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## **HOLLANDMEY RENEWABLE ENERGY DEVELOPMENT CASTLE OF MEY MITIGATION PLANTING PROPOSAL**

Appended:

**Figure 1.** Castle of Mey (CoM) Inventory Garden and Designed Landscape boundary (full extent)

**Figure 2.** Castle of Mey extent of proposed enhanced hedge screening / photo locations

**25(No.) Photographs from Site Visit undertaken by Wayne Scurrah, RSK ADAS**

**CHVP01.** CoM GDL entrance photomontage: mitigation proposal, Yr1 & Yr10 growth

**CHVP02.** CoM Cat A LB 1<sup>st</sup> floor dining room photomontage: mitigation proposal, Yr1 & Yr10 growth

**CHVP09.** CoM Cat A LB 1<sup>st</sup> floor drawing room photomontage: mitigation proposal, Yr1 & Yr10 growth

**CHVP11.** CoM GDL deer park photomontage: mitigation proposal, Yr1 & Yr10 growth

### **Background**

The proposed Hollandmey Renewable Energy Development (RED) (the 'proposed Development') includes 10 wind turbines of 149.9 m tip height, five of which (T5-9) would be visible in views from a statutory designated cultural heritage receptor of high importance, the *Castle of Mey and Garden Walls, Castle of Mey (Barrogill Castle)* a Category (Cat) A Listed Building (LB)1797 and its Inventory Garden and Designed Landscape (GDL)00096.

Historic Environment Scotland (HES) has indicated that the change in the views, as shown on visualisations submitted as part of the EIA Report (namely Cultural Heritage Viewpoint Figures (CHVPs) 01, 02, 09, & 11), is likely to raise issues of national interest for this asset such that they would object to the proposed Development.

It is agreed that the most sensitive ('key') views from the Castle of Mey and its designed landscape that would be affected by the proposed Development are the principal rooms of the castle with south-facing windows (i.e. the dining room and the drawing room) and its forecourt (from the castle's south entrance

steps, and in kinetic views on leaving the castle, passing through the forecourt, and across and/or from within the GDL deer park).

This letter sets out a proposed mitigation option to minimise potential effects on affected key views from Castle of Mey and its GDL setting. It is intended that a mitigation option would be developed further in discussion with ScottishPower Renewables (UK) Ltd (SPR) (the Applicant), HES and third parties with the purpose of agreeing an acceptable solution. This letter has been prepared by Owen Raybould, RSK Headland Archaeology with support from Wayne Scurrah (Forestry), RSK ADAS, Ross Allan (Landscape), RSK Stephenson Halliday and Robert Beck (EIA Project Manager), RSK Environment.

## Consultation

In their reasons for objection, HES conclude:

*'The proposed development would have a significant adverse impact on the setting of the Castle of Mey and its garden and designed landscape. This is primarily because of potential visibility of some of the turbines in key views from principal rooms and the castle forecourt. These views are contrived to create a sense of enclosure and privacy. They are also aesthetically pleasing, tranquil and rural. These attributes make an important contribution to the character of this part of the designed landscape and setting of the castle.*

*The proposed development would erode our ability to understand, appreciate and experience a deliberately designed view that has been in place since the early 19th century, when the role of the castle changed from a defensive tower house to a baronial country estate.*

*The views that would be affected contribute strongly to a sense of place that encompasses the castle's historic associations with the Earls of Caithness and Royal Family, its role as a Caithness landmark and a popular visitor attraction'.*

A 'planting belt' along the southern boundary of the GDL has previously been explored with HES as a potential mitigation option but rejected on the grounds that this would adversely affect the character of the GDL.

Recent discussions with HES have suggested that the viability of an 'enhanced hedge' could be explored further as this would offer a more acceptable mitigation option. The hedge would reduce the visibility of the proposed wind turbines, year-round, whilst maintaining the general parkland character of the GDL and enabling the continued appreciation of its specific identified individual, intentional and culturally significant design elements. It would need to be viable, given the climate and exposure of the receptor location.

## Existing Situation

The southern boundary of the GDL comprises areas of woodland between which is a drystone dyke approximately 1.2 m in height. To the east of the woodland a post and wire fence delineates the boundary (see **Figure 1**. Castle of Mey (CoM) Inventory Garden and Designed Landscape boundary (full extent)).

The views affected by the proposed Development are across the parkland from the castle towards the drystone dyke boundary and beyond. To the south of the drystone dyke and outwith the GDL on third party land there is an existing hedge that extends between the two woodland blocks. The hedge is comprised

almost exclusively of hawthorn (*Crataegus monogyna*) with some stunted hedge trees of sycamore (*Acer pseudoplatanus*). The hedge is well established and healthy growing to a height of up to 1.85 m with some gaps along its length. The hedge is regularly trimmed or flailed to maintain its current height. Immediately to the south of the hedge there is a stock proof fence and a 1 m strip of grassland, and to the south of that a rough track that runs parallel to the hedge along the northern boundary of a pasture field.

### **Mitigation Proposal**

An enhanced hedge is proposed between the GDL woodland blocks only, as it is through these that views are 'channelled' towards the open horizon, with three woodland clumps punctuating the skyline, with the proposed Development located beyond, to the south.

The requirement is to establish a screening barrier dense enough to obscure visibility through it all year round. Height to be a minimum of 4 m over a 10-year growing period, and potentially 6 m over a 15-year growing period. The enhanced hedge screen is 157 m in length along part of the GDL southern boundary.

### Mitigation Option

To achieve a minimum of 4 m and potentially 6 m in height, the mitigation detailed below is proposed (see **Figure 2**. Castle of Mey extent of proposed enhanced hedge screening), as this gives room and a wide base for the hedge to establish to enable the additional height. It also uses the existing well established and healthy hedge that is proven to grow at this location and with careful management and monitoring would be an effective mitigation measure.

- manage the existing 157 m hedge line in a manner to not restrict height growth;
- make good any gaps within the existing hedge;
- plant an additional row of hedge plants parallel to the existing hedge on its south side; and
- move the existing stock proof fence 1 m to the south to accommodate the new row of plants.

### Methodology

Manage existing hedge - allow the top of the hedge to grow in height whilst still maintaining the sideways growth of the hedge through sympathetic hedge cutting. The hedge should be managed to allow the base to grow wider tapering the hedge towards the top. This is important for taller hedges to allow light to get to lower levels. See further information on maintaining the hedge below.

Gapping up of existing hedge – cut out any dead wood and failed areas within the hedge line (as shown in picture #4769) to allow for new hedge plants and hedge trees to be planted within the hedge line. Trees should be of similar species to those existing within the hedge, these being hawthorn, blackthorn and holly may also be included to provide greater diversity.

Plant a single row of hedge plants immediately to the south of existing hedge and parallel to it. The hedge should be protected with a stock proof fence, whilst individually protecting the transplants in shelters with supporting stakes/canes.

### Planting Outline Specification

Planting is to be carried out during the planting season – ideally in November, before the ground gets too cold, otherwise up to March except when there is a ground frost or soil is waterlogged. Plants planted later in the planting season are more at risk of failure as most of the root growth occurs in the dormant season and plants require more water during the growing season.

Transplants can be either bare rooted or cell grown stock and between 60 cm and 90 cm tall. These would need to be pot grown in order to increase survival rate. Hedge planting within the gaps of the existing hedge line should be planted in two staggered rows at a density of not less than 5 No. plants per linear metre, with approximately 450 mm between the plants in the same row and 300 to 400 mm between the rows.

### Establishing and Maintaining the Hedge

SPR would be responsible for establishing and maintaining the hedge over the operational life of the proposed Development.

The process for establishing and maintaining the hedge would follow the steps below:

- 1) In the first spring after planting trim all lateral branches of the new plants back by 50%. Prune damaged, diseased, or dead wood immediately after first leaf break. Follow with a light trim every second or third year, allowing the hedge to increase in size each time.
- 2) Replace dead, dying, or damaged stock with the same species as soon as practicable in the first planting season following failure.
- 3) In the spring and after severe frosts and winds firm in around the base of each plant and ensure that shrub stakes and ties and shelters are secure.
- 4) Ensure the hedgerow ties are not so tight that they damage the stems. Check regularly and loosen to allow growth. Hedge plants should be self-supporting by the third year when the stakes and ties should be removed to avoid damage to the tree and making it dependent on support.
- 5) Check regularly that the shrub guards are sound and secure and replace as necessary.
- 6) Maintain a 1-metre-wide strip (50 cm either side of the centre of the hedge plants) in a weed free condition for at least three years, to reduce competition from grass and weeds for moisture and nutrients.
- 7) For the existing hedge relax the cutting regime and allow the hedge to incrementally increase in height. This allows the hedge to “breathe” and if this is done before stems start to die out then a hedge can remain healthy for a considerably longer time. It is the density of stems in a hedge that is crucial to the process of a growing hedge, so to gap up and introduce new growth would be a positive intervention.

- 8) Allow hedge to incrementally increase in height in a controlled manner, sympathetic trimming to a batter can thicken a hedge by creating new points from which growth can tiller out (typically, growth of a hawthorn is 40-60 cm per year).
- 9) Cut hedge, just once every two or three years' allowing the hedge to grow out and up a little. Then cut on a rotational basis, cut just one side or the top each year (allowing the mature hawthorn to grow can produce more berries and is better for wildlife).

The projected growth rate may be expediated by implementing a maintenance schedule that ensures the trees are planted correctly, adding in a slow release fertiliser to the planting hole at the time of planting, ensuring the plants are watered in and watered in times of low or no rainfall, competing weed growth is removed to keep clear of the plants by at least 50 cm radius (1 m diameter).

### Proposed Species

The proposal is to plant hawthorn species (*Crataegus monogyna*) in any hedge line, either for gapping up or for a new row. Hawthorn is the single species of the existing hedge and grows well at this location as evidenced on site. Hawthorn is a native species and can grow to a height of 6 m in the right conditions. In addition, blackthorn (*Prunus spinosa*) and holly (*Ilex aquifolium*) would add diversity to the hedge. Both species are known to grow well in Caithness. Holly is susceptible to wind damage and a relatively small proportion of this species would be used or grown on in a sheltered location before transplanting into the hedge line.

### **Environmental Impact Assessment**

In terms of physical ground impacts of the mitigation proposal, no significant archaeological impacts are anticipated as likely, given the minimal requirements for ground disturbance. No archaeological mitigation is anticipated to be required.

The mitigation visualisations show the hedge after 10 years of growth at which point the hedge would reach a height of 4 m and the proposed Development would no longer be visible from ground-level, within the Inventory GDL, and would be barely discernible from the 1<sup>st</sup> floor level of the Cat A LB Castle (south-facing windows within principal rooms).

Calculations suggest that after 15 years the height of the hedge could reach 6 m, such that the hubs of all visible turbines would be screened from the 1<sup>st</sup> floor level of the Cat A LB Castle.

The mitigation proposal would maintain the integrity and topography of the designed elements of the garden as viewed in plan, and as experienced from within the garden setting of the castle. The current channelled views from the southern side of the castle towards the GDL boundary enclosed by a stone dyke, backdropped by a flat hedge with an open skyline horizon above, punctuated with three woodland clumps would be preserved. These designed elements would remain to be appreciated as viewed from identified significant viewpoints: both at ground level within the boundaries of the Inventory GDL (castle forecourt and deer park), and 1<sup>st</sup> floor level of the Cat A LB Castle (south-facing windows within principal rooms).

Significantly, the linear nature of the proposed mitigation screening would be such that the effect would be experienced from anywhere within the castle forecourt, deer park, and south-facing principal rooms, not just the points represented by CHVPs 01, 02, 09 & 11.

It is acknowledged that despite establishment of the proposed enhanced hedge mitigation screening, the proposed turbines would remain visible from south-facing windows of the upper floors of the Castle of Mey and its roof. These views are not considered to be culturally significant such that visual change would be considered 'significant'.

The orientation and nature of the castle's southern driveways, passing through woodland blocks, is such that the neither the proposed Development nor the proposed enhanced hedge mitigation screening would be visible on approach to the castle.

### **Conclusion**

Through consultation with the landowner and a site visit, Wayne Scurrah the forestry lead for Hollandmey RED has considers that an enhanced hedge of up to 6 m height could potentially be achieved within <15 years of the proposed Development becoming operational. Specific native species are identified and could be sourced locally, or grown on site, and maintained to meet mitigation requirements.

The ability to appreciate the intentional 19<sup>th</sup> century layout and designed elements of the Castle of Mey's landscape setting would remain fully discernible.

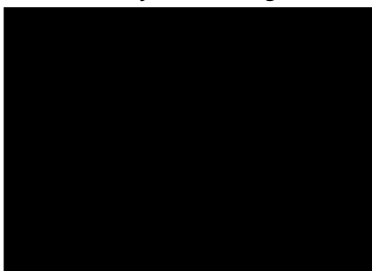
The mitigation proposal therefore minimises the magnitude of visual impact upon the identified key elements of cultural significance, specifically in south-facing views from the Castle of Mey Cat A LB and Inventory GDL that would be introduced by the proposed Hollandmey RED wind turbines.

Yours sincerely

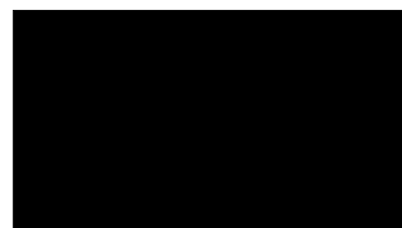
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**References:**

British Standards 1722, 3936, 5837

Hedgerows Regulations (1977) Statutory Instrument No.1160

The Good Hedge Guide by Bayer / FWAG. ISBN 0 9534804 0 2

## Appendices



**Figures (Provided Separately)**

**Figure 1.** Castle of Mey (CoM) Inventory Garden and Designed Landscape boundary (full extent)

**Figure 2.** Castle of Mey extent of proposed enhanced hedge screening / photo locations

**Site Photographs**

**4760 – Hedge line - View looking to the east from the beginning of the hedge**



**4761 - View showing the start of the hedge from the western end**



**4762 - View showing the start of the hedge from the western end**



**4763 - Hedge line of Hawthorn (*Crataegus monogyna*) with Sycamore (*Acer pseudoplatanus*) natural regeneration growing as a single stem in the foreground**



**4764 - Measurement for width of hedge shown, taken from wall to fence line**



**4765 - Established hawthorn showing multi stems, likely to have been coppiced in early years of growth**



**4766 - Gap in hedge line showing wall to the rear, stock fence to the fore and single stem sycamore regeneration growing**





**4767 - Gap in hedge line showing broken wall to the rear, stock fence to the fore and single stem sycamore regeneration growing**



**4768 - Gap in hedge line showing broken wall to the rear, stock fence to the fore and single stem sycamore regeneration growing (looking to the west)**



**4769 - Gap in hedge line**



**4770 - End of the hedge to the eastern end, showing gap within fenced area, field gate and section of wall before woodland edge**



**4771 - View over hedge towards Castle of Mey from the eastern end of the hedge**



**4772 - View of track to the east that runs east from the woodland, showing hedge does not continue**



**4773 - View looking west from the woodland to the beginning of the hedge**



4774 - Height measurement of the hedge





4775 - Height measurement of the hedge



4776 - Height measurement of the hedge



**4777 - View from the field to the south of the hedge, looking northwest with the Castle of Mey in the background**



**4778 - View from the field to the South of the hedge, looking northeast with the Castle of Mey in the background**



**4779 - View from the field to the south of the hedge, looking north with the Castle of Mey in the background**



**4780 - View from the field to the south of the hedge, looking northeast with the Castle of Mey in the background**



**4781 - View from the field to the south of the hedge, looking north with the Castle of Mey in the background**



**4782 - View from the field to the south of the hedge, looking northwest with the Castle of Mey in the background**





**4783 - Sycamore trees to the west of the hedge line**



**4784 - View of the north side of the boundary wall that runs parallel with the hedge**



## **Cultural Heritage Viewpoints (with mitigation) – Provided Separately**

**CHVP01.** CoM GDL entrance photomontage: mitigation proposal, Yr1 & Yr10 growth

**CHVP02.** CoM Cat A LB 1<sup>st</sup> floor dining room photomontage: mitigation proposal, Yr1 & Yr10 growth

**CHVP09.** CoM Cat A LB 1<sup>st</sup> floor drawing room photomontage: mitigation proposal, Yr1 & Yr10 growth

**CHVP11.** CoM GDL deer park photomontage: mitigation proposal, Yr 1 & Yr 10 growth