

## 6. Landscape and Visual Impact

### Introduction

- 6.1 Barton Willmore LLP (Landscape Planning and Design) (BW) were commissioned in 2012 to undertake a landscape and visual appraisal as the basis for advice to mitigate potential landscape and visual effects of the proposed residual waste treatment facility (the proposed development) at Hightown Quarry (the application site) and to record the landscape and visual effects in an Environmental Statement (ES) Chapter as part of the submitted planning application<sup>1</sup>. BW were also commissioned to prepare a Design Statement entitled Design Evolution: Landscape and Visual Mitigation by Design (the 'Design Statement')<sup>2</sup>, which was submitted to demonstrate the design response to the landscape and visual mitigation requirements.
- 6.2 The submitted Landscape and Visual Impact Assessment, included in the original ES Chapter 10, was comprehensive, robust and transparent and undertaken with the agreement of DoE Landscape Branch (DOELB) (subsequently NIEA: Landscape Architects) to the approach taken, in terms of scope and methodology. This methodology, whilst developed in advance of the publication of Guidelines for Landscape and Visual Impact Assessment Third edition 2013<sup>3</sup>, accords with the principles of the subsequently-updated guidelines. Input related to the revised alignment of Boghill Road and changes to the EfW building was provided for an EIA Addendum in September 2014<sup>4</sup>. The landscape and visual impact of the proposed development was deemed acceptable by Department for Environment – Strategic Planning Division in their Development Management Report of June 2015.
- 6.3 It is noted that in the Notice of Opinion of September 2015, the Reasons for Refusal refer to matters of need and human health. There is no mention in either this document, or in the Department of Environment Ministerial Memo that preceded it (also September 2015), of any landscape or visual impacts contributing to the refusal reasons, notwithstanding the fact that the Ministerial Memo notes the fact that careful consideration was given to all information before the Minister and that representation from objecting parties was received.
- 6.4 BW gave evidence at th Planning Appeals Commission (PAC) hearing in 2016. A review of submitted hearing evidence on landscape and visual matters was prepared in September 2016<sup>5</sup>. Additional information requested by the Commissioner post-hearing included cumulative photomontages of a consented wind farm and commentary on cumulative effects which was prepared by Barton Willmore in conjunction with photomontage consultancy Realm Communications in November 2016.<sup>6</sup> In September 2017, Department for Infrastructure

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<sup>1</sup> Becon Consortium, March 2014. Arc21 Residual Waste Treatment Project: Hightown Quarry. Environmental Statement.

<sup>2</sup> Becon Consortium, November 2013. Hightown Quarry: Residual Waste Project. Design Evolution: Landscape & Visual Mitigation by Design.

<sup>3</sup> Landscape Institute/ IEMA, 2013. Guidelines for Landscape and Visual Impact Assessment (Third Edition)

<sup>4</sup> Becon Consortium, August 2014. Hightown Quarry: Residual Waste Treatment Project. Environmental Statement Addendum.

<sup>5</sup> Barton Willmore, September 2016. Hightown Quarry: Review/ Rebuttal of Submitted Hearing Evidence on Landscape and Visual Matters.

<sup>6</sup> Barton Willmore, November 2016. Hightown Quarry: Landscape and Visual; Additional Information Requested by Commissioner.

granted permission for the development, based on the recommendation of the PAC Commissioner, dated March 2017, which included noting that *“the visual impact of the proposal would be acceptable in the landscape (in the particular circumstances)”* (paragraph 156).

- 6.5 It is noted that recent landscape and visual objection submissions to the Department are those that were already before and considered by the PAC.
- 6.6 A further comprehensive landscape and visual appraisal has been carried out in 2018 to update the appraisal of the application site, the description of the character of the surrounding landscape and views towards the application site. This Addendum to the original ES Chapter 10 provides an updated description of the existing baseline, physical characteristics of the proposed development including proposals for Boghill Road, which have evolved slightly as a result of further post-submission input from Department for Infrastructure (DfI) Roads and reflects all current policy and character information and guidance for carrying out landscape and visual impact assessment.
- 6.7 This Addendum Chapter describes the updated baseline conditions of the application site. The original ES Chapter 10 identified and assessed the likely significant landscape and visual effects; the mitigation measures required to prevent, reduce or offset any likely significant effects; and the likely significant residual effects arising from the proposed development. These assessments have been re-considered as part of the 2018 appraisal and the findings are included within this Addendum. Chapter 3 of the original ES and the planning application drawings described the landscape scheme for the proposed development. The proposals for the development of the built form and infrastructure associated with the quarry site contained within Chapter 3 remain unchanged. The amended landscape scheme for the Boghill Road part of the application site has been considered in the 2018 addendum.

### **Policy Context**

- 6.8 Relevant policy at European, national and local levels is summarised in Appendix 6.2 which includes all current policies which have come into effect since 2013. The potential implications on the proposed development of these planning policies, including the Strategic Planning Policy Statement 2015<sup>7</sup>, Regional Development Strategy 2035<sup>8</sup>, and the draft Belfast Metropolitan Area Plan 2015<sup>9</sup>, relate primarily to the need to integrate built form into the rural landscape to protect landscape character and minimise visual impact.

#### *Strategic Planning Policy Statement 2015*

- *“All development in the countryside must integrate into its setting, respect rural character, and be appropriately designed. (6.70)*

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<sup>7</sup> DOE, September 2015. Strategic Planning Policy Statement for Northern Ireland (SPPS) Planning for Sustainable Development

<sup>8</sup> Department for Regional Development, 2010. Regional Development Strategy 2035 Building a Better Future.

<sup>9</sup> DOE, 2014. Draft Belfast Metropolitan Area Plan 2015

- *Development in the countryside must not mar the distinction between a settlement and the surrounding countryside, or result in urban sprawl. (6.71)*  
...
- *In all circumstances proposals for development in the countryside must be sited and designed to integrate sympathetically with their surroundings, must not have an adverse impact on the rural character of the area, and meet other planning and environmental considerations including those for drainage, sewerage, access and road safety. (6.77)*  
...
- *Particular care should be taken when considering the potential impact of all renewable proposals on the landscape. For example, some landscapes may be able to accommodate wind farms or solar farms more easily than others, on account of their topography, landform and ability to limit visibility. (6.222)*  
...
- *Development that generates energy from renewable resources will be permitted where the proposal and any associated buildings and infrastructure, will not result in an unacceptable adverse impact on the following planning considerations:*
  - *public safety, human health, or residential amenity;*
  - *visual amenity and landscape character;*
  - *biodiversity, nature conservation or built heritage interests;*
  - *local natural resources, such as air quality, water quality or quantity; and,*
  - *public access to the countryside. (6.224)*
- *Sites and proposals for waste collection and treatment facilities must meet one or more of the following locational criteria:*  
...
  - *it is suitably located within an active or worked out hard rock quarry or on the site of an existing former waste management facilities including a land fill site;*
  - *it brings previously developed, derelict or contaminated land back into productive use or where existing or redundant buildings can be utilised;*
  - *in the case of civic amenity facilities, the site is conveniently located in terms of access to service a neighbourhood or settlement whilst avoiding unacceptable adverse impact on the character, environmental quality and amenities of the local area; or*
  - *it is suitably located in the countryside, it involves the reuse of existing buildings or is on land within or adjacent to existing building groups. Alternatively where it is*

*demonstrated that new buildings/plant are needed these must have an acceptable visual and environmental impact. (6.313)”*

*Regional Development Strategy 2035*

- 6.9 As RG11 seeks to “Conserve, protect and, where possible, enhance our built heritage and our natural environment” and requires that developments:

*“Recognise and promote the conservation of local identity and distinctive landscape character. Landscape character is what makes an area unique. It is defined as “a distinct, recognisable and consistent pattern of elements, be it natural (soil, landform) and/or human (for example settlement and development) in the landscape that makes one landscape different from another, rather than better or worse”. We can only make informed and responsible decisions on the management and planning of sustainable future landscapes if we pay proper regard to their existing character. By understanding how places differ we can also ensure that future development is well situated, sensitive to its location, and contributes to environmental, social and economic objectives. The Northern Ireland Landscape Character Assessment 2000 provides valuable guidance on local landscape character and scenic quality.”*

*Draft Belfast Metropolitan Area Plan 2015*

- 6.10 Adoption of the Belfast Metropolitan Area Plan (BMAP) 2015 was declared unlawful by the Court of Appeal on 18 May 2017. Draft BMAP remains a material consideration with the weight to be given to it the subject of planning assessment based on the site specifics of each individual case.
- 6.11 Policy ENV 1 relates to Local Landscape Policy Areas. The application site does not lie within an LLPA however nearby LLPAs include Ballycraigy (Sentry Hill), which includes views south to the Belfast Hills. It states that:

*“In designated Local Landscape Policy Areas (LLPAs) planning permission will not be granted for development that would be likely to have a significant adverse effect on those features, or combination of features, that contribute to the environmental quality, integrity or character.*

*Where riverbanks are included within LLPAs, access may be required to the river corridor as part of the development proposals. Any access should not have an unacceptable adverse impact on the flora and fauna of the river corridor. Where proposals are within and/or adjoining a designated LLPA, a landscape buffer may be required to protect the environmental quality of the LLPA.”*

- 6.12 Importantly, this does not state that there is any requirement for development outside LLPAs and not adjoining them, to avoid effects on LLPAs.

## **Baseline Conditions**

### *Application Site Location*

- 6.13 The application site location is as described in the original ES Chapter 10, paragraphs 10.58-10.61. As illustrated in the Figure 6.1: Site Context Plan, the quarry and quarry access road parts of the application site now lie within the administrative area of Antrim and Newtownabbey Borough Local Government District (LGD), Antrim and Newtownabbey Borough Councils now having been amalgamated.

### *Topography*

- 6.14 The description of landform in the vicinity of the application site provided in the original ES Chapter 10, paragraphs 10.62-10.68, is still relevant. Topographical Features are illustrated in Figure 6.2: Topographical Features Plan, with updated map base information.

### *Land Use and Settlement*

- 6.15 The description of land use and settlement in the immediate surroundings of the application site provided in the original ES Chapter 10, paragraphs 10.69-10.80, remains broadly unchanged, however the evolving land-uses include the addition of wind turbines including one to the north of Boghill Road, as well as a number on the western flanks of the Belfast Hills, a solar array to the east of Sealstown Road and residential development extending south-east along Hydepark Road in the vicinity of the application site. Further developments have been consented and are considered further in the Cumulative Effects section below.

### *Vegetation*

- 6.16 The character of the vegetation in the study area, as described in paragraphs 10.81-10.82, remains broadly unchanged.

### *Landscape Designations*

- 6.17 The paragraphs 10.83-10.93 outline the landscape designations within the context of the application site. These are broadly unchanged and illustrated on Figure 6.3: Site Context Plan.

### *Landscape Character*

- 6.18 Data within the Northern Ireland Environment Agency (NIEA) Landscape Character Assessment (2000) the application site lies predominantly within the Divis Summits Landscape Character Area (LCA 111). The access road area of the application site lies within the Three and Six Mile Water Valleys Landscape Character Area (LCA 114). These LCA descriptions are included in full in Appendix 10.3 and summarised in paragraphs 10.94-10.105. The areas are illustrated on Figure 6.4: Landscape Character Plan.
- 6.19 Figure 6.4: Landscape Character Plan also shows the DAERA regional landscape character assessment of 2016, which provides an additional, more strategic layer. The application site lies within Area 19: South Antrim Hills and Six Mile Water.

6.20 Summary extracts from Area 19 of relevance are noted below. Full extracts are included within Appendix 6.3.

- A populous landscape with significant infrastructure.
- The M2 crosses the [Six Mile Water] valley between Antrim and Newtownabbey and industrial development becomes more prominent in this south-easterly direction.
- Further south-west, the hills rise again to Collinward, Squires Hill, Divis and White Hill. These hills form an open and windswept upland plateau with a transition to more sheltered farmland with more substantial hedges on the gentle northern slopes. Fields are enclosed by gappy hedges or stone walls.
- The land is mostly enclosed elevated farmland, with a rural character influenced by settlement and transport links.
- Communication masts are found on many of the hills, with pylons and electricity lines, crossing the area which can detract from the remote, undeveloped feel on the highest uplands.
- A medium scale rural and mostly tranquil landscape with scattered small settlements. The scale is smaller in the valleys and larger scale on the hill summits where there is no enclosure.
- Field cover consists of medium scale, rolling elevated pastoral farmland, which can be irregular and patchy on higher ground. Most field boundaries are hedgerows with many beech trees.
- Former quarrying and mineral workings are scattered throughout the landscape as hard rock quarrying was once widespread.
- The Six Mile and Three Mile valley is a communications corridor with prominent pylons and telecommunications masts. The M2 motorway, railway and several major A roads cross through this area.
- Field boundaries in the area feature beech and ash trees and hedges, dividing geometric fields of improved grassland. The geometry of the landscape is typified by the 'seven mile straight' of the B39, leading south-east from Antrim. On the uplands hedges become more sparse with stunted trees and stone walls. The highest areas are unenclosed.
- On higher elevations the land is still enclosed but there is a feeling of exposure resulting from the wind sculpted trees and scrappy hedgerows.
- Relatively wild on the more sparsely settled higher ground, particularly considering proximity to large urban centres.
- Minerals: Extensive quarries are operational in this area, exploiting the basalt from which the hills are formed. The restoration of such installations, including use for landfill, as well

as the excavation of new sites, will potentially impact on the comparative rurality of this area.

- Electricity transmission: The major power lines radiating out from Kilroot and Ballylumford power stations pass through this landscape carried on steel towers.
- Transport: The M2 corridor is likely to remain a focus for infrastructure improvements and development pressure, forming the key route from Belfast to Derry/Londonderry and the north-west, and to the International Airport. The corridor is essentially urban as far west as the industrial estates at Mallusk, beyond which a more rural character takes over. The A8 route to Larne is also being upgraded.
- Renewable energy: One wind farm has been constructed in the area, at Carn Hill, and there are a number of operating and consented single turbines across the RLCA.
- Minerals: Disused and active quarrying and mineral workings, particularly for basalt;
- Sense of place: Most known as a transport corridor and a strategic link between Belfast, Larne and Lough Neagh.

6.21 On the basis of the published assessment, it is considered that the sensitivity of Area 19, to the type of development proposed, is medium.

#### *Belfast Hills Landscape Partnership Scheme*

6.22 Understanding Your Landscape Partnership's Area, Section 1 of the downloadable document from the Belfast Hills Landscape Partnership website, describes the Belfast Hills Operational Area, as defined in 2004 and revised by the Landscape Partnership as the Landscape Partnership Scheme Area (LPSA). The document describes the landscape types and character areas within the LPSA from the 2000 Environment and Heritage Service Landscape Character Assessment, concluding:

*"The Belfast Hills landscape areas are dramatic and important for their own sake as well as an attractive backdrop to the city and its residents and visitors. Landscapes are generally degraded and highly impacted, showing the pressure of low returns in farming, of insensitive development, and of industries such as quarrying and waste management. Telecommunications masts dominate the upland landscapes, with few summits free from structures."*

6.23 A more detailed landscape assessment of the LPSA is included within "Understanding Your Landscape Partnership's Area", Section 1, describing visibility and quality of key views towards the identified areas of study:

*"Visibility ratings relate to how clear the view is from its location and the number of people it is visible to. For example, if the view is clearly visible to most of the population of Belfast it would score 10, while a view that is obstructed by trees or a hedge in the rural countryside would*

score 1. Quality ratings relate to the aesthetic quality, with a maximum score of 10 and the presence of aeriels, pylons and netting reducing the score.”

- 6.24 The areas of study include Cave Hill, Mcllwhans and Squires Hill. In relation to Mcllwhans it is noted that:

*“The upper slopes of the hill are open upland heath, surrounded by lower slopes consisting of hedged fields of improved grassland. To the north east of the hill there is a large active quarry called the Hightown/Tarmac North quarry.”*

- 6.25 A view of the northern part of the hill from Aughnabrack Road is included at Photo 3.1. It is scored 3 for visibility and 9 for quality of the view stating that:

*“This photograph shows the active agricultural use of the fields on the lower slopes of Mcllwhans hill, with strong hedged field boundaries and numerous mature trees. The upland heath on the hill top can also be seen.”*

- 6.26 Photo 3.2 shows the eastern view from the Flush Road, scoring 4 for visibility and 4 for quality.

*“This view of the hill is dominated by the pylon and the cables associated with it. A tarmac road can be seen which provides access to a Water Service station, also visible on the horizon”.*

- 6.27 From Ballyhill Road to the south Photo 3.3 is rated as 5 for visibility and 6 for quality. Photo 3.4 gives a western view from Aughnabrack Road which is rated as visibility 3 and quality 8. The hill has a broad range of archaeological sites suggesting ongoing settlements dating from the Bronze Age.

- 6.28 With reference to Squires Hill it is noted that:

*“Over 80% of Squires Hill is within the Area of High Scenic Value. Only a small section of the northern end of the hill has been excluded, this may be due to the fact that it is not visible from the city.... The most distinctive feature on this hill is the two masts, one of which is approximately three times the height of the other. These are accessed via a concrete lane off the Flush road. On the eastern slope there is a disused limestone quarry still visible in the landscape. Scrub, particularly gorse, is encroaching from the south and spreads along the southern edges. A small quarry is also present on the North Eastern side of the hill. The hill is mostly upland with heath, while the lower edges are large agricultural hedged fields.”*

- 6.29 The views illustrated include the south western view from Divis Mountain, Photo 4.2, showing:

*“the very visible mast along with the field patterns and scrub with visibility 6 and quality 7”.*

- 6.30 Site Photo 4.3 is the north-eastern view from Cave Hill which:

*“clearly shows scar on landscape from old quarry along with the mast on the summit. The succession of green fields to rough open grassland and scrub can also be seen. Visibility 6 Quality 5” Photo 4.4 is a north-western view from Sentry Hill to the north of Mallusk where “houses and large buildings dominate the landscape. Visibility 5 Quality 4”*

6.31 Commentary titled “Needs of the Landscape and How to Address these needs” (Page 83) includes the following of relevance to the application site:

- *“Appropriate grazing levels to preserve rich grasslands and traditional farmland landscape.*
- *For the landscape to be unobstructed by numerous masts on hill tops.*
- *The need to remove bracken and scrub.*
- *Visibility of landfill and quarry sites. Address by appropriate planting and restoration plans. .... There is a need to raise basic awareness of the impact their site can have on the surrounding areas, so the need to place buildings, spoil piles etc sensitively on site. Through the Landscape Partnership Schemes Industrial Site Restoration Scheme (project 1.1), some planting of native tree species around the base of industrial sites could help lessen their visibility. This will depend on the suitability of the site for tree planting and the co-operation of site owners. Invasive species mapping and removal to prevent these invasive plants taking over sites and negatively impacting on local biodiversity and visitor enjoyment.*  
*...”*

6.32 “Forces for Change and Opportunities for Restoring and Strengthening It” (Page 86) considers quarry site restoration, which is of limited relevance to the proposed development, but noted here for reference:

*“Industrial site managers: With regard to the various quarry and landfill sites, forces of change will largely be due to decisions by Planning Service and NIEA regarding approved quarry/landfill licence and restoration plans. There may be an opportunity for the Landscape Partnership Scheme, through project 1.1, to approach the owners of such industrial sites to discuss appropriate tree planting or other works that go beyond the restoration plans or result in them occurring many years before they have to. This could minimise visual impact, perhaps leading to discussions regarding public access once restoration of inactive sections of the quarry/landfill are completed.”*

6.33 The landscape in the vicinity of the application site is subject to ongoing change and evolution, notably in terms of infrastructure and urbanisation. Since 2016 there has been extension of the Blackrock development, in the vicinity of Aylesbury Lane; and completion of residential development at Cashelton Manor, off Upper Hightown Road, to the south-east of the junction with Hightown Road. In combination with the removal of a tall coniferous hedge surrounding 103 HydePark Road, this results in the urban edge being presented more strongly as an influence over the landscape of Local Character Area L4 Valley Farmland: Flush River Valley, to the south-west. In addition, a number of infrastructural influences have been brought to bear on the character of the Valley Farmland landscape, including an extensive solar array to the east of Sealstown Road and a wind turbine north of Boghill Road. These features, seen in the updated Site Appraisal and Site Context photographs (see below) whilst not within the extent shown on **Figure 6.5**, are sufficiently substantial to accentuate the pre-existing influences of

pylons and overhead cables, as described in the original ES Chapter 10, on LCAS L4 and L5 Suburban / Residential, Hydepark / Hightown.

#### *Site Appraisal*

- 6.34 Figure 6.6: Site Appraisal Plan shows an aerial view of the application site, the locations of the Site Appraisal photographs and the site-level landscape character areas. It illustrates the landscape features of the application site and its immediate surroundings. The detailed site appraisal carried out in 2012 and 2013 was updated in 2018 and the Site Appraisal photographs retaken (Appendix 6.1: Illustrative Material). There has been little change within the application site with the exception of the demolition of one of the plant buildings in the north-eastern part of the quarry and the succession growth of vegetation into the waterbodies of settling ponds. With these exceptions, the description provided in paragraphs 10.130-10.169 in relation to site character and site features remains valid.
- 6.35 A number of Site Appraisal Photographs (A-Y inclusive) were taken as part of several site visits, in August 2012, April 2013 and July 2013. These photographs have been re-taken in November/December 2018. These illustrate the features and character of the application site. The locations from which the photographs were taken are shown on Figure 6.6: Site Appraisal Plan (Aerial Photograph). Notwithstanding the above changes within the Site, the description of the Site Appraisal Photographs in paragraphs 10.170-10.195 is still relevant. However, as the 2018 photographs show, the constructed turbines, the perceived encroachment of the urban edge at Hydepark road and the solar array at Sealstown Road have an increasing influence on the character of the vicinity of the application site (see commentary above in relation to local landscape character).

#### *Visual Appraisal*

- 6.36 To understand the visual envelope of the development and inform the visual assessment, a number of exercises were undertaken as part of the iterative design process, starting with the Zone of Theoretical Visibility (ZTV) computer modelling, to give an indication of the likely extent of visibility of the proposed built form. The process used for ZTV preparation and how it informed the subsequent assessment is set out in the original ES Chapter 10, Methodology section and paragraph 10.197.
- 6.37 Verification on the ground was undertaken in visual appraisal fieldwork exercises, most recently in November/December 2018. In order to assist the visual impact assessment, and the prediction of likely significant effects, the visual assessment field exercises in August 2012 and July 2013 involved the flight of a helium balloon (blimp) from the application site to demonstrate the heights proposed for components of the proposed development. The details of this exercise are set out in the original ES Chapter 10, Methodology section and paragraph 10.198.
- 6.38 The ZTV and flying of the blimp have not been repeated for the 2018 appraisal update as there is no change to the proposed height of the EfW flue or built form.

- 6.39 The 2018 visual appraisal involved revisiting the locations identified during the 2013 assessment, as set out in the visual appraisal section of the original ES Chapter 10. The findings of the assessment are very similar and the description of the visibility of the application site contained in the original ES Chapter 10 remains valid, a re-run of the ZTV model resulting in imperceptible changes. The Site Context Photographs show the original 2013 photography and the winter view from 2018, thus illustrating both the seasonal change and any physical changes that have occurred in the interim. Physical changes include:
- the development of a Solar Array at Sealstown Road;
  - extension of Blackrock residential development;
  - completion of Cashelton Manor residential development on Upper Hightown Road; and
  - erection of a wind turbine north of Boghill Road.
- 6.40 Consented developments within the visual envelope of the application site notably further include wind turbines and a residential development between Hydepark Lane and Hydepark Road.
- 6.41 In addition, the walking network on Carnmoney Hill has been extended nearer to the summit of the hill, affording more open views across the wider landscape to the south-west, towards the application site.
- 6.42 How these and any other changes are manifested in the different Site Context photographs are noted below.
- 6.43 In Site Context Photograph 6, from the junction of Boghill Road with Hydepark Road, there has been a loss of vegetation to the south of Hydepark Road where a dense coniferous tree line has been removed, opening views to the west, as seen to the right of the view. Whilst this does not affect views towards the application site, it does allow a view of the north of Boghill Road wind turbine from this vicinity. The north of Boghill Road wind turbine is also visible in Site Context Photograph 7.
- 6.44 These incremental changes to the landscape are perceived in elevated views from Hightown Road to the east of the application site as illustrated by Site Context Photograph 10, from where the solar array and north of Boghill Road turbine can be seen within the existing panorama.
- 6.45 Similarly, from the upper slopes of Carnmoney Hill, where more elevated views are now available from the extended footpath network, the turbine and the solar array are visible beyond the urban area of Mallusk, as seen in Site Context Photograph 14a.
- 6.46 The Boghill Road turbine is visible in views from the north west as illustrated by Site Context Photograph 18. The solar array on Sealstown Road forms a notable feature of the view along the northern part of this road as illustrated in Site Context Photograph 20, which also features the north of Boghill Road turbine. Landfill activities within the former quarry to the west of

Sealstown Road are also a dominant feature, just seen on the right of the December 2018 view.

- 6.47 The north of Boghill Road turbine is also visible within the panorama in Site Context Photograph 22.
- 6.48 A number of new wind turbines are visible as part of the panorama in Site Context Photograph 23 from the summit of Divis, most clearly the turbine to the south of McIlwhans; and also in the views from the west (Seven Mile Straight) as illustrated in Site Context Photograph 24.

## **Lighting**

### *Assessment of dark landscapes and existing lighting*

- 6.49 The character of the night sky in the area surrounding the application site has been assessed in a night-time light sources assessment which identified the visibility of existing light sources in the surrounding area. The original ES Chapter 10, paragraphs 10.243-10.255 details the findings of the 2012 night time assessment.
- 6.50 Indicative information on the nature and prominence of the various light sources has been plotted on Figure 6.9: Existing Light Source Plan. Light in the vicinity of the application site was experienced in the form of night-time sky glow, typically emanating from urban areas, or direct glare from particular points of light. In some situations, a combination of both sky glow and direct glare was evident. The 2018 appraisal identified additional light sources in the vicinity of the application site as including:
- Extensive floodlighting along the rooflines of barns at the farm adjoining the quarry access road. This lighting constitutes particularly prominent direct glare across the night sky, perceived from locations to the east and north-east, including as far as Upper Hightown Road between Collinward and Squires Hill;
  - Floodlighting on properties at The Flush, to the south of the application site; and
  - Streetlighting at Cashelton Manor.
- 6.51 The updated appraisal confirmed that the landscape surrounding and including the application site is subject to a range of light sources, with sky glow readily perceived across the area and sources of direct glare noticeable from a range of public viewpoints, notably when looking into the urban area of Newtownabbey from elevated areas, including the ridgeline between Carnmoney Hill and Sentry Hill, the Belfast Hills and rising landform to the north of the Three Mile Water valley.

### *Landscape character and sensitivity to lighting*

- 6.52 Notwithstanding the additional light sources identified in the 2018 night-time survey, the assessment of sensitivity of the character of the local landscape to the introduction of lighting made in the original ES Chapter 10 is considered to be valid.

*Likely receptors of lighting associated with proposed development*

- 6.53 The relatively wide range of locations from which the potential to be receptors of lighting associated with the proposed development would be experienced, identified in the original ES Chapter 10 are still valid with no additional receptors identified in the 2018 assessment.
- 6.54 Assessment of the most significant effects of lighting on these areas is described under the heading of Likely Significant Effects.

**Landscape Strategy**

- 6.55 The landscape strategy as outlined in the original ES Chapter 10, to anchor and absorb the built-form through integration within the landform of the quarry and subtle additions to the varied patterns of vegetation surrounding the quarry, remains unchanged. The proposals for Boghill Road have developed since the submission of the original ES as described in the 2014 ES Addendum and as set out in the updated landscape proposals plans. The latest revisions to the Boghill Road landscape proposals include for a response to DFI Roads comments (11 March 2015) on the arrangement of vegetation in relation to fencing.
- 6.56 In proposing conditions, DfI Roads stated:
- “Notwithstanding the details shown on the stamped approved drawing No L21 and No. L22 which were received on 17 September 2014, no landscape planting will be permitted to verges on the road side of the boundary fence.*
- REASON: To ensure appropriate visibility splays and forward sight distances are achieved in the interest of road safety”.*
- 6.57 The landscaping plans have been updated to address this requirement and as such this condition is no longer necessary.
- 6.58 In terms of the assessment of effects on landscape features, the revised alignment of the roadway will result in the loss of further sections of currently gappy hedgerows with trees flanking Boghill Road, which will be removed as part of the construction process, to facilitate the construction and re-alignment of a route appropriate for HGV traffic.
- 6.59 The proposals will result in the removal of approximately 1,456m of hedgerow and 58 no. trees and retention of 695 of hedgerow and 13 no. trees, as opposed to the previously proposed removal of approximately 1,243m of hedgerow and 56 no. trees and retention of 928m of hedgerow and 15 no. trees.
- 6.60 This vegetation will be replaced with new hedgerows totalling approximately 2,513m, as opposed to the previously proposed new hedgerows totalling approximately 2,794m, to retain connectivity with the original, retained hedgerow wherever possible. 106no hedgerow trees are proposed, as previously.

## Likely Significant Effects

- 6.61 The evolving character of the baseline conditions as described above serves, in certain instances, to reduce the magnitude of change of the proposed development. However, the significance of effects on landscape character and features and on views resulting from the proposed development would broadly be as set out in the original ES Chapter 10 which would in any event represent the scenario of maximum significance of effects. For reference, Appendices 6.4 and 6.5 provide details of the updated assessment.
- 6.62 The revised road proposals would still constitute a high magnitude of adverse change on the existing hedgerows with trees at construction, as set out in the original ES Chapter 10, resulting in adverse effects of moderate-major significance; a medium magnitude of adverse change at year 1, resulting in adverse effects of moderate significance at Year 1; and a low magnitude of beneficial change at year 20 (residual), resulting in beneficial effects of minor-moderate significance. Therefore, these changes are not material to the assessment of effects on landscape features in the original ES Chapter 10, which remains valid.
- 6.63 With regard to visual effects of the revised road, as illustrated in the revised photomontages P1 and P2<sup>10</sup> (Appendix 6.6), it is not considered that there would be any material difference in views from Boghill Road or adjacent properties as a result of the revised proposals. Consequently, the assessment of effects on visual receptors in the original ES Chapter 10 remains valid.
- 6.64 With regard to landscape character, the overall character of the roadway corridor would change very little from the previous proposals. The principal change from the previous proposals is the arrangement of the stock-proof fence and hedgerow planting, with the fence located on the highway side of the hedgerow, as required by DfI Roads. As a result, it is not considered that there would be a material difference in the character of the roadway from the previous proposals and that the assessment of effects on landscape character for application site character area S1 Boghill Road in the original ES Chapter 10 remains valid.
- 6.65 The wind turbine north of Boghill Road, the solar array at Sealstown Road and the increasingly prominent influence of the edge of residential development north-east of HydePark Road, would slightly reduce the magnitude of change in the character of the vicinity resulting from the proposed development, notably local Valley Farmland Landscape Character Area: L4 Flush River Valley, but this would not affect the overall significance of adverse effects as set out in the original ES Chapter 10.
- 6.66 Similarly, visual effects for receptor locations where the recently-developed wind turbine and solar array now appears in views, notably receptors on and adjoining HydePark Road, including the edge of residential development, would not overall experience any diminution of the significance of adverse effects and the assessment in the original ES Chapter 10 remains valid as the scenario of maximum significance of effects.

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<sup>10</sup> NB: the Methodology for preparation of the photomontages remains as for the previously submitted images.

- 6.67 From the extended footpath network onto more elevated land on the southern flanks of Carnmoney Hill (Site Context Photograph 14a), there would be more open views, broadly with the same visibility of the Site as residential properties at Glebe Manor (Visual Receptor 17, Photomontage P7). There would be adverse effects of construction of moderate significance (significant) and adverse effects of operation would be of minor-moderate to moderate significance at year 1 and minor-moderate adverse at year 20.
- 6.68 In terms of landscape character, as assessed at a regional level, there would be relatively limited effect on Area 19, South Antrim Hills and Six Mile Water, largely owing to its existing characteristic infrastructure, as set out in the published assessment; and such effects would not be significant.

### **Cumulative Effects**

- 6.69 A cumulative assessment was carried out in 2016 of the combined appearance of the proposed development and the consented windfarm north of No. 71 Ballyutoag Road T/2014/0478/F, comprising 5 wind turbines, illustrated by Photomontages P01-P10, which accompanied the Additional Information requested by the Commissioner at the 2016 Hearing.
- 6.70 The 2018 assessment includes consideration of applications which have been consented since 2016 and these are illustrated on the updated photomontages at Appendix 6.6. The baseline photography for the photomontages has not been updated as there has been minimal change that would appear in the field of view of these photomontages that would materially affect the view. The recently constructed wind turbine and solar farm to the north of the application site can be seen in a number of the Site Context Photographs which have been used as reference in the review of visual effects.

### *Visual Effects*

- 6.71 In the view from Boghill Road (P01), four consented wind turbines are visible, two on the northern slopes of Squires Hill and two on the northern slopes of Collinward. The consented turbines and proposed development would be seen in the context of existing infrastructure and would only slightly alter the composition of the view, as the series of pylon towers would remain the main focus of the view. Accordingly, the cumulative effect experienced for the original ES Appendix visual receptor R1 would remain significant at year 1 (Moderate/Major Adverse).
- 6.72 In the view from the junction of Boghill Road and Hydepark Road (P02), the consented turbines on the northern slopes of McIlwhans and Squires Hill will be dominant features on the horizon and draw focus to due to the turbines' visual prominence on the skyline, owing to their combined spread across the upland landscape, height and their movement. In contrast, the proposed development is set within a quarry and uses a carefully considered colouration strategy to assimilate it into the landscape and of which, only the energy from waste facility's flue would appear above the skyline. As a result, the cumulative effects for the original ES Appendix 10.5 representative visual receptor R10 would remain significant at Year 1 (Moderate/Major Adverse).

- 6.73 In the view from Blackrock residential development (P03), a similar situation would prevail. The consented turbines on the northern slopes of Mcllwhans and Squires Hill would form the main focus to the view and draw the viewers' eye. Less prominent, but also in the view, is one further consented turbine to the north of Bog Hill. The significant effect set out in the original ES Appendix 10.5 (Moderate to Moderate/Major Adverse) for representative visual receptor R11 would remain.
- 6.74 In the view from Flush Road north-west of the proposed built form (P04), a consented turbine and part of a rotor blade located on Squires Hill would protrude above the horizon directly behind the proposed development creating additional infrastructural influence in the setting to the proposed development. The 40° Horizontal Field of View images demonstrate that the consented wind turbines on Mcllwhans and those to the left of the view on Collinward would not be seen without turning the head (thereby resulting in 'in succession' effects). However, the overarching significant effect as set out within the original ES Appendix 10.5 (Moderate to Moderate/Major Adverse) for representative visual receptor R4 would remain, with the Consented Windfarm on Mcllwhans forming the main focus to the view as opposed to the proposed development.
- 6.75 In the view from Flush Road to the south of the application site (P05), the consented wind turbines on Mcllwhans, the proposed development and consented turbines to the north of Squires Hill would be seen in the context of extensive existing infrastructure and would only slightly alter the composition of the view, as the series of pylon towers would remain the main focus of the view. Accordingly, the cumulative effect experienced for the original ES Appendix visual receptor T22 would not be significant (Minor/Moderate Adverse). As for P04, the 40° Horizontal Field of View images demonstrate that the Consented Scheme would not be seen without turning the head (thereby resulting in 'in succession' effects).
- 6.76 In the view from Cave Hill (P06), the consented turbines on the northern slopes of Squires Hill will draw focus in the view due to their proximity and addition of a further vertical element on the hill profile, comparable in scale to the telecoms mast on Collinward. Consented wind turbines on Mcllwhans and the proposed development would be seen alongside each other in the distance, with the cluster of wind turbines resulting in the visual disturbance of the locally characteristic rounded summit of Mcllwhans. As such, the cumulative effects experienced by representative visual receptor O6 would increase the significance of effect from Minor/Moderate Adverse to Moderate/Major Adverse and therefore would be considered to be significant. However, the consented turbines on Squires Hill would form the main focus to the view.
- 6.77 In the view from Glebe Manor (P07), again, the visible consented wind turbines would increase the magnitude of adverse change in view, for representative visual receptor R17, as a result of the visual disturbance they bring to the locally characteristic rounded summits of Mcllwhans and Collinward, (seen above the roofline of the house to the left of the view). The proposed development, which is well assimilated against the backdrop in the view from this location, would again form a small proportion of the adverse magnitude of change in view. However, in combination with the consented wind turbines, the composition of the view would be altered,

with the pylons acting as scale indicators. As such, the cumulative effect is considered to remain significant i.e Moderate Adverse.

- 6.78 In the view from the Ballycraig Road overpass above the A8, (P08) a constructed wind turbine and two consented turbines can just be seen above the quarry skyline, creating additional infrastructural influence in the setting to the proposed development. However, the consented wind turbines on Mcllwhan's can barely be perceived, owing to intervening vegetation and would have very limited effect on this view, for which the significance of adverse effect would remain non-significant (e.g. Minor-Negligible Adverse).
- 6.79 In the view from Mallusk recreation centre (P09), the consented wind turbines on Mcllwhans to the right of the view, and to the left on Collinward, would increase the magnitude of adverse change in view, for representative visual receptor O1, particularly as a result of the visual disturbance it brings to the skyline to the west of the application site, extending the area within which vertical elements break the skyline and resulting in a relatively more cluttered horizon, but also amongst the existing infrastructure visible to the left of the view. As such, the cumulative effect is considered to be significant (e.g. Moderate Adverse). However, the consented wind turbines form the main focal features in to the view.
- 6.80 In the view from the Ulster Way in the vicinity of Knockagh/Massey's Mountain (P10), a plethora of consented wind turbines will reinforce the influence of the existing vertical features of masts and pylons across the upland landscape above Mallusk, from Collinward to Bog Hill. These consented wind turbines would increase the magnitude of adverse change in view, here for the original ES Appendix 10.5 (Moderate Adverse) representative visual receptor O4, as a result of the visual disturbance it brings to the rounded summits of Collinward, Divis, Squires Hill, Mcllwhan's and Bog Hill. The proposed development, which is well assimilated against the backdrop in the view from this location, would again form a small proportion of the adverse magnitude of change in view, for which the significance of adverse effect would become significant, as a result of the number of consented wind turbines.
- 6.81 In summary therefore, the introduction of the consented wind turbines would result in slightly higher magnitudes of adverse change in view and significance of adverse visual effect in isolated locations, as a result of the disturbance they create on the skyline of Bog Hill, Mcllwhan's, Squires Hill and Collinward notably where these are perceived as locally characteristic rounded summits.

#### *Character Effects*

- 6.82 As noted in the previous cumulative assessment, the consented wind turbines, together with consented residential schemes and operational solar array and landfill sites, are the principal contributors to cumulative effects on character.
- 6.83 The consented wind turbines are the principal contributors to the inevitable cumulative effects on character as their influence on the currently open and locally characteristic rounded summit skyline of Mcllwhan's, and surrounding hills, is substantially greater than the influence of the proposed development, which is set within a quarry and subject to other mitigation by design

approaches including sensitive siting, massing and colouration strategies, as set out in the Design Statement accompanying the submitted application.

- 6.84 As a result, it is considered that whilst there would be an increase in the magnitude of adverse change and consequent adverse effects on landscape character, notably on LCA 111: Divis Summits and Local Character Area Upland Moor L1a McIlwhan's southern slopes, L1b Squires Hill and L1c Collinward Western Slopes, the proportion of the magnitude of adverse change arising from the proposed development would be relatively limited. It is also notable that the presence of the constructed wind turbines are additional influences on a rapidly increasing influence of infrastructure on the Belfast Hills, now including pylons and cable routes, quarrying activities and an aggregates depot, communications masts and wind turbines. Into this setting, the proposed development, owing to its mitigation by design approach, would form a minor additional element.
- 6.85 In conclusion and in this context, it is considered that the proposed development would appear a minor component of these cumulative infrastructural influences.

### **Conclusion**

- 6.86 Noting the above changes in the baseline conditions, the conclusions of the submitted original ES chapter and subsequent landscape and visual submissions remain broadly valid, the only changes since being as a result of the increasing influence of infrastructure and urbanisation in the landscape surrounding the application site. This does not affect the significance of effects on features, character or views in relation to the proposed development alone and the submitted original ES Chapter 10 remains an assessment of the scenario of maximum significance of effects of the proposed development. There are slight increases in the significance of effects as a result of the cumulative schemes, in a number of views and in terms of landscape character, as a result of the disturbance the consented turbines would create on the skyline of Bog Hill, McIlwhan's, Squires Hill and Collinward, notably where these are perceived as locally characteristic rounded summits.