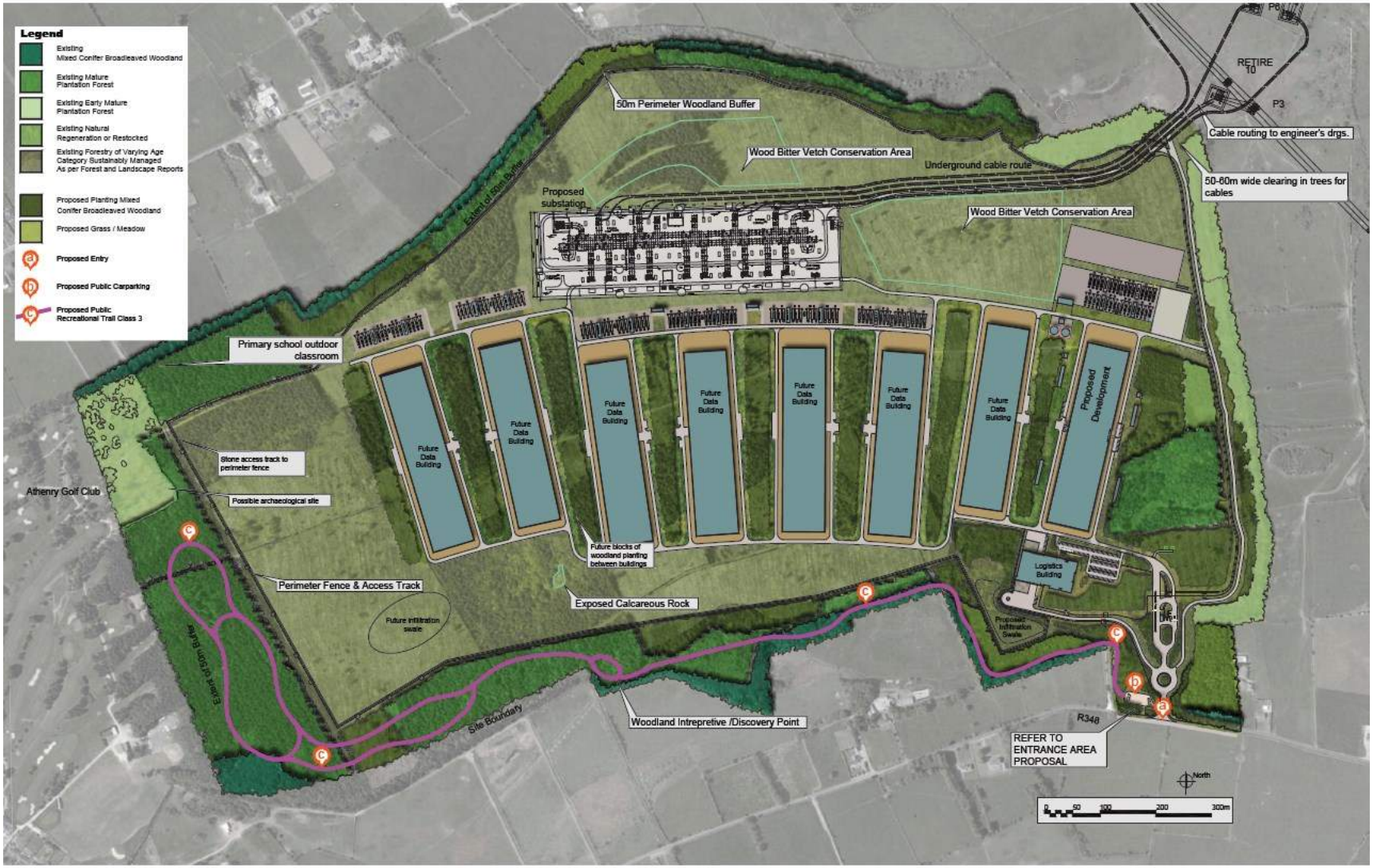


Figure 6.6 Future Development Landscape and Forest Plan

6.5.1 Cumulative impact on Landscape Character

The surrounding rural, agricultural landscape has been undergoing change with the development of the M6 motorway, residential development and power transmission network in the area.

The 'under construction' M17 motorway and Rathmorrissy interchange is further altering the existing landscape character of the area.

Apple Power Supply, plus Phase 1 of the Data Centre

The addition of the proposed 220kV substation and connection to the transmission network, and the proposed phase 1 data centre, will add further change to the landscape. With the retention of the perimeter forestry and screening, the additional cumulative impact arising from the development on the wider landscape is considered to be **slight** and **neutral**. There will be locally **moderate** and **negative** impacts at the Rathmorrissy interchange where the proposed towers and associated compounds will be located.

Apple Power Supply, plus Phase 1 of the Data Centre, plus 7 future data halls, M17/M18 and Rathmorrissy Interchange, plus the M6

It is likely that future development of the site, if carried out, would include an additional 7 no. data centre buildings of the same dimensions as Phase 1. These would extend westwards through the centre of the site, with finished floor levels ranging from 42.5m in the centre of the site to 37.5m on the western side of the site. This would clearly alter the landscape character of the site at a local level from forestry to built development, however with the retention of the perimeter woodland they will be visually screened and largely imperceptible from external areas. The existing M6 motorway, and M17/M18 motorway and the Rathmorrissy interchange (currently under construction) to the east of the site, are significant elements and forces of change within the landscape, however within a number of years it is likely to be an accepted feature of the landscape as vegetation associated with the road development establishes. The additional cumulative impact arising from these developments on the wider landscape is considered to be **moderate** and **neutral.**

6.5.2 Cumulative visual impact

Cumulative visual impacts can be defined as the additional changes caused by a proposed development in conjunction with similar developments or as the combined effect of a set of developments, taken together.

The cumulative visual impacts of the following projects are assessed including the proposed Apple Power supply, the Phase 1 data centre, future data centre phases and M17/M18 motorway/Rathmorrissy interchange. These are noted and illustrated in the photomontage viewpoints in **Section 6.4.3** above.

Proposed Apple Power Supply, plus Phase 1 Data Centre (under appeal)

The proposed 220kV substation located within the Apple data centre site will be screened by the perimeter forestry, however the changes to the power supply

(construction of 7 new towers and removal of 3 existing towers and the undergrounding of cables) will give rise to **slight** to **moderate** visual impacts upon views from the north and east. There will be locally **moderate** and **negative** impacts at the Rathmorrissy interchange in the vicinity of the proposed towers and associated compounds. The Phase 1 Data Centre will be substantially screened by the perimeter forestry.

Proposed Apple Power Supply, Phase 1 Data Centre (under appeal), plus 7 future data halls, plus M17/M18 motorway and Rathmorrissy Interchange, plus the M6.

From most vantage points, the proposed 220kV substation, Phase 1 data centre and future phases of development of the Apple data centre will be substantially screened by the retained perimeter of forestry planting at the site of the Apple Data Centre. However the changes to the power supply (undergrounding cables from the existing 220kV network) will give rise to **slight** visual impacts upon views from the east. The proposed towers and overhead lines close to the Rathmorrissy interchange will give rise to **moderate** and **negative** impact.

The existing M6 motorway, and the M17/M18 motorway and Rathmorrissy Interchange (currently under construction), give rise to the greatest visual impact in the immediate surrounding area. However within a number of years are likely to be accepted features of the landscape, as vegetation associated with the motorway development establishes. The cumulative visual impact arising from these developments is considered to be **moderate** and **neutral.**

6.5.3 'Do Nothing' Situation

In the 'Do-Nothing' situation, i.e. where the proposed development did not proceed, it is considered most likely that the area will continue to undergo landscape change with the development of the M17/M18 and the Rathmorrissy Interchange. The existing towers and overhead power lines would continue to be visible in the immediate surrounding landscape.

6.5.4 Worst Case Situation

There is a small risk that the perimeter forest could be diminished through the loss of the perimeter trees, e.g. in a significant storm event, thereby opening up views into the site and proposed developments. The outline forest management plan, which accompanies the planning application for the data centre building, aims to manage this through considered management and replanting of the woodland.

6.5.5 Mitigation Measures

Consideration was given to avoidance of impact wherever possible during the design of the proposed scheme. However, as with any development, some degree of impact is inevitable and wherever possible, measures have been proposed to mitigate the adverse nature of these impacts.

The electrical substation will be surrounded by existing forestry at the Apple Data Centre site. A minimum 50m wide buffer of forest will be retained and managed by the associated Apple International Distribution data centre. The existing woodland will be maintained, sustainably managed and enhanced over time by through selective thinning and replanting with more mixed deciduous/coniferous planting to increase biodiversity, and to retain visual screening and provide a diverse mixed age forest. The area containing the protected wood bitter vetch will be protected as per the recommendations of **Chapter 10**, *Ecology/ Biodiversity*. **Figure 6.5** illustrates the proposed 220kV substation together the planned Phase 1 data centre with the retained 50m wide forestry to the boundary. **Figure 6.6** illustrates the potential future development of the site.

It is considered that planting is not likely to be appropriate nor effective in screening the relocated and proposed towers.

6.6 Residual Impact Assessment

With the construction of the M17/M18 motorway and Rathmorrissy Interchange, the area has and continues to undergo significant change in landscape character and a changing visual environment. The introduction of additional towers clustered to the southwest of the interchange will be locally significant visual entities within the landscape. However, it is considered that the landscape is sufficiently robust to accommodate the proposed development. There will be no significant negative landscape and visual impacts as a result of the proposed development, or cumulatively as a result of other projects underway or planned in the surrounding environs.

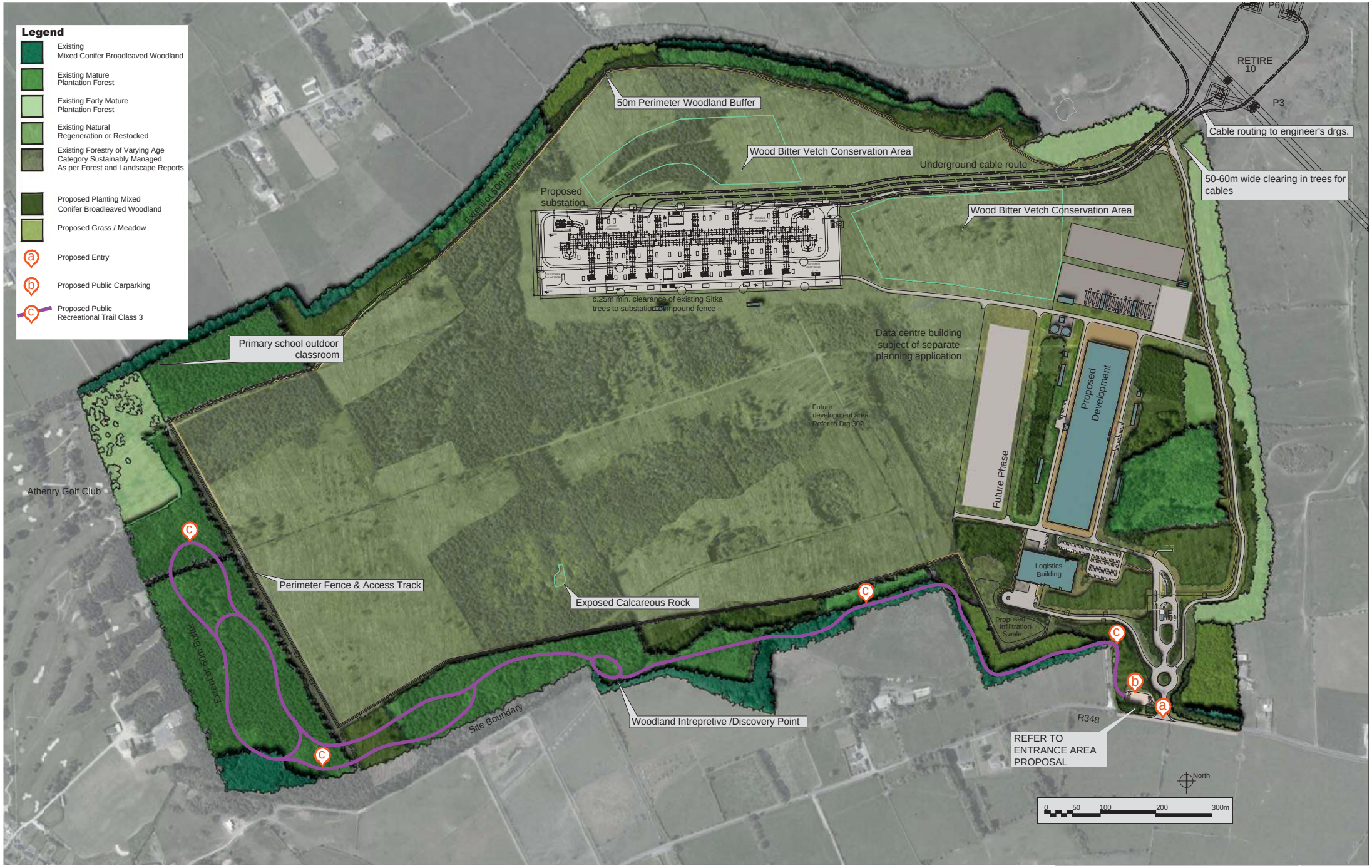
6.7 References

Galway County Council *Galway County Development Plan (2015-2021)*

Department of Environment and Local Government (2000) *Landscape and Landscape Assessment – Consultation Draft Guidelines for Planning Authorities* The Stationery Office, Dublin

Environmental Protection Agency (2002) *Guidelines on the Information to be Contained in Environmental Impact Statements*, and *Draft Revised Guidelines* (2015), EPA, Wexford

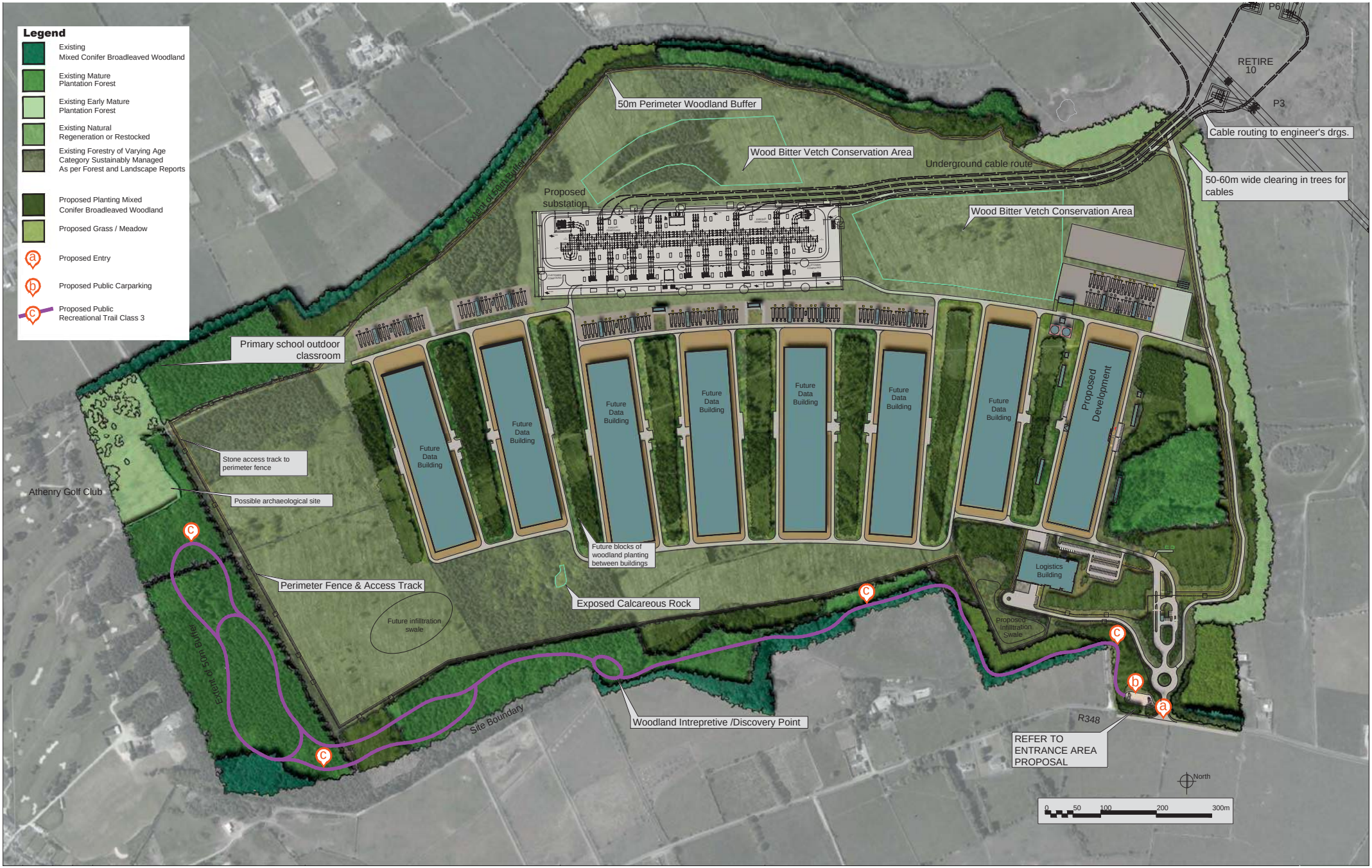
The Landscape Institute/ Institute of Environmental Management and Assessment (2013) *Guidelines for Landscape and Visual Impact Assessment (3rd Edition)* Routledge Press



Proposed Development Landscape and Forest Plan	Date 26/01/2016 Drn EmcD	Status Planning Checked DB
Caraunduff 200kV Substation, Athenry	Job No 6138	**Figure 6.5**

BSM Brady Shipman Martin. Built. Environment.

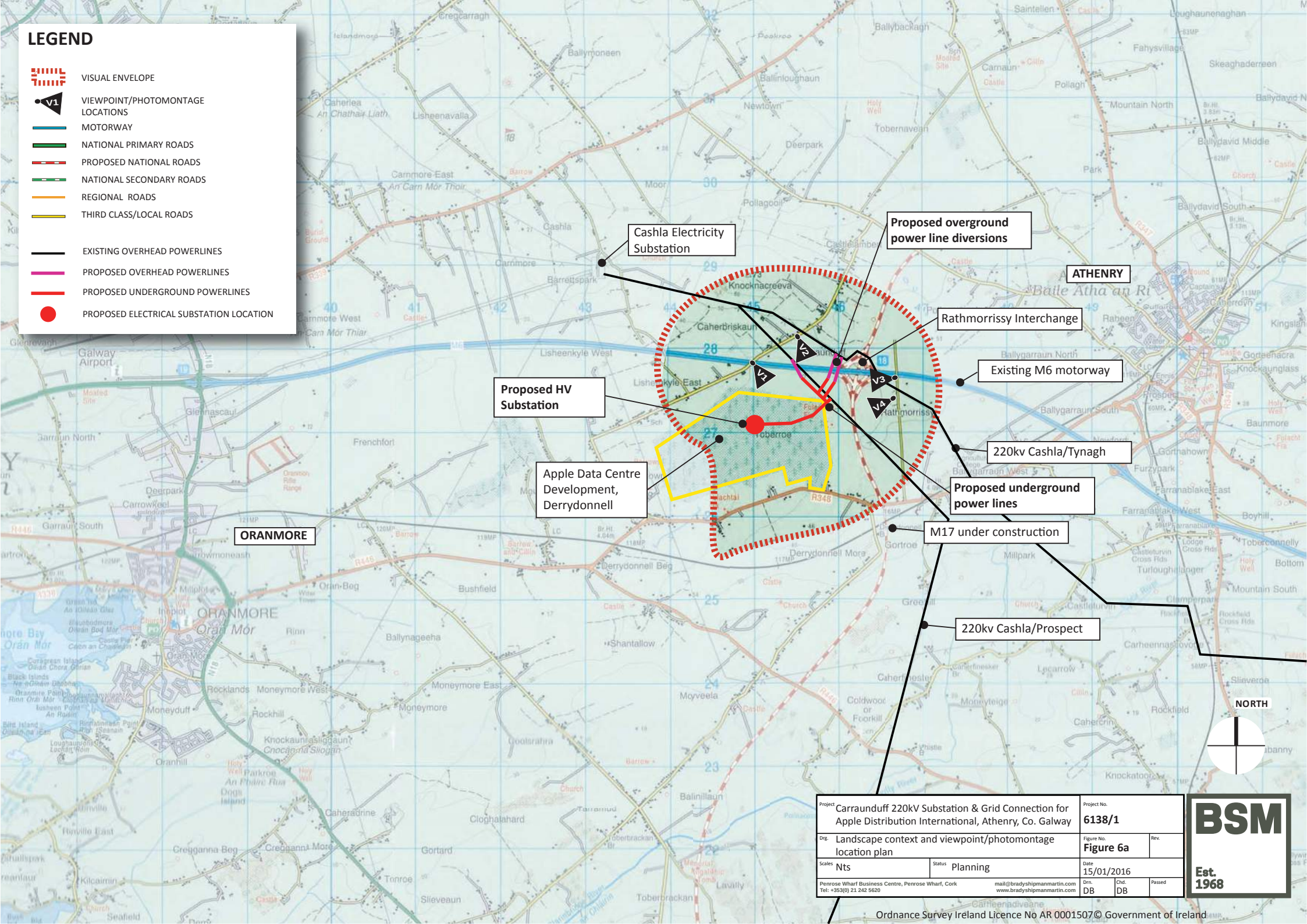
Planning Masterplanning Landscape Environment Visualisation Arboriculture
Penrose Wharf Business Centre, Penrose Wharf, Cork
Tel: +353 (0)21 2425620



Future Development Landscape and Forest Plan	Date 26/01/2015 Drn EmcD	Status Planning Checked DB
Caraunduff 220kV Substation, Athenry	Job No 6138	Figure 6.6

BSM Brady Shipman Martin. Built. Environment.

Planning Masterplanning Landscape Environment Visualisation Arboriculture
Penrose Wharf Business Centre, Penrose Wharf, Cork
Tel: +353 (0)21 2425620


LEGEND
VISUAL ENVELOPE
VIEWPOINT/PHOTOMONTAGE LOCATIONS
MOTORWAY
NATIONAL PRIMARY ROADS
PROPOSED NATIONAL ROADS
NATIONAL SECONDARY ROADS
REGIONAL ROADS
THIRD CLASS/LOCAL ROADS
EXISTING OVERHEAD POWERLINES
PROPOSED OVERHEAD POWERLINES
PROPOSED UNDERGROUND POWERLINES
PROPOSED ELECTRICAL SUBSTATION LOCATION
Cashla Electricity Substation
Proposed overground power line diversions
ATHENRY
Rathmorrissy Interchange
Existing M6 motorway
Proposed HV Substation
220kv Cashla/Tynagh
Apple Data Centre Development, Derrydonnell
Proposed underground power lines
M17 under construction
ORANMORE
220kv Cashla/Prospect
NORTH
V1
V2
V3
V4
Project
Carraunduff 220kV Substation & Grid Connection for Apple Distribution International, Athenry, Co. Galway
Project No.
6138/1
Drg.
Landscape context and viewpoint/photomontage location plan
Figure No.
Figure 6a
Rev.
Scales
Nts
Status
Planning
Date
15/01/2016
Penrose Wharf Business Centre, Penrose Wharf, Cork
Tel: +353(0) 21 242 5620
mail@bradyshipmanmartin.com
www.bradyshipmanmartin.com
Drn.
DB
Chd.
DB
Passed
BSM
Est. 1968
Ordnance Survey Ireland Licence No AR 0001507© Government of Ireland

PHOTOMONTAGES

for

Project No. 6138
CARAUNDUFF 220kV SUBSTATION, ATHENRY, CO. GALWAY

for

Client: APPLE DISTRIBUTION INTERNATIONAL

Date: 25 January 2016
Document Number: RP07

Brady Shipman Martin
Canal House
Canal Road
Dublin 6

Tel: +353 (0)1 208 1900
Email: mail@bradyshipmanmartin.com

BSM Est. 1968 Brady Shipman Martin. Built. Environment.

Project Number:	6138	Document Number:	RP07	Revision:	04
Project Name:	CARAUNDUFF 220kV SUBSTATION, ATHENRY, CO. GALWAY	Document Title:	PHOTOMONTAGES	Date:	25 January 2016

CONTENTS AMENDMENT RECORD

This report has been amended as follows:

REVISION	DESCRIPTION	DATE	PREPARED BY	CHECKED BY
00	View location map and Photomotnages from 4 No. locations	26 November 2015	BP	JK
01	Updated view Location Map	03 December 2015	BP	DBos
02	Updated view Location Map	16 December 2015	BP	DBos
03	Update to 5 no of photomontages	18 December 2015	BP	DBos
04	Update to all photomontages. New Figures added. Figures Renumbered	25 January 2016	BP	DBos

PHOTOMONTAGE TABLE OF CONTENT

Day:	26	03	16	18	25
Month:	11	12	12	12	01
Year:	15	15	15	15	16
FIGURE NUMBER	**REVISION**				
6.0	00	01	02	02	02
6.1A.1	00	00	00	00	00
6.1A.2	00	00	00	01	02
6.1A.3	00	00	00	01	02
6.1A.4					00
6.1B.1	00	00	00	00	00
6.1B.2	00	00	00	00	01
6.1B.3	00	00	00	00	01
6.1B.4					00
6.2.1	00	00	00	00	00
6.2.2	00	00	00	01	02
6.2.3	00	00	00	01	02
6.2.4					00
6.3.1	00	00	00	00	00
6.3.2	00	00	00	01	02
6.3.3	00	00	00	01	02
6.3.4					00
6.4A.1	00	00	00	00	00
6.4A.2	00	00	00	01	02
6.4A.3	00	00	00	01	02
6.4A.4					00
6.4B.1	00	00	00	00	00
6.4B.2	00	00	00	01	02
6.4B.3	00	00	00	01	02
6.4B.4					00

Project Number:	6138	Document Number:	RP07	Revision:	04
Project Name:	CARAUNDUFF 220kV SUBSTATION, ATHENRY, CO. GALWAY	Document Title:	PHOTOMONTAGES	Date:	25 January 2016

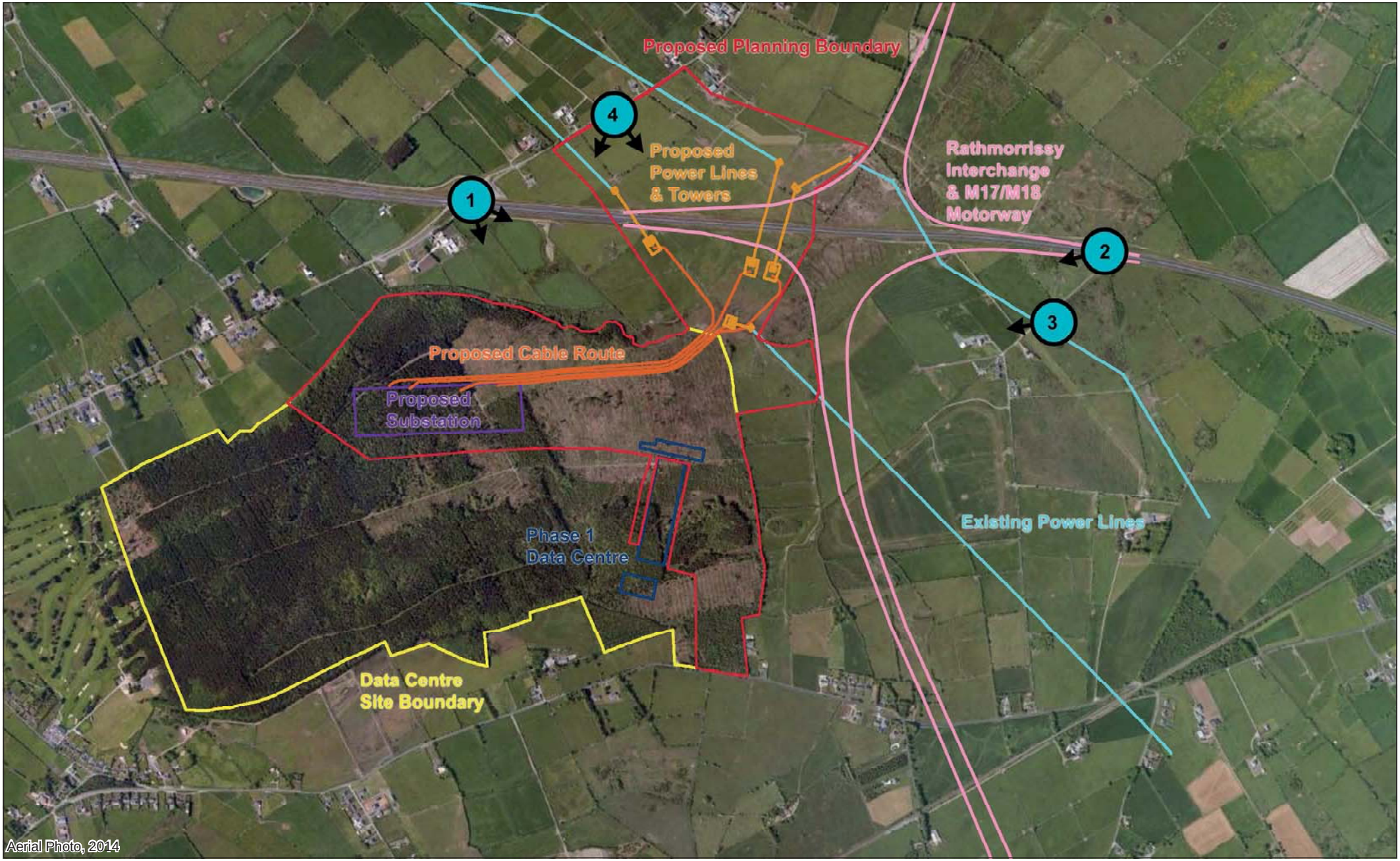


Figure: 6.0

Rev: 02
View Location Map

BSM Est. 1968 Brady Shipman Martin. Built. Environment.

Project Number:	6138	Document Number:	RP07	Revision:	04
Project Name:	CARAUNDUFF 220kV SUBSTATION, ATHENRY, CO. GALWAY	Document Title:	PHOTOMONTAGES	Date:	25 January 2016

< 73.7° / 24mm	< 65.5° / 28mm	< 54.4° / 35mm	< 39.6° / 50mm	< 28.8° / 70mm	ANGLE OF VISION / LENS FOCAL LENGTH	70mm / 28.8° >	50mm / 39.6° >	35mm / 54.4° >	28mm / 65.5° >	24mm / 73.7° >

Figure: 6.1A.1 **Rev: 00**

View 01 from M6 overbridge looking east

As Exisiting

BSM Est. 1968 Brady Shipman Martin. Built. Environment.

Project Number:	6138	Document Number:	RP07	Revision:	04
Project Name:	CARAUNDUFF 220kV SUBSTATION, ATHENRY, CO. GALWAY	Document Title:	PHOTOMONTAGES	Date:	25 January 2016

< 73.7° / 24mm	< 65.5° / 28mm	< 54.4° / 35mm	< 39.6° / 50mm	< 28.8° / 70mm	ANGLE OF VISION / LENS FOCAL LENGTH	70mm / 28.8° >	50mm / 39.6° >	35mm / 54.4° >	28mm / 65.5° >	24mm / 73.7° >

Figure: 6.1A.2 **Rev: 02**

View 01A from M6 overbridge looking east

As Proposed

BSM Est. 1968 Brady Shipman Martin. Built. Environment.

Project Number:	6138	Document Number:	RP07	Revision:	04
Project Name:	CARAUNDUFF 220kV SUBSTATION, ATHENRY, CO. GALWAY	Document Title:	PHOTOMONTAGES	Date:	25 January 2016

< 73.7° / 24mm	< 65.5° / 28mm	< 54.4° / 35mm	< 39.6° / 50mm	< 28.8° / 70mm	ANGLE OF VISION / LENS FOCAL LENGTH	70mm / 28.8° >	50mm / 39.6° >	35mm / 54.4° >	28mm / 65.5° >	24mm / 73.7° >

Figure: 6.1A.3 **Rev: 02**

View 01A from M6 overbridge looking east

As Proposed: Power Supply and Phase 1 Data Centre

BSM Est. 1968 Brady Shipman Martin. Built. Environment.

Project Number:	6138	Document Number:	RP07	Revision:	04
Project Name:	CARAUNDUFF 220kV SUBSTATION, ATHENRY, CO. GALWAY	Document Title:	PHOTOMONTAGES	Date:	25 January 2016

Red outline indicates profile of proposed substation not visible from this location. Dark Blue outlines indicate profiles of proposed Phase 1 Data Centre development, and Light Blue indicates Future Data Centre development.

< 73.7° / 24mm	< 65.5° / 28mm	< 54.4° / 35mm	< 39.6° / 50mm	< 28.8° / 70mm	ANGLE OF VISION / LENS FOCAL LENGTH	70mm / 28.8° >	50mm / 39.6° >	35mm / 54.4° >	28mm / 65.5° >	24mm / 73.7° >

Figure: 6.1A.4 **Rev: 00**

View 01A from M6 overbridge looking east

Cumulative Impact: Power Supply, Phase 1 and Future Data Centre Developments and M6 Rathmorrissy Interchange

BSM Est. 1968 Brady Shipman Martin. Built. Environment.

Project Number:	6138	Document Number:	RP07	Revision:	04
Project Name:	CARAUNDUFF 220kV SUBSTATION, ATHENRY, CO. GALWAY	Document Title:	PHOTOMONTAGES	Date:	25 January 2016

< 73.7° / 24mm	< 65.5° / 28mm	< 54.4° / 35mm	< 39.6° / 50mm	< 28.8° / 70mm	ANGLE OF VISION / LENS FOCAL LENGTH	70mm / 28.8° >	50mm / 39.6° >	35mm / 54.4° >	28mm / 65.5° >	24mm / 73.7° >

Figure: 6.1B.1 **Rev: 00**

View 01B from M6 overbridge looking southeast

As Exisiting

BSM Est. 1968 Brady Shipman Martin. Built. Environment.

Project Number:	6138	Document Number:	RP07	Revision:	04
Project Name:	CARAUNDUFF 220kV SUBSTATION, ATHENRY, CO. GALWAY	Document Title:	PHOTOMONTAGES	Date:	25 January 2016

< 73.7° / 24mm	< 65.5° / 28mm	< 54.4° / 35mm	< 39.6° / 50mm	< 28.8° / 70mm	ANGLE OF VISION / LENS FOCAL LENGTH	70mm / 28.8° >	50mm / 39.6° >	35mm / 54.4° >	28mm / 65.5° >	24mm / 73.7° >

Figure: 6.1B.2 **Rev: 01**

View 01B from M6 overbridge looking southeast

As Proposed

BSM Est. 1968 Brady Shipman Martin. Built. Environment.

Project Number:	6138	Document Number:	RP07	Revision:	04
Project Name:	CARAUNDUFF 220kV SUBSTATION, ATHENRY, CO. GALWAY	Document Title:	PHOTOMONTAGES	Date:	25 January 2016

Red outline indicates profile of proposed substation not visible from this location. Dark Blue outlines indicate profiles of proposed Phase 1 Data Centre development.

< 73.7° / 24mm	< 65.5° / 28mm	< 54.4° / 35mm	< 39.6° / 50mm	< 28.8° / 70mm	ANGLE OF VISION / LENS FOCAL LENGTH	70mm / 28.8° >	50mm / 39.6° >	35mm / 54.4° >	28mm / 65.5° >	24mm / 73.7° >

Figure: 6.1B.3 **Rev: 01**

View 01B from M6 overbridge looking southeast

As Proposed: Power Supply and Phase 1 Data Centre

BSM Est. 1968 Brady Shipman Martin. Built. Environment.

Project Number:	6138	Document Number:	RP07	Revision:	04
Project Name:	CARAUNDUFF 220kV SUBSTATION, ATHENRY, CO. GALWAY	Document Title:	PHOTOMONTAGES	Date:	25 January 2016

Red outline indicates profile of proposed substation not visible from this location. Dark Blue outlines indicate profiles of proposed Phase 1 Data Centre development, and Light Blue indicates Future Data Centre development. Pink outline indicates profile of M6 Interchange.

< 73.7° / 24mm	< 65.5° / 28mm	< 54.4° / 35mm	< 39.6° / 50mm	< 28.8° / 70mm	ANGLE OF VISION / LENS FOCAL LENGTH	70mm / 28.8° >	50mm / 39.6° >	35mm / 54.4° >	28mm / 65.5° >	24mm / 73.7° >

Figure: 6.1B.4 **Rev: 00**

View 01B from M6 overbridge looking southeast

Cumulative Impact: Power Supply, Phase 1 and Future Data Centre Developments and M6 Rathmorrissy Interchange

BSM Est. 1968 Brady Shipman Martin. Built. Environment.

Project Number:	6138	Document Number:	RP07	Revision:	04
Project Name:	CARAUNDUFF 220kV SUBSTATION, ATHENRY, CO. GALWAY	Document Title:	PHOTOMONTAGES	Date:	25 January 2016

< 73.7° / 24mm	< 65.5° / 28mm	< 54.4° / 35mm	< 39.6° / 50mm	< 28.8° / 70mm	ANGLE OF VISION / LENS FOCAL LENGTH	70mm / 28.8° >	50mm / 39.6° >	35mm / 54.4° >	28mm / 65.5° >	24mm / 73.7° >

Figure: 6.2.1 **Rev: 00**

View 02 from M6 overbridge looking west

As Exisiting

BSM Brady Shipman Martin. Built. Environment. Est. 1968

Project Number:	6138	Document Number:	RP07	Revision:	04
Project Name:	CARAUNDUFF 220kV SUBSTATION, ATHENRY, CO. GALWAY	Document Title:	PHOTOMONTAGES	Date:	25 January 2016

< 73.7° / 24mm	< 65.5° / 28mm	< 54.4° / 35mm	< 39.6° / 50mm	< 28.8° / 70mm	ANGLE OF VISION / LENS FOCAL LENGTH	70mm / 28.8° >	50mm / 39.6° >	35mm / 54.4° >	28mm / 65.5° >	24mm / 73.7° >

Figure: 6.2.2 **Rev: 02**

View 02 from M6 overbridge looking west

As Proposed

BSM Brady Shipman Martin. Built. Environment. Est. 1968

Project Number:	6138	Document Number:	RP07	Revision:	04
Project Name:	CARAUNDUFF 220kV SUBSTATION, ATHENRY, CO. GALWAY	Document Title:	PHOTOMONTAGES	Date:	25 January 2016

< 73.7° / 24mm	< 65.5° / 28mm	< 54.4° / 35mm	< 39.6° / 50mm	< 28.8° / 70mm	ANGLE OF VISION / LENS FOCAL LENGTH	70mm / 28.8° >	50mm / 39.6° >	35mm / 54.4° >	28mm / 65.5° >	24mm / 73.7° >

Figure: 6.2.3 **Rev: 02**

View 02 from M6 overbridge looking west

As Proposed: Power Supply and Phase 1 Data Centre

BSM Brady Shipman Martin. Built. Environment. Est. 1968

Project Number:	6138	Document Number:	RP07	Revision:	04
Project Name:	CARAUNDUFF 220kV SUBSTATION, ATHENRY, CO. GALWAY	Document Title:	PHOTOMONTAGES	Date:	25 January 2016

< 73.7° / 24mm	< 65.5° / 28mm	< 54.4° / 35mm	< 39.6° / 50mm	< 28.8° / 70mm	ANGLE OF VISION / LENS FOCAL LENGTH	70mm / 28.8° >	50mm / 39.6° >	35mm / 54.4° >	28mm / 65.5° >	24mm / 73.7° >

Figure: 6.2.4 **Rev: 00**

View 02 from M6 overbridge looking west

Cumulative Impact: Power Supply, Phase 1 and Future Data Centre Developments and M6 Rathmorrissy Interchange

BSM Est. 1968 Brady Shipman Martin. Built. Environment.

Project Number:	6138	Document Number:	RP07	Revision:	04
Project Name:	CARAUNDUFF 220kV SUBSTATION, ATHENRY, CO. GALWAY	Document Title:	PHOTOMONTAGES	Date:	25 January 2016

< 73.7° / 24mm	< 65.5° / 28mm	< 54.4° / 35mm	< 39.6° / 50mm	< 28.8° / 70mm	ANGLE OF VISION / LENS FOCAL LENGTH	70mm / 28.8° >	50mm / 39.6° >	35mm / 54.4° >	28mm / 65.5° >	24mm / 73.7° >

Figure: 6.3.1 **Rev: 00**

View 03 from local road at Rathmorrissy looking west

As Exisiting

BSM Est. 1968 Brady Shipman Martin. Built. Environment.

Project Number:	6138	Document Number:	RP07	Revision:	04
Project Name:	CARAUNDUFF 220kV SUBSTATION, ATHENRY, CO. GALWAY	Document Title:	PHOTOMONTAGES	Date:	25 January 2016

< 73.7° / 24mm	< 65.5° / 28mm	< 54.4° / 35mm	< 39.6° / 50mm	< 28.8° / 70mm	ANGLE OF VISION / LENS FOCAL LENGTH	70mm / 28.8° >	50mm / 39.6° >	35mm / 54.4° >	28mm / 65.5° >	24mm / 73.7° >

Figure: 6.3.2 **Rev: 02**

View 03 from local road at Rathmorrissy looking west

As Proposed

BSM Brady Shipman Martin. Built. Environment. Est. 1968

Project Number:	6138	Document Number:	RP07	Revision:	04
Project Name:	CARAUNDUFF 220kV SUBSTATION, ATHENRY, CO. GALWAY	Document Title:	PHOTOMONTAGES	Date:	25 January 2016

< 73.7° / 24mm	< 65.5° / 28mm	< 54.4° / 35mm	< 39.6° / 50mm	< 28.8° / 70mm	ANGLE OF VISION / LENS FOCAL LENGTH	70mm / 28.8° >	50mm / 39.6° >	35mm / 54.4° >	28mm / 65.5° >	24mm / 73.7° >

Figure: 6.3.3 **Rev: 02**

View 03 from local road at Rathmorrissy looking west

As Proposed: Power Supply and Phase 1 Data Centre

BSM Brady Shipman Martin. Built. Environment. Est. 1968

Project Number:	6138	Document Number:	RP07	Revision:	04
Project Name:	CARAUNDUFF 220kV SUBSTATION, ATHENRY, CO. GALWAY	Document Title:	PHOTOMONTAGES	Date:	25 January 2016

< 73.7° / 24mm	< 65.5° / 28mm	< 54.4° / 35mm	< 39.6° / 50mm	< 28.8° / 70mm	ANGLE OF VISION / LENS FOCAL LENGTH	70mm / 28.8° >	50mm / 39.6° >	35mm / 54.4° >	28mm / 65.5° >	24mm / 73.7° >

Figure: 6.3.4 **Rev: 00**

View 03 from local road at Rathmorrissy looking west

Cumulative Impact: Power Supply, Phase 1 and Future Data Centre Developments and M6 Rathmorrissy Interchange

BSM Brady Shipman Martin. Built. Environment. Est. 1968

Project Number:	6138	Document Number:	RP07	Revision:	04
Project Name:	CARAUNDUFF 220kV SUBSTATION, ATHENRY, CO. GALWAY	Document Title:	PHOTOMONTAGES	Date:	25 January 2016

< 73.7° / 24mm	< 65.5° / 28mm	< 54.4° / 35mm	< 39.6° / 50mm	< 28.8° / 70mm	ANGLE OF VISION / LENS FOCAL LENGTH	70mm / 28.8° >	50mm / 39.6° >	35mm / 54.4° >	28mm / 65.5° >	24mm / 73.7° >

Figure: 6.4A.1 **Rev: 00**

View 04 from local road at Caraunduff looking southeast

As Exisiting

BSM Est. 1968 Brady Shipman Martin. Built. Environment.

Project Number:	6138	Document Number:	RP07	Revision:	04
Project Name:	CARAUNDUFF 220kV SUBSTATION, ATHENRY, CO. GALWAY	Document Title:	PHOTOMONTAGES	Date:	25 January 2016

< 73.7° / 24mm	< 65.5° / 28mm	< 54.4° / 35mm	< 39.6° / 50mm	< 28.8° / 70mm	ANGLE OF VISION / LENS FOCAL LENGTH	70mm / 28.8° >	50mm / 39.6° >	35mm / 54.4° >	28mm / 65.5° >	24mm / 73.7° >

Figure: 6.4A.2 **Rev: 02**

View 04 from local road at Caraunduff looking southeast

As Proposed

BSM Est. 1968 Brady Shipman Martin. Built. Environment.

Project Number:	6138	Document Number:	RP07	Revision:	04
Project Name:	CARAUNDUFF 220kV SUBSTATION, ATHENRY, CO. GALWAY	Document Title:	PHOTOMONTAGES	Date:	25 January 2016

< 73.7° / 24mm	< 65.5° / 28mm	< 54.4° / 35mm	< 39.6° / 50mm	< 28.8° / 70mm	ANGLE OF VISION / LENS FOCAL LENGTH	70mm / 28.8° >	50mm / 39.6° >	35mm / 54.4° >	28mm / 65.5° >	24mm / 73.7° >

Figure: 6.4A.3 **Rev: 02**

View 04 from local road at Caraunduff looking southeast

As Proposed: Power Supply and Phase 1 Data Centre

BSM Brady Shipman Martin. Built. Environment. Est. 1968

Project Number:	6138	Document Number:	RP07	Revision:	04
Project Name:	CARAUNDUFF 220kV SUBSTATION, ATHENRY, CO. GALWAY	Document Title:	PHOTOMONTAGES	Date:	25 January 2016

< 73.7° / 24mm	< 65.5° / 28mm	< 54.4° / 35mm	< 39.6° / 50mm	< 28.8° / 70mm	ANGLE OF VISION / LENS FOCAL LENGTH	70mm / 28.8° >	50mm / 39.6° >	35mm / 54.4° >	28mm / 65.5° >	24mm / 73.7° >

Figure: 6.4A.4 **Rev: 00**

View 04 from local road at Caraunduff looking southeast

Cumulative Impact: Power Supply, Phase 1 and Future Data Centre Developments and M6 Rathmorrissy Interchange

BSM Est. 1968 Brady Shipman Martin. Built. Environment.

Project Number:	6138	Document Number:	RP07	Revision:	04
Project Name:	CARAUNDUFF 220kV SUBSTATION, ATHENRY, CO. GALWAY	Document Title:	PHOTOMONTAGES	Date:	25 January 2016

< 73.7° / 24mm	< 65.5° / 28mm	< 54.4° / 35mm	< 39.6° / 50mm	< 28.8° / 70mm	ANGLE OF VISION / LENS FOCAL LENGTH	70mm / 28.8° >	50mm / 39.6° >	35mm / 54.4° >	28mm / 65.5° >	24mm / 73.7° >

Figure: 6.4B.1 **Rev: 00**

View 04B from local road at Caraunduff looking southeast
As Exisiting

BSM Est. 1968 Brady Shipman Martin. Built. Environment.

Project Number:	6138	Document Number:	RP07	Revision:	04
Project Name:	CARAUNDUFF 220kV SUBSTATION, ATHENRY, CO. GALWAY	Document Title:	PHOTOMONTAGES	Date:	25 January 2016

< 73.7° / 24mm	< 65.5° / 28mm	< 54.4° / 35mm	< 39.6° / 50mm	< 28.8° / 70mm	ANGLE OF VISION / LENS FOCAL LENGTH	70mm / 28.8° >	50mm / 39.6° >	35mm / 54.4° >	28mm / 65.5° >	24mm / 73.7° >

Figure: 6.4B.2 **Rev: 02**

View 04B from local road at Caraunduff looking southeast

As Proposed

BSM Est. 1968 Brady Shipman Martin. Built. Environment.

Project Number:	6138	Document Number:	RP07	Revision:	04
Project Name:	CARAUNDUFF 220kV SUBSTATION, ATHENRY, CO. GALWAY	Document Title:	PHOTOMONTAGES	Date:	25 January 2016

< 73.7° / 24mm	< 65.5° / 28mm	< 54.4° / 35mm	< 39.6° / 50mm	< 28.8° / 70mm	ANGLE OF VISION / LENS FOCAL LENGTH	70mm / 28.8° >	50mm / 39.6° >	35mm / 54.4° >	28mm / 65.5° >	24mm / 73.7° >

Figure: 6.4B.3 **Rev: 02**

View 04B from local road at Caraunduff looking southeast
As Proposed: Power Supply and Phase 1 Data Centre

BSM Est. 1968 Brady Shipman Martin. Built. Environment.

Project Number:	6138	Document Number:	RP07	Revision:	04
Project Name:	CARAUNDUFF 220kV SUBSTATION, ATHENRY, CO. GALWAY	Document Title:	PHOTOMONTAGES	Date:	25 January 2016

< 73.7° / 24mm	< 65.5° / 28mm	< 54.4° / 35mm	< 39.6° / 50mm	< 28.8° / 70mm	ANGLE OF VISION / LENS FOCAL LENGTH	70mm / 28.8° >	50mm / 39.6° >	35mm / 54.4° >	28mm / 65.5° >	24mm / 73.7° >

Figure: 6.4B.4 **Rev: 00**

View 04B from local road at Caraunduff looking southeast

Cumulative Impact: Power Supply, Phase 1 and Future Data Centre Developments and M6 Rathmorrissy Interchange

BSM Est. 1968 Brady Shipman Martin. Built. Environment.