Addressing Opencast Coal Impacts on the Muirkirk and North Lowther Uplands Special Protection Area

Hen Harrier © Lorne Gill/Scottish Natural Heritage

The Scottish Government
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Executive Summary

The insolvency of two coal companies in 2013 has had repercussions for industry, employment and the environment at various sites in the Scottish coalfields. The Scottish Opencast Coal Task Force was set up in response to these insolvencies to ensure the optimum outcome including for the environment and site restoration and to avoid a similar situation recurring.

To augment these efforts and in order to re-establish site integrity and facilitate material improvements to the site condition of the Muirkirk and North Lowther Uplands Special Protection Area (SPA), the Scottish Government led a working group of partner bodies: East Ayrshire Council, Scottish Natural Heritage, Mines Restoration Ltd and the Royal Society for the Protection of Birds.

This report describes the measures which this working group has agreed as a co-ordinated response to the environmental impacts affecting the SPA and has the support of all the partners.

Implementation (which is already under way) will deliver:

- the restoration of the affected sites at Powharnal, Dalfad and Grievehill as far as is practicable
- the removal of a redundant coal-conveyor which traverses the SPA
- the re-instatement of mitigation management within the SPA and
- the expansion of the SPA to compensate for unavoidable habitat losses.

Taken together, these measures agreed by the working group will remedy the damage to the SPA. In parallel, the work of the Coal Task Force will provide a strengthened programme of advice, guidance and regulation to support the planning process at national level.

An estimated 98 hectares of habitat within the SPA (approximately 0.37% of its total area), have been directly affected because the companies abandoned the site without carrying out restoration. The main impacts are overburden mounds, water filled voids, the loss of topsoil, dried and damaged peatland and the cessation of the land-management action which had been designed to mitigate the impacts on the SPA. The condition in which the Powharnal mine was abandoned renders full restoration infeasible. Restoration and mitigation bond provision by East Ayrshire Council are inadequate for both Powharnal and Grievehill and significant additional public expenditure will be required.

Planning consent was granted by East Ayrshire Council for Powharnal (2004), Dalfad (2011) and Grievehill (2008) with conditions and legal agreements requiring the restoration of the sites in conjunction with appropriate mitigation of impacts on the natural heritage of the sites (largely via additional land management measures). These conditions and legal agreements were necessary to satisfy the procedural requirements of the Conservation (Natural Habitats &c.) Regulations 1994 (“the Habitats Regulations”, which transpose the requirements of the EU Habitats Directive in Scotland). Restoration and mitigation activity ceased when the operators went into liquidation.
It is anticipated that a new planning consent from East Ayrshire Council will be required for the proposed restoration work at Powharnal which would supersede the existing consents (and be subjected to community consultation) alongside assessment under the requirements of the Habitats Regulations at the appropriate juncture. Work at Grievehill is to be delivered through the conditions of the extant planning consent from East Ayrshire Council.
### KEY FACTS AND FIGURES

<table>
<thead>
<tr>
<th>Description</th>
<th>Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPA Area</td>
<td>26,330 ha</td>
</tr>
<tr>
<td>impacted area at Powharnal opencast coal mine</td>
<td>80 ha</td>
</tr>
<tr>
<td>area to be restored at Powharnal opencast coal mine</td>
<td>65 ha</td>
</tr>
<tr>
<td>area to be left unrestored at Powharnal due to permanent water body</td>
<td>15 ha</td>
</tr>
<tr>
<td>impacted area at Grievehill opencast coal mine</td>
<td>18 ha</td>
</tr>
<tr>
<td>area to be restored at Grievehill opencast coal mine</td>
<td>18 ha</td>
</tr>
<tr>
<td>extent of Glenmuckloch conveyor</td>
<td>2.4km</td>
</tr>
<tr>
<td>extent of Glenmuckloch conveyor removed/restored</td>
<td>2.4km</td>
</tr>
<tr>
<td>extent of mitigation area prior to liquidation of operators</td>
<td>1281 ha</td>
</tr>
<tr>
<td>extent of mitigation area under this framework</td>
<td>at least 1281 ha</td>
</tr>
<tr>
<td>extent of proposed SPA expansion (to compensate for 15 ha unrestored habitat)</td>
<td>600 ha</td>
</tr>
</tbody>
</table>

### TIMETABLE FOR DELIVERY

<table>
<thead>
<tr>
<th>Activity</th>
<th>Lead Body</th>
<th>Initiation Date</th>
<th>Completion date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Restoration of SPA at Powharnal/Dalfad Opencast Site</td>
<td>Mines Restoration Ltd</td>
<td>September 2016</td>
<td>February 2020</td>
</tr>
<tr>
<td>Restoration of SPA at Grievehill Opencast Site</td>
<td>East Ayrshire Council</td>
<td>September 2016</td>
<td>February 2017</td>
</tr>
<tr>
<td>Restoration of SPA by removal of Glenmuckloch Conveyor</td>
<td>Hargreaves</td>
<td>September 2015</td>
<td>December 2015 (re-seeded in spring 2016)</td>
</tr>
<tr>
<td>Re-establishment of mitigatory management activity</td>
<td>Mines Restoration Ltd</td>
<td>January 2016</td>
<td>5 to 10 years beyond the completion of work at the site</td>
</tr>
<tr>
<td>SPA Expansion</td>
<td>Scottish Natural Heritage/The Scottish Government</td>
<td>August 2015</td>
<td>August 2016</td>
</tr>
</tbody>
</table>

- = preparatory work at an advanced stage
- = work substantially complete
1. Introduction

1.1.1 The liquidation of Scottish Resources Group Ltd and ATH Resources Ltd in 2013 left a legacy of economic and environmental damage across central and southern Scotland. This was particularly evident in East Ayrshire where the industry was recognised as an important means of delivering economic benefit to rural communities with a long history of dependence on coal mining. The collapse of the industry highlighted a number of regulatory and environmental shortcomings which are well documented (e.g. see\(^1\)\(^2\)\(^3\)).

1.1.2 To augment the efforts of the Scottish Opencast Coal Task Force which was set up in response to these insolvencies, and in order to re-establish site integrity and facilitate material improvements to the site condition of the Muirkirk and North Lowther Uplands Special Protection Area, the Scottish Government led a working group of partner bodies comprised of East Ayrshire Council, Scottish Natural Heritage, Mines Restoration Ltd and the Royal Society for the Protection of Birds to mitigate negative impacts on the SPA via an agreed package of measures. This is a co-ordinated response to the environmental impacts affecting the SPA and has the support of each of the partners.

1.1.3 Under the requirements of the European Communities Act 1972 and the associated provisions of the Scotland Act 1998, the responsibilities of the Scottish Ministers include those which relate to the transposition and implementation of EU legislation in Scotland. Such legislation includes the EU Birds\(^4\) and Habitats\(^5\) Directives which make provision for the protection of wild birds, certain non-bird species and their habitats as well as recognising the importance of certain habitat types in their own right. A core requirement of each Directive is the designation of protected areas (termed “Special Protection Areas” under the Birds Directive and “Special Areas of Conservation” under the Habitats Directive) which collectively form the EU-wide network of nature-conservation sites called “Natura 2000” and which is the cornerstone of biodiversity protection in the European Union.

1.1.4 Scotland provides the greater part of the United Kingdom’s contribution to Natura 2000, with approximately 15% of Scotland’s land surface designated as either Special Protection Area (SPA) or Special Area of Conservation (SAC). The protection of such areas in Scotland is delivered by strict legal requirements which are described later in this section.

1.1.5 Designation triggers certain requirements under the EU Habitats Directive. In particular, Article 6.2 requires Member States to take appropriate steps to avoid

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2 http://docs.east-ayrshire.gov.uk/CRPADMIN/2012%20AGENDAS/COUNCIL/19%20SEPTEMBER%202013/Open%20Cast%20Mining%20Report.pdf


the deterioration of the habitats of the species for which sites are designated whilst avoiding significant disturbance and Article 6.3 provides for the protection of sites by requiring development (or any plan or project) to be considered by competent authorities in accordance with a specified procedure.

1.1.6 Transposition in Scotland is achieved via several pieces of inter-related legislation but the protection of European Sites and European Protected Species is substantially provided by the Conservation (Natural Habitats &c.) Regulations 1994 which delegate responsibility in certain ways to competent authorities (as defined in those regulations) including local authorities when exercising their functions under the planning system.

1.1.7 In this particular context, planning authorities are prohibited from granting consent for any plan or project which is not necessary for the conservation management of a European site and which is likely to have a significant effect on such a site, unless they can ascertain by means of an appropriate assessment that the plan or project will not adversely affect the site in view of its conservation objectives. This process is commonly termed a Habitats Regulations Assessment. A derogation is provided for situations where there is no alternative and there are imperative reasons of overriding public interest. When undertaking a Habitats Regulations Assessment, competent authorities are required to consult and have regard to the advice of Scottish Natural Heritage which is the statutory body in Scotland charged with advising on, and promoting Scotland’s natural heritage.

The Muirkirk and North Lowther Uplands Special Protection Area

1.1.8 The Muirkirk and North Lowther Uplands SPA is 26,330 ha in extent and comprises four discrete adjacent upland areas in the south west of Scotland. The site is underpinned by a number of Sites of Special Scientific Interest (the Muirkirk Uplands, North Lowther Uplands, Blood Moss and Slot Burn, Garpel Water and Ree Burn and Glenbuck Loch) notified by Scottish Natural Heritage under the provisions of the Nature Conservation (Scotland) Act 2004. The predominant habitats on the site include semi-natural areas of blanket bog, acid grassland and heath.

1.1.9 The SPA was classified by the Scottish Ministers in accordance with the requirements of the EU Birds Directive on 7 March 2003. The qualifying features of the SPA are listed below (along with Scottish Natural Heritage’s most recent condition assessment for each feature).

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Table 1

<table>
<thead>
<tr>
<th>SPA Qualifying interests</th>
<th>Baseline population (2003)</th>
<th>% of GB population</th>
<th>Condition</th>
<th>Assessment Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Golden plover (breeding)</td>
<td>157 pairs</td>
<td>0.7</td>
<td>Favourable maintained</td>
<td>2004</td>
</tr>
<tr>
<td>Short-eared owl (breeding)</td>
<td>23 pairs</td>
<td>2</td>
<td>Favourable maintained</td>
<td>1998</td>
</tr>
<tr>
<td>Merlin (breeding)</td>
<td>12 pairs</td>
<td>0.9</td>
<td>Unfavourable no change</td>
<td>2009</td>
</tr>
<tr>
<td>Peregrine (breeding)</td>
<td>9 pairs</td>
<td>0.8</td>
<td>Unfavourable no change</td>
<td>2004</td>
</tr>
<tr>
<td>Hen harrier (breeding)</td>
<td>28 pairs</td>
<td>5</td>
<td>Unfavourable declining</td>
<td>2008</td>
</tr>
<tr>
<td>Hen harrier (non-breeding)</td>
<td>12 individuals</td>
<td>2</td>
<td>Unfavourable declining</td>
<td>2004</td>
</tr>
</tbody>
</table>

1.1.10 In accordance with the requirements of the EU Habitats Directive, conservation objectives for the SPA were established at the time of classification and are published\(^7\) on Scottish Natural Heritage’s “Sitelink” website\(^8\). These are as follows:

To avoid deterioration of the habitats of the qualifying species or significant disturbance to the qualifying species, thus ensuring that the integrity of the site is maintained; and

To ensure for the qualifying species that the following are maintained in the long term:

- Population of the species as a viable component of the site
- Distribution of the species within the site
- Distribution and extent of habitats supporting the species
- Structure, function and supporting processes of habitats supporting the species
- No significant disturbance of the species

The Environmental Assessment (Scotland) Act 2005

1.1.11 The Scottish Government considers that the content of this document falls outwith the scope of the Environmental Assessment (Scotland) Act 2005 as it only points to the necessary actions to be undertaken by the relevant parties whilst not leading or controlling those actions. Accordingly, it does not meet the definition of “plan or project” as provided within the 2005 Act.


2. Opencast Coal Impacts on the SPA

2.1 Relative Locations

2.1.1 Figures 1, 2 and 3 show the locations of the 3 opencast sites in question and the route of the Glenmuckloch Coal Conveyor in relation to the boundary of the SPA.
Figure 1 Overview map showing location of the opencast developments in question in relation to the SPA
Figure 2 showing a close-up of the Powharnal and Dalfad Mines in relation to the SPA (see “Map 1” on Fig1).
Figure 3 showing close-up of the Grievehill and Glenmuckloch conveyor in relation to the SPA (see “Map 2” on Figure 1).
2.2 Powharnal/Dalfad Complex

2.2.1 Powharnal and Dalfad are opencast coal mines which straddle the SPA boundary to the west of the village of Muirkirk, occupying some 88 ha of the SPA (0.3% of the total extent). The mine was originally established external to the SPA (under the name “Gasswater”) but a subsequent eastern extension into the SPA became known as Powharnal. Dalfad became an extension of the Gasswater site in a westward direction.

2.2.2 Planning consent (which envisaged the temporary loss of mixed grassland and wet-heath habitats supporting voles, passerines and wading birds, all of which are suitable prey species for hen harrier, peregrine falcon, merlin and short-eared owl) was granted by East Ayrshire Council on 8 September 2004 and 30 May 2011 for Powharnal\(^9\) and Dalfad\(^10\) respectively following the development of mitigation and restoration proposals. The implementation of these mitigation and restoration proposals was formalised by planning conditions and legal agreements under section 75 of the Town and Country Planning (Scotland) Act 1997 and underwritten by the provision of mitigation and restoration bonds. These measures allowed East Ayrshire Council to undertake Habitats Regulations Appraisals in consultation with Scottish Natural Heritage which satisfied the requirement of the Conservation (Natural Habitats, &c.,) Regulations 1994 to ascertain no adverse effect on the integrity of the SPA in view of its conservation objectives before planning consent was granted.

2.2.3 All mitigation and restoration activity on the SPA ceased when the operators went into liquidation in 2013. (A review of the mitigation works carried out for the Powharnal and Dalfad surface mines was commissioned by East Ayrshire Council in 2014).

2.3 Current Status

2.3.1 In July 2014, the Powharnal and Dalfad sites were acquired\(^11\) from the liquidator (KPMG) by Mines Restoration Ltd (MRL), a wholly owned subsidiary of the Scottish Mines Restoration Trust\(^12\) (SMRT). SMRT is an independent and charitable body established to facilitate the process of communities and other stakeholders in restoring open cast sites across Scotland. MRL is working with the Scottish Government and other stakeholders to restore the site.

\(^9\) [http://eplanning.east-ayrshire.gov.uk/online/applicationDetails.do?activeTab=summary&keyVal=ZZZTVGFXC259](http://eplanning.east-ayrshire.gov.uk/online/applicationDetails.do?activeTab=summary&keyVal=ZZZTVGFXC259)

\(^10\) [http://eplanning.east-ayrshire.gov.uk/online/applicationDetails.do?activeTab=documents&keyVal=L9XCT2GF01B00](http://eplanning.east-ayrshire.gov.uk/online/applicationDetails.do?activeTab=documents&keyVal=L9XCT2GF01B00)


\(^12\) [http://www.smrtrust.org/](http://www.smrtrust.org/)
2.3.2 At present, the main features at Powharnal are the water-filled void at the east end (with a volume of approximately 28.5 million m$^3$ and flooded to a depth in excess of c.60m) (see figure 4) and the large overburden mound stretching to the west, the upper surface of which has been overlain with peat and soil-making material (and which is presently re-vegetating). The site layout and phasing of deposition has deviated from the terms of the planning consent in that there is a substantial variance in the volumes of soils and peat set aside for restoration purposes.

Figure 4

2.3.3 The Dalfad site lies to the west of the Powharnal main overburden dump, with only relatively small areas to the south and south-west of the former site service area impacting directly on the SPA. The mining company tipped overburden and spoil over these areas (shown at points 1 & 12 in figure 9) in contravention of the planning permission. This incursion on to the SPA has now been partially addressed (in 2015), with the overburden (point 1 in figure 9) reduced to original ground level in preparation for reinstating to peaty moorland in Summer 2016. The mound (at point 12 in figure 9) is to be cut back external to the SPA and the “batter” reduced to eliminate the ecological impact of an ‘overshadowing’ effect, which can be seen in figure 5.
2.3.4 In ecological terms, the impact on the SPA is through the loss of mixed grassland and wet-heath habitats (which fell within the regular hunting range of breeding hen harriers) and supported voles, passerines and wading birds all of which were suitable prey species for hen harrier, peregrine falcon, merlin and short-eared owl. This loss of habitat within the SPA also includes the “overshadowing” effect of the large overburden on nearby SPA habitat, with the new “cliff” interrupting the open topography of the moorland and providing an unwelcome vantage point for an array of predator species which is considered to have a discouraging effect on nesting activity in the vicinity (for both qualifying features and other avian potential prey species).

2.3.5 The Powharnal/Dalfad complex is coincident with a part of the notional hunting ranges of two nesting pairs of hen harrier and the nesting habitat of one pair of short-eared owl. The original planning consent required the SPA land at Powharnal to be restored according to the following approximate proportions: acid grassland (70%), marshy pasture (5%), wet heathland (15%), wetlands (3%), with the remainder (7%) given over to reinstatement of the Powharnal Burn and associated scrub plantings.

2.4 Grievehill

2.4.1 Grievehill lies to the north of the town of New Cumnock. Whilst the original development did not impinge upon the SPA, consent was subsequently granted by East Ayrshire Council in 2008 to extend the mine into the SPA and it currently occupies some 18 ha of the SPA (0.07% of the total extent).
2.4.2 Planning consent envisaged the temporary loss of grassland and peatland habitats falling within the regular hunting range of breeding hen harriers and supporting nesting golden plover (displacing two golden plover territories). Mitigation and restoration plans were implemented through planning conditions and a section 75 legal agreement underwritten by the provision of mitigation and restoration bonds. The relevant papers are available on East Ayrshire Council’s website.\(^\text{13}\)

2.4.3 The land occupied by the Grievehill Site is in private ownership but also includes an area which has been “disclaimed” under section 178 of the Insolvency Act 1986\(^\text{14}\).

2.5 Current Status

2.5.1 The abandonment of workings at the Grievehill site has resulted in an open/flooded mine void (see figure 6) adjacent to the SPA boundary along with an unrestored area within the SPA.

Figure 6

2.5.2 The impact on the SPA is through the loss of grassland and peatland habitats that fell within the regular hunting range of breeding hen harriers and also supported nesting golden plover.

\(^{13}\)\url{http://eplanning.east-ayrshire.gov.uk/online/applicationDetails.do?activeTab=summary&keyVal=ZZZTMGFXC903}

\(^{14}\)\url{http://www.legislation.gov.uk/ukpga/1986/45/contents}
2.6 The Glenmuckloch Conveyor

2.6.1 The Glenmuckloch Conveyor is an overland coal conveyor (with adjacent access road) to link the Glenmuckloch open cast coal site to the Grievehill opencast site and the rail terminal at Crowbandsgate in the town of New Cumnock. The conveyor is approximately 12 km long, 2.4 km of which falls within the SPA (see figure 7).

2.6.2 For its route across the SPA, the conveyor utilises the path of a pre-existing track and despite its impact on visual amenity, is not considered to have any adverse effect on the conservation objectives of the Muirkirk SPA. Planning consent\(^\text{15}\) was granted by East Ayrshire Council on 8 September 2006 with a number of conditions including a requirement for the removal of the conveyor system and temporary access route by 31 December 2012.

\(^{15}\)http://eplanning.east-ayrshire.gov.uk/online/applicationDetails.do?activeTab=documents&keyVal=ZZZTOGFXC184
2.7 Current Status

2.7.1 Work to dismantle the infrastructure of the Glenmuckloch Conveyor commenced in August 2015, is now well advanced and will be complete by the end of January 2016.

Figure 8
3. **Outline of Proposed Actions to Address Opencast Impacts on the SPA**

3.1 **Powharnal/Dalfad Options Appraisal**

3.1.1 A number of factors render the restoration and after-use of Powharnal as originally approved by East Ayrshire Council infeasible. These are explored further as follows.

3.1.2 Powharnal in its current form is one of a sequence of multiple sites worked for coal extraction by the Scottish Resources Group Ltd over a period of more than 15 years. During that time overburden from these multiple sites has been extracted and stored in a series of dumps and in a manner which allowed the operator to access the deeper coals to the east of the site (i.e. the “final” water-filled void as it now exists). The volume of that void now equates to some 28.5 million m$^3$ with the material required to infill it spread over some 4 km distance. In addition the void has now flooded to an overflow level just below original ground level at outfall.

3.1.3 Over the period since site development commenced some of the overburden in store has been re-soiled and seeded by the developer and now supports wildlife. The remaining material is now largely weathered and is regarded as ‘incompetent’ in terms of its usefulness for the direct infilling of the water filled void, as the material would further degrade due to the action of the water and would not support the construction of a satisfactory and safe landform. Moreover, the soils and peat, which were stripped as part of the mining operation, have been incorrectly stored, resulting in a shortfall of material available to adequately cover the landform as approved. Further, and due to the nature of the workings and the manner in which they were permitted to develop, some if not all of the peat in store has been the subject of natural vegetative regeneration and is being used by nesting birds.

3.1.4 The timescale to reinstate the site as per the extant planning consent, (allowing for void de-watering and the bird breeding season) is estimated by MRL to exceed 10 years (assuming that sufficient plant and equipment could be mobilised to work within approved operating periods) onto which a further 5 year aftercare period would be required to ensure adequate development of the required vegetation and support infrastructure.

3.2 **Options Available**

3.2.1 With the assistance of East Ayrshire Council and their minerals advisers (Dalgliesh Associates), Mines Restoration Ltd has undertaken a review of various restoration options and associated cost models as set out in table 2.
Table 2

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
<th>Estimated Cost (£M)</th>
<th>Estimated Timescale (years)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1A (water body eliminated)</td>
<td>Powharnal site to be restored consistent with the original planning consent (i.e. full restoration including reinstatement of original topography).</td>
<td>58.78</td>
<td>10+</td>
</tr>
<tr>
<td>1B (water body eliminated)</td>
<td>As per 1A but with Powharnal site and SPA reinstated consistent with approved restoration strategy but with some deviation from original ground levels.</td>
<td>50.00</td>
<td>9</td>
</tr>
<tr>
<td>2A (partial water body)</td>
<td>As per 1A with the water body partially retained to the north of the SPA boundary and pre-opencast topography restored.</td>
<td>40.09</td>
<td>8</td>
</tr>
<tr>
<td>2B (partial water body)</td>
<td>As per 2A but with reduced ground levels to minimise restoration “muck-shift”.</td>
<td>33.91</td>
<td>7 to 8</td>
</tr>
<tr>
<td>3 (retain water body)</td>
<td>Reinstall site and SPA consistent with new “scoping plan” as developed by MRL.</td>
<td>9.57</td>
<td>4</td>
</tr>
</tbody>
</table>

Notes

1. For those options incorporating the dewatering of the void, calculations indicate that at permitted discharge rates it will take up to 3 years to draw down the water to the level required to enable backfilling to commence (this timescale being a function of depth, rate of discharge and also competency of backfill material which is considered particularly poor at Powharnal).

2. Studies to date confirm that total infilling of the void would require overburden to be relocated from the Powharnal, Gasswater and Dalfad overburden dumps. This is due to the progressive nature of working the various constituent elements of the various sites.

3. All 3 options in whichever form cater for the reinstatement of the Powharnal Burn. Option 1 would permit the reinstatement of the Boghead Burn to its original course.

4. Options 2 and 3 would require new planning applications and approvals, with accompanying SEPA licences prior to major works being facilitated.

5. For option 1A, a total of 27M m$^3$ would have to be relocated from both the Powharnal and Gasswater overburden dumps to infill the void. Note that the entire Gasswater dump requires to be relocated, including all previously reinstated sections. Soil handling extends to c. 400K m$^3$, further increasing the amount of “muck-shift”. Advance dewatering would be required, with a 2 to 3 year lead in time prior to any bulk “muck-shift” commencing. Overall timescale – c. 10 years.

6. Option 1 B: As above, with “muck-shift” reducing to c. 23 M m$^3$. Timescale – c. 9 years.

7. Option 2A: The partial water body option requires c. 19 M m$^3$, to restore the topography of the SPA south of the line of the old railway. The dewatering period would remain substantial (estimated at 2 to 2 $^{1/2}$ years). Timescale – c. 8 years.
8. Option 2B: Dependent on approved levels and ground-water rebound this option could require “muck-shift” in the range 10M to 14M m$^3$, resulting in a partial water body with ground south of the SPA boundary at lower levels, c. 3 to 5 m above water level. Further detailed analysis is on-going. De-watering as per 2A. Timescale – c. 7 to 8 years.

9. Option 3: requires c. 5 M m$^3$ of muck shift and no de-watering. Timescale of the order of 4 years.

3.2.2 Taking all of the above factors into account, option 3 is the preferred option. This relies on retaining the water body with the re-profiling of the site completed within a reasonable timescale (3 years for operations, 5 years for aftercare). This option is detailed further in figure 9 and illustrates the proposed alternative restoration for the site with the focus being on a reinstatement geared to support the qualifying features of the SPA through the implementation of a revised ecological management plan, allied to an extension of existing techniques (as is already deployed on Airds Moss to the north).
**Schedule of Works (referring to Figure 9)**

1. At Dalfad: excavate and dress-off the batters to the roadway behind the former amenity area (including the re-instatement of peat areas and thereby eliminating the incursion altogether); treat as a test bed for moorland reinstatement on the eastern end of the main overburden dump

2. On the south face of overburden mound: excavate in a series of terraces after stripping back soils and peat (previously placed on the top surface by Scottish Resources Group Ltd). Dress off surfaces with peat with some indigenous planting to stabilise the intervening slopes

3. Peat dump: excavate peat and place to the south of eastern faces, restoring the dump site to a water body acting as a seasonal flood meadow and headwater to the reinstated Powharnal Burn

4. Powharnal Burn: reinstate to a route crossing the terrace on the eastern face of the overburden mound. (NB steeper section to be rock-lined with “stilling ponds” at intervals)

5. Moorland to the south: block off the burn diversions

6. NE and eastern walls of the water-filled void: stabilise using Enkamat or similar as per the geotechnical engineers report

7. NE edge of the void: regrade to create gentler slopes and allow soils to be re-distributed

8. NE edge of the overburden mound: convert the water treatment area to a balancing pond to minimise the impact of any surges along the northern face of the mound

9. Grade off the eastern face and replant with moorland mix (harvested from local moorland to the north)

10. Re-shape the northern face, with focus on grading to acceptable slopes for woodland planting season running contour ditches through to the balancing pond as 8 above and westerly to the Boghead Burn outfall

11. Retain amenity area as compound for works, then to be utilised as access to Dalfad once restoration commences on that site

12. The east-southeast edge of the former Gasswater mound is to be stripped of soil/peat, then excavated and re-profiled to a gentler slope with spoil from the excavations replaced in the former site amenity area as infill/surcharge to the lagoon systems. The resultant slopes will be re-soiled with inclusion of peat traps and scrapes along the lower margins.
3.3 Positive Effects of Proposed Restoration at Powharnal on the Conservation Objectives

3.3.1 The outcome of the recommended restoration plan will be the creation of 122 ha of new habitats suitable for supporting the key prey species on which the hen harrier, short-eared owl and merlin depend. (Prior to the establishment of the Powharnal mine the affected area did not support golden plover or peregrine falcon and this will remain the case). The re-shaping of the overburden mounds to remove the dramatic escarpment will mitigate against their existing current overshadowing impacts, returning 120 ha to full productivity.

3.3.2 Only the area of open water (15 ha or 0.038% of the total SPA) i.e. the flooded mine void, will not be returned to productive habitat contributing towards the maintenance of the conservation objectives (although the open water habitat is considered benign, with no negative influence on the adjacent habitats).

3.3.3 In parallel to the above programme of direct habitat re-creation, the previous mitigation package of improved habitat management and predator control will be re-instated. This will deliver improved productivity across a much wider area of the SPA (see section 3.6).

3.4 Grievehill Options Appraisal and Restoration Plan

3.4.1 An assessment has been made of the relationship of the land within the SPA boundary to the water-filled void at Grievehill. The water body has now stabilised and is draining through “backfill” to abandoned deep mine workings to the west (see figure 10) and accordingly, a plan involving the infill of the eastern end of the void within the SPA boundary has been developed.
3.4.2 The plan provides for overburden material around the edge of the void to be used to infill the void via a combination of dozing and dig and cast methods. The aim is to reform the existing mine landscape into a broad basin with an undulating, partially terraced topography capable of accepting and holding the soil-forming materials available onsite. This will create a range of semi-natural habitats capable of making a positive contribution towards the maintenance of the SPA's Conservation Objectives. The material would be terraced and lightly surcharged to effect a settled profile capable of retaining peat placed from the eastern on-site store, supplemented as necessary by imported material.

3.4.3 As noted, the bulk of the soil material is likely to consist of stored peat. While some of this stored peat still supports the original cut turfs with associated vegetation, the bulk is likely to be from deeper layers with little viable seed-bank. The highest quality habitat restoration will be obtained by the direct translocation of these turfs onto the restored surface profile with the minimum disturbance. The turfs could be tiled into patches, or dispersed over a wider area interspersed with areas of bare peat. The design and accessibility of the peat store is being explored and the precise use of the materials will need to be based on the judgment of the operators as the access to the peat store is developed.

3.4.4 The areas of bare “back-tipped” peat will need to be levelled before they can be sown with a seed mix collected from the moorland surrounding the site. Experience has shown that in order to secure efficient germination and establishment rates, the seed must be applied in the right season and under the optimal weather conditions. The establishment of the vegetation will be monitored closely over the first two years, and there may be a requirement for spot reseeding and treatment of any developing surface water issues.

3.4.5 The final landform will not include any topographical features which could be exploited by scavenging or predatory species (and which would have introduced a negative influence on the qualifying features of the SPA).

3.4.6 Boundary fencing is already satisfactory, but we recognize the need to erect internal fencing for future stock management purposes and also to create a safe working edge to the water filled void.

3.4.7 As the aftercare progresses, in years 4 and 5 consideration will be given to the transition to the long-term sustainable land use. The most efficient way to ensure that the vegetation development is directed towards the establishment of a stable upland habitat will be to gradually introduce livestock under a monitoring regime. The correct level of grazing pressure would be achieved by controlled introduction of stock from an adjacent grazing unit combined with the positioning of feed to direct the grazing pressure to the appropriate part of the site. As the vegetation matures, less manipulation will be required.
3.5 Glenmuckloch Conveyor Removal

3.5.1 Work to dismantle the infrastructure of the Glenmuckloch Conveyor commenced in August 2015 and is expected to be complete by the end of 2015 following agreement on methodology (taking account of sensitivities associated with the bird breeding season) between Scottish Natural Heritage, the Royal Society for the Protection of Birds, East Ayrshire Council and the contractor.

3.5.2 On completion of the works, the footprint will largely revert to that of the historic minerals railway on which the conveyor was built.
3.6 SPA Mitigation Reinstatement (for Powharnal, Dalfad and Grievehill)

3.6.1 During the mining phase, and in order for the SPA to continue to meet its Conservation Objectives, comprehensive mitigation measures were put in place as part of each individual planning approval. Each mitigation package consisted of:

- Habitat improvement delivered through adjustments to agricultural management
- Habitat improvement delivered through the restoration of ground hydrology and the creation of “wader scrapes”
- Enhanced productivity through predator control
- Active monitoring programmes reporting to the site Technical Support Groups

3.6.2 The mitigation areas in question are shown below in figure 11.
3.6.3 Following the collapse of the two mine operators, the implementation of the mitigation packages ceased and the failure to return the mining areas to its previous ecological quality is acknowledged. As part of the on-going review process (and associated planning application for Powharnal), revised mitigation packages are currently being researched and will be implemented to balance this negative impact. These will be maintained until the site restoration plans have been fully delivered (including an extended aftercare period).

3.6.4 Below is a summary of the mitigation works which will be reinstated for each of the mining complexes.

Powharnal / Dalfad: The total mitigation area is 1281ha. A priority will be to reinstate the Powharnal Technical Steering Group (Powharnal Management Committee) to monitor and guide the delivery of approved mitigation works, key amongst which are:-

1. To ensure that the appropriate livestock grazing levels are reinstated and that the appropriate grazing regime is being followed. In this respect revised grazing agreements are presently being negotiated and sheep are being re-introduced.

2. Reinstate the programme of burning / vegetation cutting.

3. Reinstate the programme of predator control

4. Complete the programme of ditch-blocking and peatland re-wetting at Springhill.

Dalfad ‘Race Course’ and Shiel Farm

5. Reinstate the programme of ditch blocking and the introduction of scrapes at Shiel Farm, noting that agreement in principle has been reached with regard to the transfer of ownership of Shiel Farm to RSPB.

Grievehill: It should be noted that the physical habitat works associated with the Grievehill mitigation area had all been implemented prior to the collapse of the mining company. Key to the recovery process will be the reinstatement of the Grievehill Technical Steering Group to monitor and guide the delivery of approved works.

The programme of works proposed is similar to that at Powharnal / Dalfad, viz:-

6. Reinstate the programme of predator control

7. Reinstate the programme of monitoring

8. Undertake remedial works on re-wetted areas
3.7 SPA Expansion

3.7.1 As discussed previously, the insurmountable difficulties associated with the water-filled void at Powharnal mean a net loss of some 15 ha of designated habitat within the SPA, a consequence which is not provided for by the Habitats Directive (unless a case can be made before consent is granted that there is no alternative to the plan or project going ahead, there are imperative reasons of overriding public interest and provided suitable compensatory measures are implemented which was not the case in this instance). Accordingly, and in recognition of the habitat which has been lost to the SPA, we are actively pursuing the designation of additional habitat for inclusion in the SPA.

3.7.2 In formulating proposals for the extension of the SPA, a number of criteria were considered to assess the suitability of potential areas for inclusion. These were

i. contiguousness with the SPA
ii. the suitability (or potential suitability) of the habitat for the qualifying features
iii. the extent of the area available for inclusion

3.7.3 An area of land which meets all of these criteria has been identified (see Figure 12) and Scottish Natural Heritage has begun to lay the groundwork for its incorporation into the SPA as soon as this can be achieved subject to the approval of the Scottish Ministers.

Figure 12

3.7.4 This candidate area, which is located on the northern side of the SPA, extends to some 600 ha which exceeds the area lost within the SPA by a large factor. At the time of classification in 2003, this area was unsuitable for inclusion in
the SPA as the land-use at the time was commercial forestry. However, a large forest fire has since destroyed most of the plantation and a ground layer of upland vegetation (moorland, peatland) has regenerated under the standing dead timber (see figure 13).

Figure 13

3.7.5 Since 2012, the area has been managed for nature conservation under a Habitat Management Plan secured as part of the planning consent for a wind farm in the vicinity.

3.7.6 It is now considered to meet the boundary definition which was used to classify the SPA in March 2003 (area of suitable habitat lying within 2 km radius of hen harrier nest used in the last five years) and additional management of the area as part of the SPA would further improve its suitability for all qualifying species by removing the standing dead timber and enhancing the peatland and moorland habitats.

3.7.7 The SPA expansion would be underpinned by an extension to the Muirkirk Uplands SSSI that would be notified simultaneously using the provisions of the Nature Conservation (Scotland) Act 2004 which require consultation with the owner/occupiers of the extension to the SSSI.
3.8 Timescales for Delivery

3.8.1 The following timetable outlines the timescales for delivery for each of the activities outlined in this section.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Lead Body</th>
<th>Initiation Date</th>
<th>Completion date</th>
</tr>
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<tbody>
<tr>
<td>Restoration of SPA at Powharnal/Dalfad</td>
<td>Mines Restoration Ltd</td>
<td>September 2016</td>
<td>February 2020</td>
</tr>
<tr>
<td>Opencast Site</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Restoration of SPA at Grievehill Opencast Site</td>
<td>East Ayrshire Council</td>
<td>September 2016</td>
<td>February 2017</td>
</tr>
<tr>
<td>Restoration of SPA by removal of Glenmuckloch</td>
<td>Hargreaves</td>
<td>September 2015</td>
<td>December 2015 (re-seeded in spring 2016)</td>
</tr>
<tr>
<td>Conveyor</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Re-establishment of mitigatory management</td>
<td>Mines Restoration Ltd</td>
<td>January 2016</td>
<td>5 to 10 years beyond the completion of work at the site</td>
</tr>
<tr>
<td>activity</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SPA Expansion</td>
<td>Scottish Natural Heritage/The</td>
<td>August 2015</td>
<td>August 2016</td>
</tr>
<tr>
<td>Scottish Government</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

= preparatory work at an advanced stage

= work substantially complete
4. **A Future for the Muirkirk and North Lowther Uplands SPA**

4.1 Securing Favourable Site Condition

4.1.1 In addition to the actions set out in the previous section addressing the impacts of opencast coal, this section sets out a vision for the future management of the SPA with the express purpose of delivering and securing favourable condition for the site’s qualifying features. Scottish Natural Heritage has undertaken a pilot project to develop “Natura Plans” for a selection of representative Natura 2000 sites in Scotland (including the Muirkirk and North Lowther Uplands Special Protection Area) and we are considering the application of this approach for all Natura 2000 sites in Scotland. This work includes the development of new “SMART” (i.e. non-generic) conservation objectives for each site.

4.1.2 Partial survey and anecdotal evidence suggest that the populations of all the qualifying interests have declined since the last condition assessment undertaken by Scottish Natural Heritage. New condition assessments will be undertaken for golden plover by 2016 (following a moorland breeding bird survey) and for breeding hen harrier in 2016 (following the national hen harrier survey).

**Key factors affecting the interests of the site**

4.2 Habitat management

4.2.1 The SPA consists of a mosaic of heather-dominated moorland, acid grassland and blanket bog that provides nesting and foraging habitat for the qualifying species. Dry heath dominated by heather typifies the moorland on steeper, well-drained slopes, while blanket bog of various types predominates on flatter, wetter ground where peat soils have developed. Acid grassland types are best represented on lower ground around the periphery where the peat shallows and gives way to mineral soils. The condition and extent of these habitats on the site has been affected by the following types of management intervention:

Grazing - almost the whole site is subject to extensive grazing of livestock, mainly by black-face sheep. Grazing intensity varies greatly but is typically highest at the periphery of the site where land adjoins in-bye fields. In parts of the site, high grazing pressure has led to a loss of heather cover and an increase in “white moor” dominated by purple moor grass.

Drainage – the effects of former land drainage practices are visible across much of the site with open hill drains (‘moor grips’) frequent in areas of blanket bog. Many of these drains remain active and continue to damage the integrity of the peatland and wetland habitats.

Muirburn – although reduced in extent, some areas of the site are still managed for shooting and are subject to muirburn. Where muirburn is carried out appropriately it can lead to a valuable diversity of habitat structure but poorly-managed or accidental fires can damage peatland soils and lead to a loss of heather cover. A very large accidental fire in 2003 damaged around 800 ha of the northern block of the SPA.
4.3 Predation

4.3.1 The ground nesting qualifying species (hen harrier, merlin, short-eared owl, and golden plover) are vulnerable to predation of their eggs and young. The level of predator control (foxes, corvids, and mustelids) in and around the SPA has reduced in recent years as the level of investment in management for game shooting has declined. There is evidence from a paper\textsuperscript{16} published in Bird Study that the benefits of habitat management for birds on the SPA were reduced by increased levels of predation from un-keepered ground.

4.4 Persecution

4.4.1 The illegal persecution of raptors is both a national concern and a wildlife crime priority in Scotland but despite the provision of a robust legal framework, is suspected to have contributed to the decline in the SPA's hen harrier population. The last officially recorded incident in the SPA was the killing of a female hen harrier that had been shot in the vicinity of its nest (PAW Scotland Bird of Prey Crime Hotspot Maps 2014\textsuperscript{17}).

4.5 Surrounding Land Use

4.5.1 Each of the qualifying species requires extensive areas of open habitat to provide sufficient nesting and foraging grounds. The boundary of the SPA was determined by the core distribution of hen harrier nests in the five years before designation and the suitable habitat available within a 2 km radius of those nests. The land surrounding the SPA does provide additional foraging and nesting areas for these species and its land use and development could affect the SPA populations.

4.5.2 Wind farms – much of the neighbouring hill ground has been subject to wind farm applications. These bring the risk of additional mortality to qualifying species through collision with turbines, especially for hen harrier. They can also cause loss of suitable habitat through displacement and disturbance.

4.5.3 Forestry – there are large commercial conifer plantations neighbouring the SPA. These can provide foraging and nesting habitat at an early stage of their establishment but, apart from nest sites for merlin, mature plantations do not support the qualifying species and can act as a source of predators (crows, foxes etc.). They may also have detrimental habitat impacts through drying out of the bog or acting as a seed source.

4.5.4 Open cast coal – there are large areas of unrestored open cast coal sites around the SPA that do not currently provide habitat that supports the qualifying species. Future decisions on the extent and type of restoration of these sites will affect the extent of habitat available for SPA populations.

\textsuperscript{16} Conservation management of moorland: a case study of the effectiveness of a combined suite of management prescriptions which aim to enhance breeding bird populations John Calladine , C. Nigel R. Critchley , David Baker , James Towers , Andre Thiel Bird Study Vol. 61, Iss. 1, 2014

\textsuperscript{17} http://www.gov.scot/Resource/0047/00474481.pdf
4.6 Conservation Priorities

4.6.1 There is considerable overlap in the management requirements of the different qualifying bird species. However, there is the potential for inter-specific competition for resources (e.g. between hen harrier, merlin and peregrine), predation impacts (e.g. peregrine or hen harrier predation on golden plover adults and chicks) and conflicting habitat requirements (short sward for golden plover, longer sward for raptor nesting and prey availability). All qualifying species are listed on Annex 1 of the Birds Directive. If management conflicts occur then it is likely that priority would be given to the needs of hen harrier.

4.7 New (draft) Conservation Objectives

4.7.1 The purpose of this SPA is to enable the application of special conservation measures concerning the habitat of Annex 1 birds to ensure their survival and reproduction in their area of distribution. This SPA has been specifically selected to protect:

- areas used by breeding golden plover, hen harrier, merlin, peregrine and short-eared owl;
- areas used by non-breeding hen harrier.

The conservation objectives for the SPA are:

(high level objectives in **bold**; supplementary advice in box):

**All species:**

1. **To avoid deterioration of the habitats of the qualifying species or significant disturbance to the qualifying species, thus ensuring that the integrity of the site is maintained and the site makes an appropriate contribution to achieving the aims of the Birds Directive for each of the qualifying species; and**

**Golden plover and short-eared owl:**

2. **To ensure that, subject to natural change, the following attributes are maintained in the long term:**

   a. **Population of the species as a viable component of the site.**

      i) To maintain the breeding populations at or around the baseline levels of 157 pairs of golden plover and 23 pairs of short-eared owl.

      ii) To ensure that each species is protected from anthropogenic pressures that could lead to a significant long-term decline in numbers using the site or to an acceleration of an existing decline.

**Hen harrier, merlin and peregrine:**
3. To ensure that, subject to natural change, the following attributes are restored in the long term:

   a. Population of the species as a viable component of the site.

   | i) To restore the breeding populations at or around the baseline levels of 28 pairs of hen harrier, 12 pairs of merlin and 9 pairs of peregrine. |
   | ii) To restore the non-breeding population at or around 12 individual hen harrier. |
   | iii) To ensure that each species is protected from anthropogenic pressures that could lead to a significant long-term decline in numbers using the site or to an acceleration of an existing decline. |

   All species:

4. a) No significant disturbance of the species or significant reduction in ability of the species to utilise important parts of the site

   i) Significant disturbance is disturbance which alters behaviour of the individuals to the extent that energetics are affected and ultimately survival (and/or productivity) is affected (potential for population decline in the long term). Disturbance includes displacement, barrier effects or redistribution.

   ii) Anthropogenic pressures, either alone or in combination with other plans or projects, should not significantly affect the ability of qualifying species to utilise the SPA.

b) Distribution and extent of habitats and the structure, function and supporting processes of the habitats supporting the qualifying species and their prey are maintained.

   i) The extent and distribution of supporting habitat in sites should be maintained, to ensure the site’s ability to support healthy populations of relevant bird prey.

   ii) The structure and function of foraging habitats should be maintained to support bird prey.

   iii) Anthropogenic pressures should not significantly, adversely impact supporting processes which could indirectly impact on the birds or their prey.

   iv) The extent of supporting habitat accessible to the species within the site should be maintained.

4.7.2 For the purposes of Habitats Regulations Appraisals, objectives 1 and 4 would normally apply to plans and projects within the site or having an effect on qualifying features within the site. Objectives 2 and 3 may have a bearing outwith the site if adverse effects apply to birds clearly connected with the site.

4.8 Conservation Measures

   a) Habitat management for birds
4.8.1 Since designation of the SPA in 2003, incentives have been available to landowners/land managers to enhance the habitat for the qualifying species by reducing grazing pressure, by reducing the drainage of wetland and peatland areas and by following good muirburn practice. There have also been incentives available to carry out predator control.

The Scottish Rural Development Programme

4.8.2 These incentives are now available through the agri-environment component of the Scottish Rural Development Plan (SRDP). Twenty-six landowners/land managers within the SPA participated in the past SRDP 2007-2013 agri-environment scheme (Rural Development Contracts).

4.8.3 The new SRDP 2014-2020 includes the Agri-Environment & Climate scheme. The first window for applications ended in June 2015. Ten landowners/land managers within the SPA submitted applications within this window and Scottish Natural Heritage ran a dedicated SPA & AECS event in August 2015 to encourage the preparation of further applications for the next AECS round.

Open cast coal mitigation funds

4.8.4 Land management for birds in the SPA was undertaken as part of the planning conditions for the Powharnal and Grievehill opencast coal sites prior to the liquidation of the coal companies. There is the potential to reinstate this management funding in order to pay for works that are not delivered through SRDP – predator control, prevention of persecution, peatland management and off-wintering of stock.

Peatland Restoration

4.8.5 Significant peatland restoration work has been carried out by RSPB Scotland and the East Ayrshire Coalfield Environment Initiative at Airds Moss RSPB Reserve, within the SPA. In total, the works over six years will deliver 396 ha of enhanced bog, with the final tranche of work happening early in 2016. This has been funded by the Water Environment Fund, Barr Environmental, Minerals Trust Fund and the Peatland Action Fund.

b) SPA Expansion

If the current plan is accepted following consultation and planning application, the permanent loss of SPA area would be restricted to 15 ha (c.0.06%). As part of the partnership response to this loss, it is intended to expand the SPA to include an area of ground adjacent to the northern boundary. This land was plantation woodland at the time of designation but the woodland has not established due to fire damage and poor growth and it now provides suitable open habitat for hen harrier.

c) Surrounding land use

If a plan or project could affect the qualifying interests of the SAC or SPA, the competent authority will be required to carry out a Habitats Regulations Appraisal (HRA). There is likely to be a significant effect with any development that:
• Causes loss or damage to qualifying habitat and/or supporting habitat for qualifying species (all habitats and species).
• Creates a hazard leading to injury or death.
• Causes displacement and/or barriers from/to favoured foraging areas.
• Increased human disturbance close to breeding sites.
• Lies outwith the SPA but still has the potential to cause one of the above effects.

Additional overlapping protected areas:

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<th>Protected Area</th>
<th>Designation</th>
<th>Area (ha)</th>
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<td>North Lowther Uplands</td>
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<td>7833</td>
</tr>
<tr>
<td>Blood Moss and Slot Burn</td>
<td>Site of Special Scientific Interest</td>
<td>162</td>
</tr>
<tr>
<td>Garpel Water</td>
<td>Site of Special Scientific Interest</td>
<td>6</td>
</tr>
<tr>
<td>Ree Burn and Glenbuck Loch</td>
<td>Site of Special Scientific Interest</td>
<td>8</td>
</tr>
<tr>
<td>Muirkirk Uplands</td>
<td>Site of Special Scientific Interest</td>
<td>18660</td>
</tr>
</tbody>
</table>
5. **Scottish Opencast Coal Task Force: Surface Coal Mining Restoration – Towards Better Regulation**

5.1.1 Surface coal mining is a significant and extensive land use across the Scottish coalfields which extend from Fife in the east across the Lothians, the Lanarkshires to East Ayrshire in the south west.

5.1.2 In 2013 when the two major operators Scottish Coal and ATH went into insolvency, a Coal Task Force (chaired by Fergus Ewing MSP, the Minister for Business, Energy and Tourism) was established by the Scottish Government. A public consultation *Opencast Coal Restoration: Effective Regulation* was conducted in late 2013 and the analysis of findings was published in July 2014. The **Main findings** included the provision of better guidance and advice on restoration financial guarantees, better monitoring, compliance, ministerial oversight and improving skills.

5.1.3 With restoration at the heart of the matter and using the consultation analysis as a platform, two Task Force sub-groups developed advice and recommendations on how to enhance site monitoring processes and in particular the financial guarantee landscape. They shared information with the mining engineering, environment, banking, industry and community sectors.

5.1.4 A report ‘Opencast Coal Restoration: Effective Regulation’ recommending a number of planning process enhancements to secure more certainty, transparency and oversight was approved by the Task Force at its meeting in October 2015 and is published on-line on the [Scottish Government Planning and Architecture Division’s homepage](#). The Scottish Government is now working to implement over 25 recommendations including public consultations on monitoring fees and notification of planning application arrangements. The report has also highlighted the need for training, up-skilling and mutual support amongst planning authorities. That’s being driven by [Heads of Planning Scotland](#) with support from the local authority [Improvement Service](#) aided by Scottish Government funding.

5.1.5 There is a consensus on the importance of effective site monitoring and expertise on the financial components of restoration guarantees.

5.1.6 The Task Force has now met ten times and it was agreed at its meeting in October 2015 that it would be scaled down, with a working group managing further actions including those flowing from the Task Force’s report.

5.1.7 Our work will ensure that operators and regulators manage future sites more effectively. The Task Force will be supplied with periodic updates on progress which will also reach a wider audience through social media and updates on the [Scottish Government website](#).
6. Conclusion

6.1.1 The development of this programme of work and its continued delivery in the coming years will be overseen in a continuing collaboration between the Scottish Government, East Ayrshire Council, Scottish Natural Heritage, RSPB Scotland and Mines Restoration Ltd.

6.1.2 It represents a significant collective undertaking in addressing the unforeseen and unconsented impacts of opencast coal on the Muirkirk and North Lowther Uplands SPA and sets out a vision for the future management of the SPA.