

A decorative graphic on the left side of the cover features a vertical lime green bar. To its right is a photograph of a worker in a yellow and black safety suit and white helmet, standing on a wind turbine. Below the bar and photo are several white line-art icons of wind turbines of varying sizes, arranged in a cluster. The background of the entire cover is a teal color with white wavy lines at the top.

# Arklow Bank Wind Park 2

## Environmental Impact Assessment Report

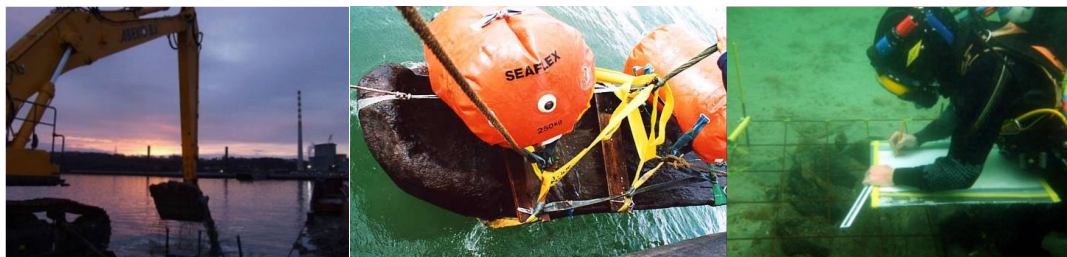
Volume III, Appendix 18.2: Cultural Heritage Visual Impact  
Assessment Report

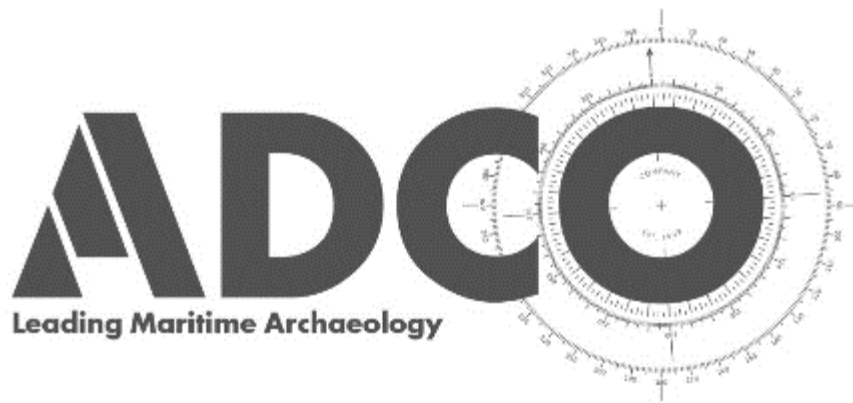


**Leading Maritime Archaeology**

## **Arklow Bank Wind Park 2**

### **Cultural Heritage Visual Impact Assessment Report**





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### **Cultural Heritage Visual Impact Assessment Report**

Client

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<b>1.0</b>	02/05/2024	Final (external)	ADCO	GoBe Consultants	Sure Partners Limited

## Statement of Authority

Name	Qualifications	Experience
Niall Brady, PhD, FSA	Graduate of UCD and Cornell University PhD 1996 HSE Part III diver since 2000	Dr Niall Brady, FSA is founding co-director of ADCO and is the company secretary. With more than two decades of experience in maritime related research and resolution, he is primarily responsible for project management and company growth initiatives. Dr Brady is a medievalist by training. Niall was project director for the Discovery Programme, Ireland's institute for advanced archaeological research, where he designed and implemented the Medieval Rural Settlement Project (2002-10). Niall has extensive project management experience in the consultancy sector, and has carried out a large number of excavations, monitoring projects, and Environmental Impact Assessments on land and underwater.



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## Abbreviations

ABWP1 -	Arklow Bank Wind Park 1
ABWP2 -	Arklow Bank Wind Park 2
ADCO -	Archaeological Diving Company Ltd
E -	Easting
ITM -	Irish Transverse Mercator
LAT -	Lowest Astronomical Tide
MHW -	Mean High Water
N -	Northing
NIAH -	National Inventory of Architectural Heritage
OD -	Ordnance Datum
OSP -	Offshore Substation Platform
OWF -	Offshore Windfarm
SMR -	Sites and Monuments Record
UTM -	Universal Transverse Mercator
WTG -	Wind Turbine Generator
ZTV -	Zone of Theoretical Visibility

## Units

m -	metre
km -	Kilometer

## Glossary

- Arklow Bank Wind Park 2 - “The Proposed Development”, Arklow Bank Wind Park 2 Offshore Infrastructure: This includes all elements under the existing Maritime Area Consent.
- Array Area - The Array Area is the area within which the Wind Turbine Generators (WTGs), the Offshore Substation Platforms (OSPs), and associated cables (export, inter- array and interconnector cabling) and foundations will be installed.
- Cable Corridor and Working Area - The Cable Corridor and Working Area is the area within which export, inter-array and interconnector cabling will be installed This area will also facilitate vessel jacking operations associated with installation of WTG structures and associated foundations within the Array Area.
- Marine Archaeology – A discipline within archaeology that studies human interaction with the marine environment, above and below the water’s surface
- Prehistory – The timeline of human activity before the recording of written records, which in Ireland refers to the period prior to c. 400 A.D., extending back to c. 8,000 years Before Present (1950).
- Setting – The surroundings in which a heritage asset is experienced. Its extent is not fixed and may change as the asset and its surroundings evolve. Elements of a setting may make a positive or negative contribution to the significance of an asset, may affect the ability to appreciate that significance or may be neutral (National Planning Policy Framework, in Heritage England, 2017).
- Site of – Archaeological term to describe a site for which no remains survive above ground.

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## **1. Introduction**

- 1.1.1.1 This Cultural Heritage Visual Impact Assessment Report provides an archaeological assessment of the degree to which settings and views from recorded cultural heritage sites may be affected by the Arklow Bank Wind Park 2 Offshore Infrastructure (hereafter referred to as 'the Proposed Development').
- 1.1.1.2 Cultural heritage sites were identified based on the Zone of Theoretical Visibility (ZTV) defined in Volume II, Chapter 17: Seascape, Landscape and Visual Impact Assessment. The Cultural Heritage Visual Impact Assessment Report is based on a desktop review of existing archaeological sources and the inspection of a selected number of cultural heritage sites.

## **2. Study Area**

- 2.1.1.1 The Cultural Heritage Study Area is based on the ZTV defined in Volume II, Chapter 17: Seascape, Landscape and Visual Impact Assessment. The ZTV extends north to Lambay Island, Co. Dublin, and south to Carnsore Point, Co. Wexford (Figure 18.2.1–Figure 18.2.2). The ZTV is focused along the coastal strip between Dalkey, Co. Dublin in the north and Raven Point, Co. Wexford in the south, while east-facing elevations extending inland across the Wicklow Mountains and the Blackstairs Mountains in Co.s Wicklow and Carlow are also included within the ZTV. Much of the east-facing elevations are absorbed within 5 km of the coastline, although the elevation of Lugnaquilla, Co. Wicklow, at 926 m above sea level lies some 26 km from the coastline, and Mount Leinster on the Carlow/Wicklow border at 795 m OD lies some 40 km from the coastline. It should be noted that the ZTV is based on a correlation with topographic contours at ground level, i.e. it does not account for the screening effects of vegetation, trees, buildings and infrastructure. Across the Cultural Heritage Study Area, the presence of woodland serves to inhibit the actual visibility of the wind turbines from particular locations on land.

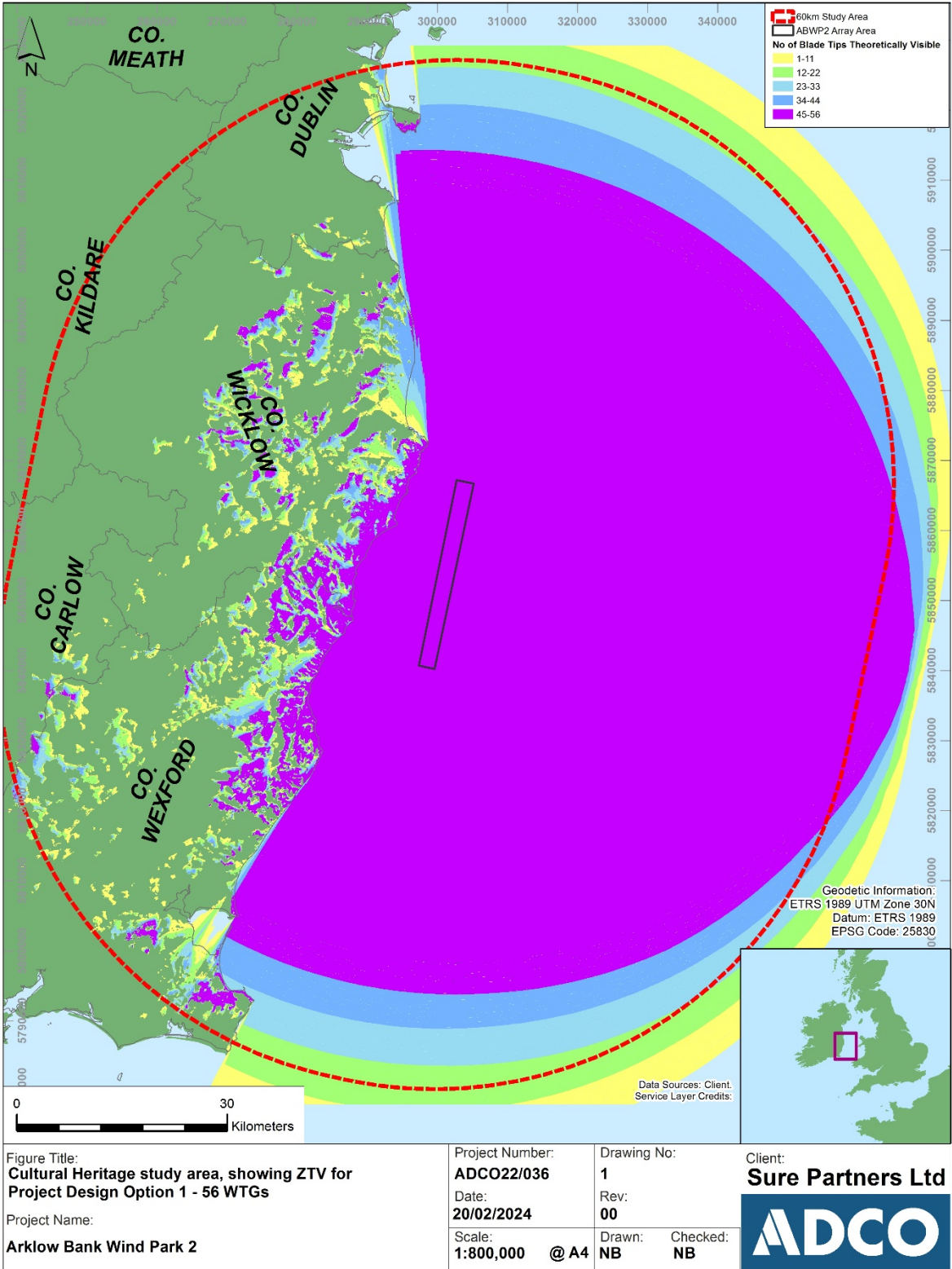


Figure 18.2.1: Cultural Heritage study area, showing ZTV for Project Design Option 1 - 56 WTGs

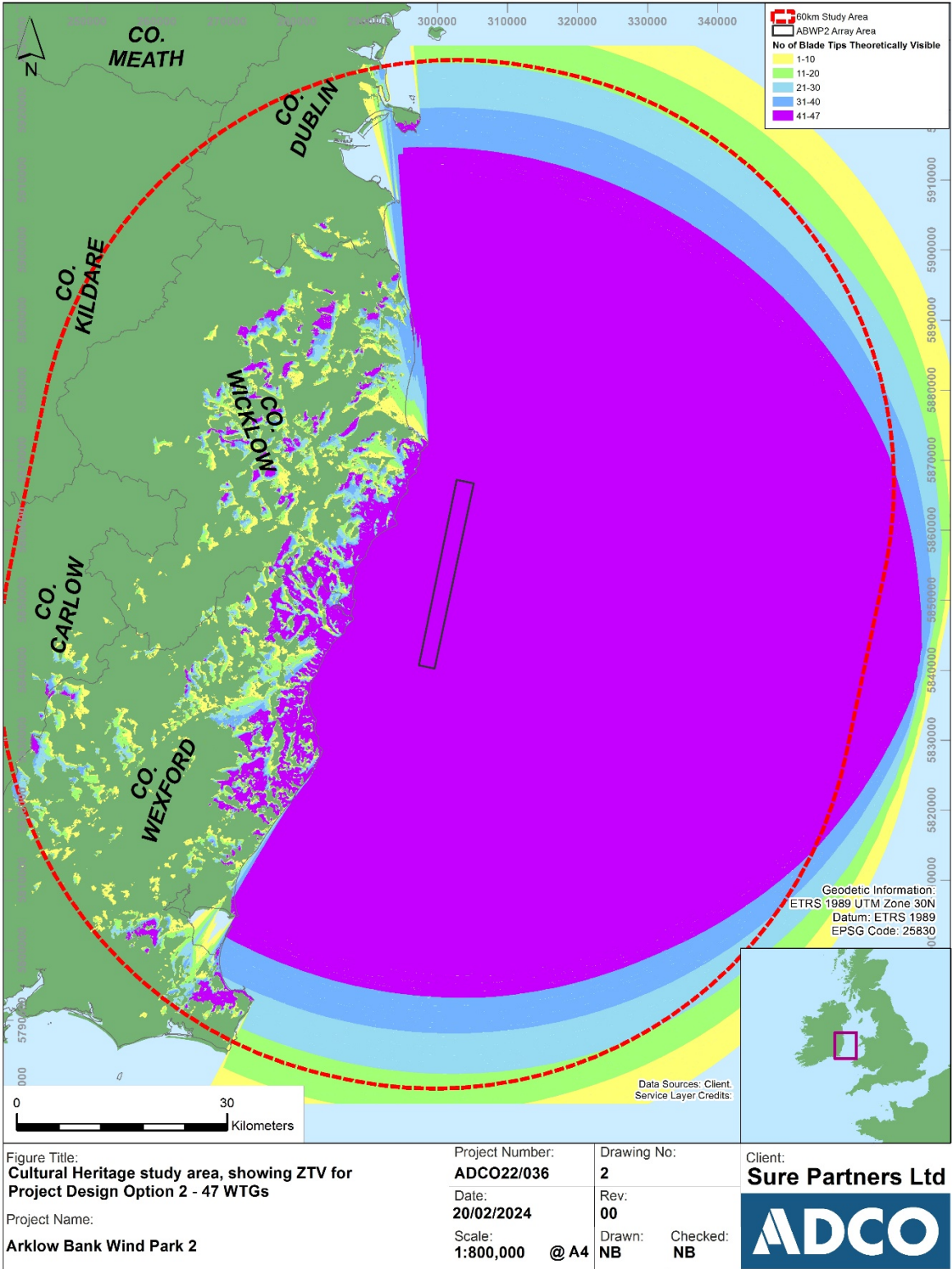


Figure 18.2.2: Cultural Heritage study area, showing ZTV for Project Design Option 2 - 47 WTGs



### 3. Guidance

- 3.1.1.1 The impact of offshore wind turbines on the setting of a cultural heritage site or complex on land is a consideration included for in EIARs. It is based on the desirability of preserving a heritage asset and its setting. This report is informed by guideline documents set out in Table 18.2.1. In the absence of statutory guidance for Offshore Windfarm (OWF) projects in an Irish context, the guidance is drawn from both the United Kingdom and Ireland's guidance, which focus on the perspective of impacts at an historic setting, rather than visual impacts on the setting from developments located at distances from the setting. UNESCO has also produced a guidance document in relation to World Heritage sites.

Table 18.2.1: Guidance documents informing the assessment of cultural heritage setting

Title	Source/Year	Online link
<i>Guidance on setting and the historic environment</i>	Department for Communities (Northern Ireland), Historic Environment Division, 2018	<a href="https://www.communities-ni.gov.uk/publications/guidance-setting-and-historic-environment">https://www.communities-ni.gov.uk/publications/guidance-setting-and-historic-environment</a>
<i>The setting of historic assets</i>	Historic England, 2017	<a href="https://historicengland.org.uk/images-books/publications/gpa3-setting-of-heritage-assets/">https://historicengland.org.uk/images-books/publications/gpa3-setting-of-heritage-assets/</a>
<i>Architectural Heritage Protection. Guidelines for Planning Authorities</i>	Department of Arts, Heritage and the Gaeltacht, 2011	<a href="https://www.gov.ie/pdf/?file=https://assets.gov.ie/236448/369d5dcd-2194-498c-959b-eee826195011.pdf#page=null">https://www.gov.ie/pdf/?file=https://assets.gov.ie/236448/369d5dcd-2194-498c-959b-eee826195011.pdf#page=null</a>
<i>Cultural heritage guidelines for electricity transmission projects</i>	EirGrid, 2006	<a href="http://www.eirgridgroup.com/site-files/library/EirGrid/Cultural-Heritage-Guidance-for-Electricity-Transmission-Projects.pdf">http://www.eirgridgroup.com/site-files/library/EirGrid/Cultural-Heritage-Guidance-for-Electricity-Transmission-Projects.pdf</a>
<i>World Heritage and wind energy planning</i>	UNESCO, 2021	<a href="https://whc.unesco.org/en/wind-energy-planning/">https://whc.unesco.org/en/wind-energy-planning/</a>

### 4. Methodology

- 4.1.1.1 The assessment of the Proposed Development on cultural heritage setting has followed three principal steps:
- Identify sites (heritage assets);
  - Define the setting;
  - Assess the impact and consider mitigation.
- 4.1.1.2 These steps are described in detail below.
- 4.1.1.3 The Developer (Sure Partners Ltd) is seeking consent for flexibility of both Project Design Options 1 and 2.
- 4.1.1.4 Project Design Option 1 comprises 56 Wind Turbine Generators (WTG) (with a maximum tip height of 273 m above Lowest Astronomical Tide (LAT) and rotor diameter of 236 m) and two OSPs (of up to 53 m x 46 m x 33.5 m above LAT for the main structure) on monopile foundations, located at the northern and southern extents of the Array Area.



- 4.1.1.5 Project Design Option 2 comprises 47 WTGs (with a maximum tip height of 287 m above LAT and rotor diameter of 250 m) and two OSPs (of up to 53 m x 46 m x 33.5 m above LAT for the main structure) on monopile foundations, located at the northern and southern extents of the Array Area.

## 4.2. Identify heritage assets

- 4.2.1.1 The extent of the ZTV includes archaeological and architectural heritage sites from across four counties. Figure 18.2.3 to Figure 18.2.7 present the archaeological and architectural heritage sites falling within the ZTV. The Sites and Monuments Record (SMR) sites refer to those sites that usually date to the period before c. 1750 AD. The National Inventory of Architectural Heritage (NIAH) sites refer to those sites that are younger in age and date from c. 1750 AD. There are no World Heritage sites within the study area, while Glendalough is a candidate World Heritage site and lies within the study area.
- 4.2.1.2 Twelve cultural heritage sites/locations falling within the ZTV were identified for the purposes of assessment. The selection was based on representative sites from along the coastal fringe where the greatest degree of theoretical visibility can be charted, and also from locations inland where the rising ground of the Wicklow Mountains allows for sea views from high ground on its east-facing slopes. The sites selected reflect the broad range of site types, time periods and landscape settings that exist with the greatest potential for negative visual impacts arising from cultural heritage considerations. The sites are presented in Table 18.2.2 and include archaeological complexes and the locations of buildings registered in the NIAH.
- 4.2.1.3 Prehistory is represented by a cist burial at Kilmichael Point and an expanse of rock art inland at Ballykean, Co. Wicklow;
- 4.2.1.4 The medieval period is represented at Dalkey Island, Co. Dublin; Wicklow Head; Ardair, Co. Wicklow; Glendalough, Co. Wicklow and Glasscarrig North, Co. Wexford.
- 4.2.1.5 The late eighteenth and nineteenth centuries are represented by coastal fortifications on Dalkey Island and in Killiney, Co. Dublin; by the coastguard station at Kilmichael Point; the lighthouse on Wicklow Head, and by Courtown harbour, Co. Wexford. The former signal tower on Mizen Head at Ardair may also have dated to this period if not somewhat earlier; it is included as an example of a location for which the cultural heritage remains are no longer upstanding but whose foundations are likely to remain in situ. There are also residences from this period, including nineteenth-century seafront houses in Greystones, Cahore House at Cahore Point; and the eighteenth-century Ballymore House, Co. Wexford, which lies somewhat inland.
- 4.2.1.6 While the reach of the ZTV is extensive, it is noteworthy that certain key cultural heritage sites that are known to inhabit the valleys of the Wicklow mountains lie outside the ZTV. This is the case with respect to Glendalough, the principal early medieval monastic centre in the southeast region of Ireland and candidate site for World Heritage status (Figure 18.2.4 and Figure 18.2.7). The ZTV does not include the valley bottom and side slopes where the known cultural heritage sites are located, but does reach the higher ground above the cultural heritage complex. The high ground remains an area with dense woodland cover. The trees prevent visibility of the wind turbines from such elevations.

*Table 18.2.2: List of locations identified to consider cultural heritage setting.*

Location	Principal Site Type	Reference	Number of turbines visible Option 1	Number of turbines visible Option 2	Distance to Array Area
<b>Dalkey Island</b>	<i>Archaeological complex</i>	DU023-029-	34-54	31-40	40 km
<b>Killiney</b>	<i>Martello Tower</i>	DU026-011	1-11	1-10	39 km

Location	Principal Site Type	Reference	Number of turbines visible Option 1	Number of turbines visible Option 2	Distance to Array Area
<b>Greystones</b>	<i>House</i>	NIAH16304025	34-54	31-40	27 km
<b>Wicklow Head</b>	<i>Lighthouse</i>	NIAH16403101	45-56	41-47	6.8 km
<b>Mizen Head</b>	<i>Signal Tower</i>	WI036-022	45-56	41-47	7.2 km
<b>Kilmichael Point</b>	<i>Coastguard Station</i>	NIAH1500741	45-56	41-47	10.7 km
<b>Courtown</b>	<i>Harbour</i>	NIAH15611016	45-56	41-47	16 km
<b>Glasscarrig North</b>	<i>Motte and Bailey</i>	WX017-008	45-56	41-47	17.8 km
<b>Cahore</b>	<i>House</i>	NIAH15701735	45-56	41-47	18.5 km
<b>Ballymore</b>	<i>House</i>	NIAH15701612	34-54	31-40	27 km
<b>Ballykean</b>	<i>Rock Art</i>	WI030-024	45-56	41-47	13.7 km
<b>Glendalough</b>	<i>Round Tower</i>	WI023-008007	0	0	28.4 km

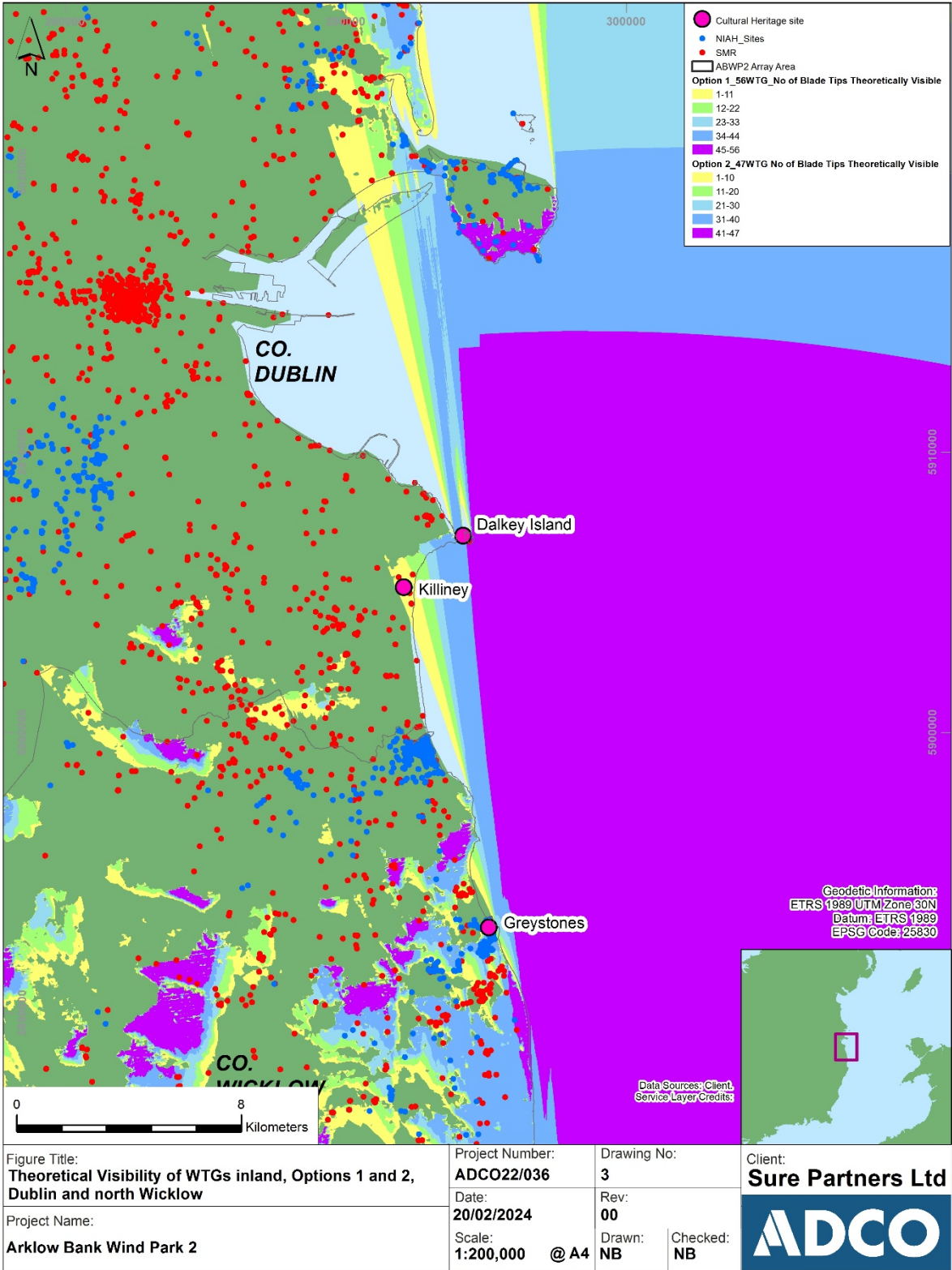


Figure 18.2.3: Theoretical Visibility of WTG's inland, based on Project Design Options 1 and 2. Dublin and north Wicklow



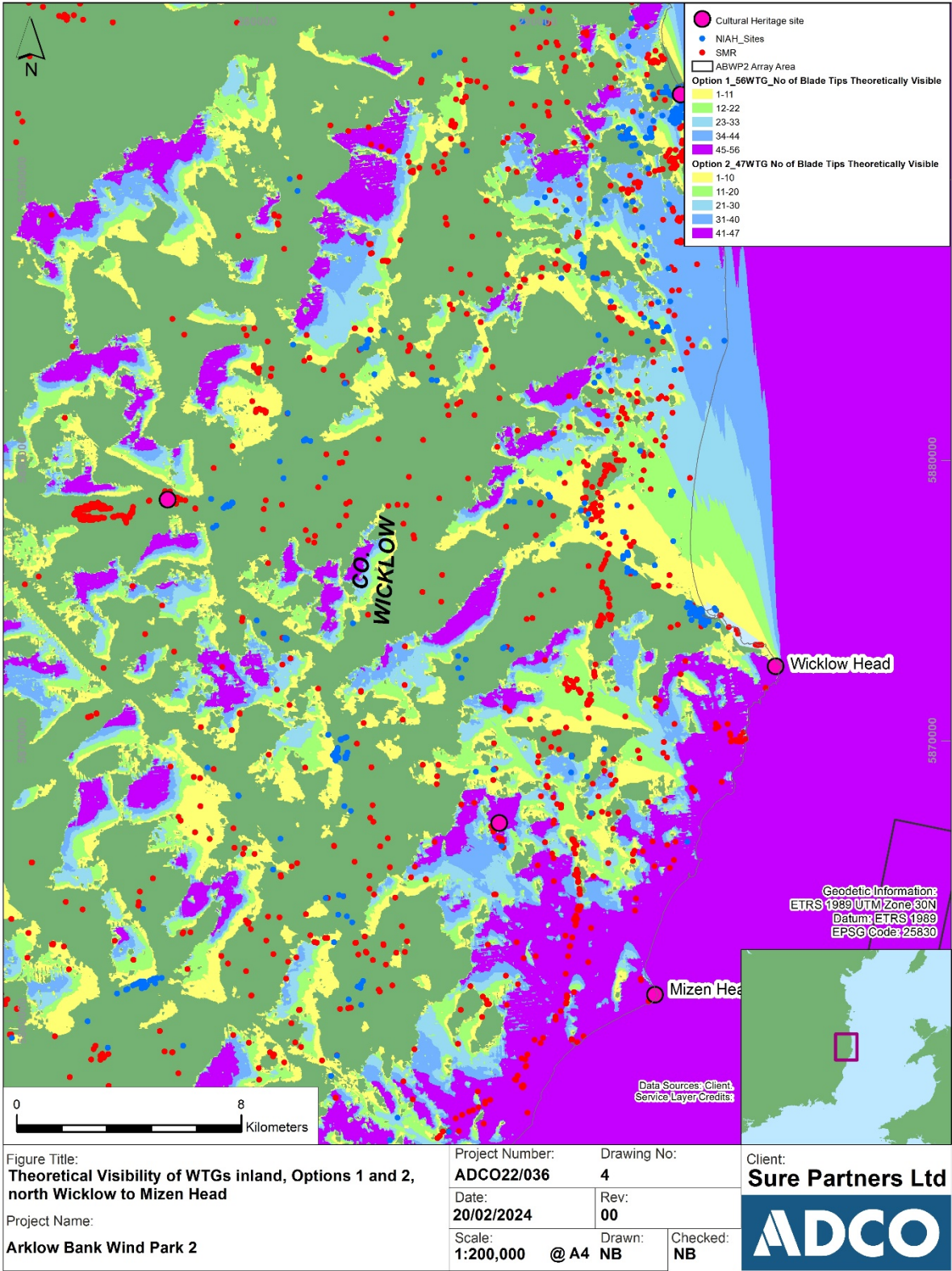


Figure 18.2.4: Theoretical Visibility of WTG's inland, based on Project Design Options 1 and 2. North Wicklow to Mizen Head

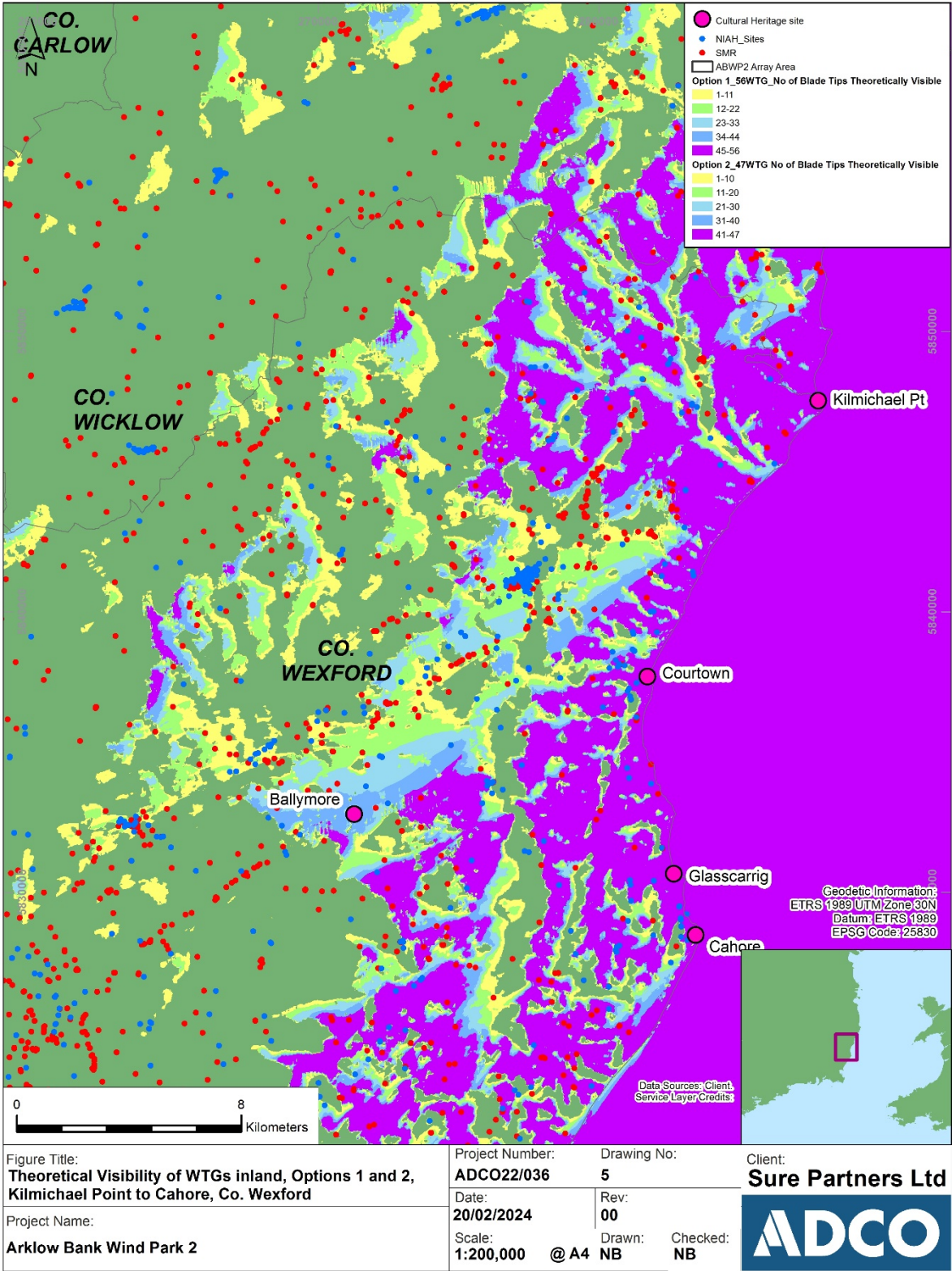


Figure 18.2.5: Theoretical Visibility of WTG's inland, based on Project Design Options 1 and 2. Kilmichael Point to south of Cahore, Co. Wexford



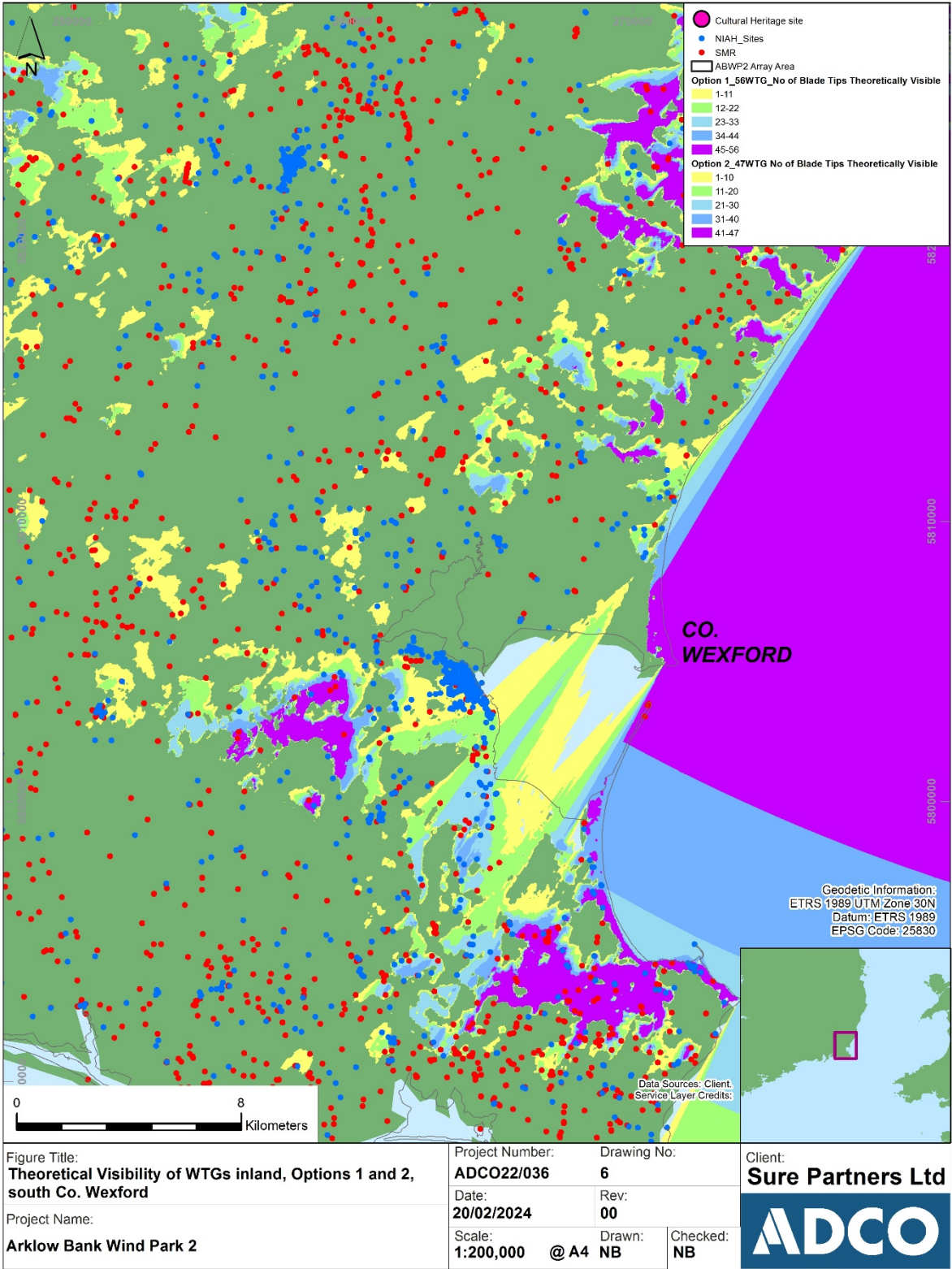


Figure 18.2.6: Theoretical Visibility of WTG's inland, based on Project Design Options 1 and 2. South Co. Wexford

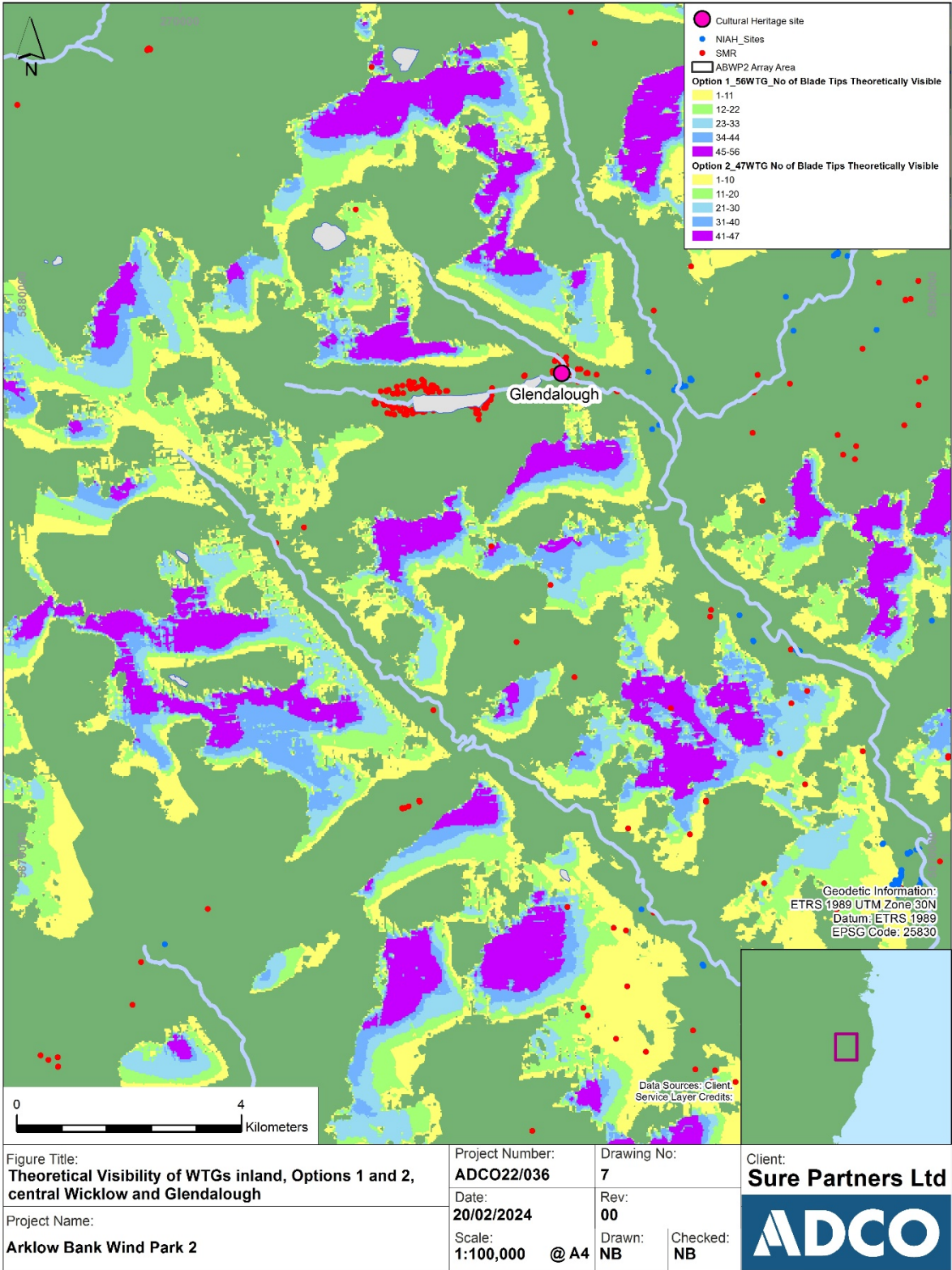


Figure 18.2.7: Theoretical Visibility of WTG's inland, based on Project Design Options 1 and 2. Central Wicklow and Glendalough



### 4.3. Define/analyse the setting

- 4.3.1.1 To define the setting, a series of photographs were taken in 2021 from the selected key cultural heritage sites/locations, or close to them, towards the Proposed Development. The results are presented in the catalogue of sites that follows. Reference was also made to the photomontages that form part of Volume II, Chapter 17: Seascape, Landscape and Visual Impact Assessment.

#### Site 1: Dalkey Island (Figure 18.2.3)

Location	Principal Site Type	Reference	Number of turbines visible	Distance to Array Area
Dalkey Island	Archaeological complex	DU023-029-	Option 1: 34-54 Option 2: 31-40	40 km



*View from with Napoleonic-era defences at south end of island*



*View towards Array Area from the Vico Road, Dalkey, on higher ground some 1 km from Dalkey Island*

<b>Description</b>	Dalkey Island, Deilig inis –‘Thorn Island’, is a 25-acre site that includes a wide range of archaeological sites, and is a well-known early medieval-period centre when it served for a time as a secure holding area for captured slaves and prisoners. With features recorded by excavation at the north end of the island from early prehistory, the centre of the island retains an early medieval church. Later medieval strata have also been uncovered, while the southern half of the island is populated with a Martello Tower and an associated fortification constructed as part of the coastal defences to defend against anticipated French invasion during the Napoleonic era. The south end of the island has the greatest visibility towards the Array Area.			
<b>Setting</b>	The visibility of WTGs from this location will be minimal for both Project Design Options given the distance to the Proposed Development. Visibility is likely only possible during clear days and when the sun is not shining from the south.			
<b>Easting</b>	<b>Northing</b>	<b>Nature of impact</b>	<b>Mitigation</b>	
294184	5907018	Indirect	None	

**Site 2: Killiney** (Figure 18.2.3)

Location	Principal Site Type	Reference	Number of turbines visible	Distance to Array Area
Killiney	Martello Tower	DU026-011	Option 1: 1-11 Option 2: 1-10	39 km



*View of site location*

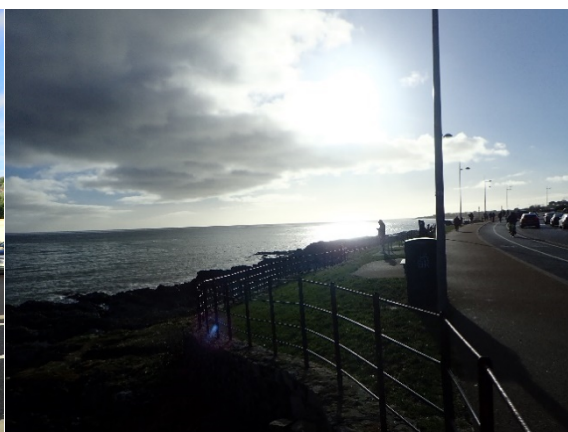
<b>Description</b>	This is one of a series of Martello Towers built along the cliff tops that define the coastal strip running south along Killiney Bay. Martello Towers are an integral part of the coastal defences constructed to defend against anticipated French invasion during the Napoleonic era, and are today iconic structures of that period. Sea views from here look southeast to the Array Area.			
<b>Setting</b>	The visibility of WTGs from this location will be minimal for both Project Design Options given the distance to the Proposed Development. Visibility will only be possible during clear days and when the sun is not shining from the south.			
<b>Easting</b>	<b>Northing</b>	<b>Nature of impact</b>	<b>Mitigation</b>	
292067	5905183	Indirect	None	

**Site 3: Greystones** (Figure 18.2.3)

Location	Principal Site Type	Reference	Number of turbines visible	Distance to Array Area
Greystones	House	NIAH16304025	Option 1: 34-54 Option 2: 41-40	27 km



*View of site location*



*View towards Array Area from the footpath opposite White Lodge*

<b>Description</b>	White Lodge house is one of a series of nineteenth-century seafront houses built along the coastline of Greystones village, with clear vistas seawards.			
<b>Setting</b>	The visibility of WTGs from this location will be minimal for both Project Design Options given the distance to the Proposed Development. Visibility will only be possible during exceptionally clear days and when the sun is not shining from the south.			
<b>Easting</b>	<b>Northing</b>	<b>Nature of impact</b>	<b>Mitigation</b>	
295101	5893045	Indirect	None	

**Site 4: Wicklow Head** (Figure 18.2.4)

Location	Principal Site Type	Reference	Number of turbines visible	Distance to Array Area
Wicklow Head	Lighthouse	NIAH16403101	Option 1: 45-56 Option 2: 41-47	6.8 km



*View of site location from public road, 700 m to southwest*

*View towards Array Area from public road, 700 m southwest of lighthouse*

<b>Description</b>	The lighthouse on Wicklow Head dates to c. 1825 and is regarded as a key site within the county's industrial heritage. The lighthouse is one of a series of sites that populate Dunbar Head townland, including the site of a promontory fort (WI031-111), which is a coastal fortification that usually dates to the late Iron Age period (early centuries A.D.). The headland is currently in private ownership.		
<b>Setting</b>	As indicated on the photomontages prepared for the Proposed Development (see Volume II, Chapter 17: Seascape, Landscape and Visual Impact Assessment), the view southwards from the Lighthouse will include the wind turbines for both Project Design Options some 6.8 km away (Photomontage viewpoints VP01 and VP02, Figure 16.10).		
<b>Easting</b>	<b>Northing</b>	<b>Nature of impact</b>	<b>Mitigation</b>
298489	5872649	Indirect	None

**Site 5: Mizen Head** (Figure 18.2.4)

Location	Principal Site Type	Reference	Number of turbines visible	Distance to Array Area
Mizen Head	Signal Tower, site of	WI036-022	Option 1: 45-56 Option 2: 41-47	7.2 km



*View towards Array Area from public road, 800 m from site. The existing WTGs are visible on the horizon*

<b>Description</b>	Marked 'Mizen Head Tower (in ruins)' on the 1838 OS 6-inch map in Ardair townland. The site is levelled and all that survived when inspected by the Archaeological Survey of Ireland in 1990 was a patch of very rough ground between the removed adjacent field boundaries and slight gullies. A second archaeological site, situated on the south side of Mizen Head, is that of a moated site (WI036-027-), which is a type of later medieval settlement enclosure that would have been home to a free tenant.			
<b>Setting</b>	As indicated on the photomontages prepared for the Proposed Development (Volume II, Chapter 17: Seascape, Landscape and Visual Impact Assessment), the view eastwards from Mizen Head will include the wind turbines for both Project Design Options and the offshore substation some 7.2 km away (Photomontage viewpoints VP25, Figure 16.10).			
<b>Easting</b>	<b>Northing</b>	<b>Nature of impact</b>	<b>Mitigation</b>	
294198	5860934	Indirect	None	



**Site 6: Kilmichael Point** (Figure 18.2.5)

Location	Principal Site Type	Reference	Number of turbines visible	Distance to Array Area
Kilmichael Point	Coastguard Station	NIAH1500741	Option 1: 45-56 Option 2: 41-47	10.7 km



*View of coastguard station from cliff edge*

*View towards Array Area from coastguard station, looking across ruined building that is being lost to the sea*

Description	Detached seven-bay two-storey coastguard station built in the nineteenth century and burned in 1922, restored 1940. The site is today converted into residences. A possible promontory fort (WX007B002) is thought to be located on the cliff edge to the northeast of the station, and would date to the late Iron Age (early centuries A.D.), while a small stone-lined cist burial (WX007B001) that was excavated from the cliff edge produced Bronze Age remains, which indicates still earlier use of the headland. The cliff edge today is very eroded and a small stone-built structure incorporating red brick is being lost to the sea; the structure has the look of a former signal tower but it is understood that the site is known locally to have served as a farmhouse.			
Setting	As indicated on the photomontages prepared for the Proposed Development (Volume II, Chapter 17: Seascape, Landscape and Visual Impact Assessment), the view eastwards from the Lighthouse will include the wind turbines for both Project Design Options some 10.7 km away (Photomontage viewpoints VP14, Figure 16.10).			
Easting	Northing	Nature of impact		Mitigation
294184	5860934	Indirect		None

**Site 7: Courtown** (Figure 18.2.5)

Location	Principal Site Type	Reference	Number of turbines visible	Distance to Array Area
Courtown	Harbour	NIAH15611016	Option 1: 45-56 Option 2: 41-47	16 km



*View of Courtown Harbour, focussed on Nimmo's design element*



*View towards Array Area from Courtown Harbour*

<b>Description</b>	Courtown Harbour retains elements designed by Alexander Nimmo in the early 1800s but was substantially completed in the 1830s/40s. The harbour retains a series of buildings and monuments to the seafaring tradition from the period and is a popular destination in the summertime.		
<b>Setting</b>	As indicated on the photomontages prepared for the Proposed Development (volume II, Chapter 17: Seascape, Landscape and Visual Impact Assessment), the view north-eastwards from the harbour will include the wind turbines from both Project Design Options some 16 km away (Photomontage viewpoints VP18 Figure 16.27).		
<b>Easting</b>	<b>Northing</b>	<b>Nature of impact</b>	<b>Mitigation</b>
281622	5830658	Indirect	None



**Site 8: Glasscarrig North** (Figure 18.2.5)

Location	Principal Site Type	Reference	Number of turbines visible	Distance to Array Area
Glasscarrig North	Motte and Bailey	WX017-008	Option 1: 45-56 Option 2: 41-47	17.8 km



*View of earthwork castle from south*



*View towards Array Area from Glasscarrig North*

<b>Description</b>	Glasscarrig motte and bailey is an earthwork castle believed to have been constructed in the early 1180s for Raymond Le Gros, one of the principal barons associated with the Anglo-Norman conquest. The earthwork is the focus point for a deserted medieval settlement, elements of which survive just inland. The location so close to the eroding coastline suggests that other elements of the settlement have been lost to the sea. The site is considered to have been the medieval port of Ferns, which served as an important bishopric in the period and as a principal caput of the MacMurrough kings and subsequently of Strongbow.			
<b>Setting</b>	The visibility of WTGs from both Project Design Options from this location will be to the northeast.			
<b>Easting</b>	<b>Northing</b>	<b>Nature of impact</b>	<b>Mitigation</b>	
282680	5830658	Indirect	None	

**Site 9: Cahore** (Figure 18.2.5)

Location	Principal Site Type	Reference	Number of turbines visible	Distance to Array Area
Cahore	House	NIAH15701735	Option 1: 45-56 Option 2: 41-47	16 km



*View of Cahore House from cliff walk*



*View towards Array Area from cliff walk*

<b>Description</b>	Detached four-bay single-storey double-pile over basement country house with half-dormer attic, built 1841-1844, Cahore House is recognized as an important survival of nineteenth-century domestic architecture for the county. The curtilage wall of the property survives and the seaward length incorporates a small stone folly (NIAH15701736).		
<b>Setting</b>	As indicated on the photomontages prepared for the Proposed Development (Volume II, Chapter 17: Seascape, Landscape and Visual Impact Assessment), the view north-eastwards from the harbour will include the wind turbines from both Project Design Options some 16 km away (Photomontage viewpoints VP20 Figure 16.28).		
<b>Easting</b>	<b>Northing</b>	<b>Nature of impact</b>	<b>Mitigation</b>
283457	5828470	Indirect	None

**Site 10: Ballymore** (Figure 18.2.5)

Location	Principal Site Type	Reference	Number of turbines visible	Distance to Array Area
Ballymore	House and church	NIAH15701612, 15701615	Option 1: 34-54 Option 2: 31-40	27 km



*View of chapel NIAH15701615*

*View towards Array Area from field above chapel and house*

<b>Description</b>	Detached five-bay two-storey double-pile country house with dormer attic, built 1721, Ballymore House is recognized as an important survival of eighteenth-century domestic architecture for the county. The demesne of the house includes several earlier features attesting to the site's later medieval importance, including a motte (WX016-014001-) a church site (WX16-015001-) and a holy well (WX016-014002-). The location also has a nineteenth-century gate lodge (NIAH15701615) and a chapel (NIAH15701615).		
<b>Setting</b>	The complex has sea views to the northeast towards both Project Design Options but most of the archaeological features have their view obscured by tree growth.		
<b>Easting</b>	<b>Northing</b>	<b>Nature of impact</b>	<b>Mitigation</b>
271277	5832784	Indirect	None

**Site 11: Ballykean** (Figure 18.2.4)

Location	Principal Site Type	Reference	Number of turbines visible	Distance to Array Area
Ballykean	Rock Art	WI030-024	Option 1: 45-56 Option 2: 41-47	13.7 km



*View towards Array Area from roadway above rock art location*

<b>Description</b>	On south-facing slope in area of improved pasture. This is one of several exposures of rock art in the townland, which is regarded as prehistoric work. Most of the other pieces are on lower-lying ground.		
<b>Setting</b>	While there are sea views to the east and southeast to both Project Design Options, the view from the archaeological site is obstructed by vegetation.		
Easting	Northing	Nature of impact	Mitigation
288626	5867062	Indirect	None



**Site 12: Glendalough** (Figure 18.2.4 and Figure 18.2.7)

Location	Principal Site Type	Reference	Number of turbines visible	Distance to Array Area
Glendalough	Round Tower	WI023-008007	Option 1: 0 Option 2:0	28.4 km



*View of Glendalough showing the round tower at the focal point within the ecclesiastical complex*

<b>Description</b>	The round tower at Glendalough represents the highest element of the important medieval ecclesiastical complex, whose foundation is attributed to St Kevin in the sixth century A.D. As indicated on Figure 18.2.4 and Figure 18.2.7, Glendalough comprises a large number of archaeological sites that extend along the base of a glacial valley in Sevenchurches or Camaderry townland. It is arguably the most important archaeological complex within the southeast region being considered in this report, and while the ZTV does not extend to any of the archaeological sites within Glendalough, the assessment of the complex's setting is warranted.		
<b>Setting</b>	The narrow valley bottom location of Glendalough may help to explain the linear stretch of the complex. The ZTV does not reach any of these features but its influence does extend to the hilltops that rise high above Glendalough. These elevations are covered in forest with few tracks or inroads into them, and the views towards both Project Design options are obstructed.		
<b>Easting</b>	<b>Northing</b>	<b>Nature of impact</b>	<b>Mitigation</b>
285013	5856559	None	None

#### **4.4. Assess impact and consider mitigation**

- 4.4.1.1 The final task is to form an opinion on the impact that the Proposed Project Design Options might have on the terrestrial cultural heritage environment. The guidance documents listed in Table 18.2.1 consider Location and Siting of the development as well as Form and Appearance of the development as key considerations, from which to deduce impact. The opinion is based on an understanding of the historical associations of the heritage assets and the perceived indirect impact that theoretical visibility of the wind turbines will have on those locations.
- 4.4.1.2 With reference to the catalogue of sites presented in section 4.3, the proposed wind turbines for both Project Design Options will be clearly visible along the shoreline from Wicklow Head to south of Cahore Point. The Proposed Development will increase the numbers of turbines currently visible that are associated with the existing development of Arklow Bank Wind Park 1, and the proposed turbines will be taller.
- 4.4.1.3 The nature of the cultural heritage sites located along the coastline tend to be sites that are intimately associated with the marine environment, whether they are coastal fortifications, navigation aids or residences embracing sea views. Though large in size, the turbines are to be located several kilometres offshore. It is concluded that the presence of the Proposed Development will not detract from the ability to understand and appreciate the cultural heritage assets.
- 4.4.1.4 The visual impact of the proposed turbines on cultural heritage sites located inland is countered by the distances between the Proposed Development and the inland sites. It is concluded that the presence of the proposed installations for both Project Design Options will not detract from the ability to understand and appreciate the cultural heritage assets.
- 4.4.1.5 The foundation structures of the turbines will be painted yellow (RAL 1023) for navigation purposes while the turbine above the foundation structure will be painted grey (RAL 7035). The grey is a neutral colour and is a useful measure to help to mitigate or neutralise the visibility of the turbines from a distance.

#### **5. Summary**

- 5.1.1.1 This Cultural Heritage Visual Impact Assessment Report provides an assessment of the degree to which settings and views from recorded cultural heritage sites may be affected by the Proposed Development, based on the ZTV identified in Volume II, Chapter 17: Seascape, Landscape and Visual Impact Assessment.
- 5.1.1.2 Twelve representative locations form the basis of this report. The locations are selected from sites along the coastal fringe where the greatest degree of theoretical visibility can be charted for both Project Design Options, and also from locations inland where the rising ground of the Wicklow Mountains allows for sea views from high ground on its east-facing slopes. The setting of each location is described.
- 5.1.1.3 The report concludes that the presence of the Proposed Development will not detract from the ability to understand and appreciate the cultural heritage assets.

## 6. References

Department of Arts, Heritage and the Gaeltacht (2011) Architectural Heritage Protection. Guidelines for Planning Authorities, Available at: <https://www.gov.ie/pdf/?file=https://assets.gov.ie/236448/369d5dcd-2194-498c-959b-eee826195011.pdf#page=null>

Department for Communities (Northern Ireland), Historic Environment Division (2018) Guidance on setting and the historic environment, Available at: <https://www.communities-ni.gov.uk/publications/guidance-setting-and-historic-environment>.

EirGrid (2006) Cultural heritage guidelines for electricity transmission projects, Available at: <http://www.eirgridgroup.com/site-files/library/EirGrid/Cultural-Heritage-Guidance-for-Electricity-Transmission-Projects.pdf>.

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