



Mainshill Opencast Coal Site

Scoping Report

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Planning & Development

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1. Introduction

1.1 Background

The Scottish Coal Company Limited (Scottish Coal) wishes to apply for planning permission to extract coal by opencast methods, on land known as Mainshill lying to the east of Douglas, South Lanarkshire (Figure 1). The proposed development will result in the extraction of approximately 1.7 million tonnes of coal and 160,000 tonnes of fireclay over an approximate 3½ year extraction period, with an initial 6 months start up period and a 12 months final restoration period.

This report marks the first formal stage of the application for planning permission. It is a request to South Lanarkshire Council to consider the scope of works proposed to carry out the Environmental Impact Assessment (EIA), as *per* Section 10 of the *Environmental Impact Assessment (Scotland) Regulations 1999*. It also aims to confirm the Council's approval of the overall impact assessment methodology.

Responses to this report will be used in the undertaking of the EIA, which assesses the likely environmental effects of the proposals, and how these will be avoided or reduced to acceptable levels. The findings of the environmental studies carried out for the impact assessment will be presented within the Environmental Statement (ES). The Council will take the ES into account in determining the Planning Application.

The Applicant

Scottish Coal is the largest coal producer in Scotland and the largest opencast coal mining company in the UK. It is a wholly owned subsidiary of Scottish Resources Group Limited (previously Mining (Scotland) Ltd). This Company acquired the operating mines and prospective sites in the Scottish coalfields from British Coal, when the coal industry in Scotland was privatised in 1994.

Scottish Coal now produces approximately 3-4m tonnes of coal per year from 6 sites throughout Scotland, which serves power generation, industrial and domestic markets. The company has a budgeted annual turnover of over £130million. Scottish Resources Group is committed to development and deployment of clean coal technologies and carbon capture and storage, in order to reduce long-term CO₂ emissions by more than 90%, to help tackle climate change.

The Company currently provides direct employment for over 600 people with an additional 500 jobs indirectly created from coal transport and the supply of goods and services.

Scottish Coal is committed to ensuring that the effects of its operations on the environment and local communities is minimised. The Company adheres to strict regulations and environmental monitoring procedures, which cover dust, noise and vibration, water treatment, and oil and fuel storage procedures. They work closely with local authorities, SEPA and other stakeholder organisations to ensure compliance with all regulations. This commitment is reflected in the production of a robust and comprehensive environmental assessment of its proposed activities, of which this report forms part.

Policy Background

South Lanarkshire Council is the Planning Authority responsible for determining a planning application for the Mainhill site.

The Structure Plan relevant to the site is the Adopted Glasgow and the Clyde Valley Joint Structure Plan (2000) as altered. Within this Plan, the Douglas Valley is a Rural Investment Area, which are areas where “rural diversification schemes, natural resource based industries, promotion of tourism and the support of primary industries” are considered important. The Douglas Valley is also designated as a Search Area for Minerals: Opencast Coal Extraction.

Mainhill falls within a “Rural Area” in the Adopted Local Plan for the region (Lower Clydesdale Local Plan 2000). It is also within an Area of Great Landscape Value. A new Local Plan for South Lanarkshire is being developed to replace the Adopted Local Plan, but this may not be finally approved until 2008. Therefore, the proposed development will be assessed against the key provisions within the Adopted Local Plan but consideration will also be given to policies in the emerging local plan.

A minerals subject plan also forms part of the Development Plan which sets out the Council’s policies for minerals development in South Lanarkshire (South Lanarkshire Minerals Local Plan, Adopted 2002).

The policies contained within these documents will be considered during the preparation of the planning application and ES.

1.2 Proposed Development

This project description outlines a proposal for the extraction of coal and fireclay by surface mining methods from land known as Mainhill, which lies approximately 1 km east of Douglas in South Lanarkshire. The location of the site is shown on Figure 1 and a plan of the site, showing land under the control of the applicant, in Figure 2. The characteristics of the site and immediate surroundings are illustrated in the aerial photograph in Figure 3.

General Site Description

The site covers an area of approximately 136 hectares of which only 63 hectares will be subject to the extraction of coal and fireclay with the remainder being used to accommodate the storage of soils and overburden; the access and site support area and water treatment lagoons, with peripheral woodland areas retained for screening purposes (Figure 4).

The site lies on the north-facing flank of the valley of the Douglas Water and comprises stands of dense conifer plantation with improved pasture on the lower slopes. The site and surrounding land forms part of the Douglas & Angus Estate.

The site’s northern and eastern boundaries are formed, respectively, by the A70, the former A70 and the B7078 beyond which lies the M74. To the west the boundary is formed by woodland, which borders the Eggerton Burn whilst to the south the site borders open, undulating moorland. Beyond the western site boundary is an area of woodland that is within Scottish Coal’s control (Figure 2).

A number of man made ditches drain the site and these are shown on Figure 2. Water flow in these ditches is seasonal and during summer months there can be little

or no flow in some. Within the site boundary (albeit outwith the mineral extraction area) is a spring from which the rising water is piped to Newmains Home Farm for water supply purposes, including for domestic use.

Designated Sites and Other Policies

Mainshill lies within the Douglas Water Area of Great Landscape Value (AGLV), which embraces the core river corridor of the Douglas Water and adjoining policy grounds along with the higher ground, which flanks the valley. The AGLV boundary is shown on Figure 5. The character of the site is especially important in the context of the Douglas Valley. In particular, the boundary of Mainshill Wood – which is included in the application boundary, has been a feature of the landscape since the 19th Century, and it is considered important to reflect this in the long term development and restoration of the site.

Ancient and Long Established Woodland is found within the site, and more is located along the Douglas Valley, near to the site. The site carries no other landscape designation or any designation, statutory or non-statutory, for nature conservation.

The closest designated wildlife area is a local Site of Importance for Nature Conservation (SINC), which takes in the Douglas Water. The remains of Douglas Castle to the north of the site close to the Douglas Water are a Category C Listed Building, and St Bride's Chapel in Douglas is a Scheduled Ancient Monument.

A National Cycle Network Route (Sustrans Route 74) runs on a north–south alignment close to the site's eastern boundary (Figure 5). This route currently stops by Junction of the M74, though there is a proposition by Sustrans and South Lanarkshire Council to extend it northwards. No formal open spaces, community woodlands or country parks fall within the site.

The Minerals Local Plan acknowledges that remaining coal deposits underlie large parts of the north and east of the Council's area, and in particular, the Douglas Valley. The Plan details large parts of the Mainshill site overlying known coal deposits and notes that *...potential exists for the establishment of new opencast workings at...Mainshill Wood near Douglas*. In addition, the site lies within a designated Opencast Coal Area of Search in the Structure Plan.

Services

Figure 6 identifies a number of utility services (water, electricity and telecommunications), which lie either within or close to the site. Only one of these (an underground electricity line) will require to be diverted although protection will be given to those other services.

Many of the dwellings within Newmains Home Farm (see below) source their potable water from a private spring-fed supply, which rises within the site. Although the point where the spring issues will remain undisturbed, there is the possibility that water supply will be diminished by the development and thus a mains supply may need to be installed to these dwellings.

Receptors

There are no residential dwellings within the site, although a number of grouped or single dwellings lie around it, as follows:

- Newmains Home Farm to the west, which contains 11 residential properties within the overall farm complex, the estate office and various livestock and storage buildings. All the properties are owned by the Douglas & Angus Estate, two of which are Grade B listed buildings;
- South Lodge – two residential properties lying to the west of Newmains Home Farm, again owned by the Estate;
- Coalgill – four grouped residential properties lying, at their closest point, 225m to the east of the site boundary beyond the M74. These are owned by the Estate;
- Castle Mains – the Douglas & Angus Estate’s ‘large house’ lying to the east beyond the M74. This is a Grade B listed building;
- Millbank – lying by junction 12 of the M74 and east of the site, this is another Estate owned property and is a Grade C(s) Listed Building; and
- Parkhead Cottage – lying to the south adjacent to the B7078; this again is owned by the Estate.

All the above properties together with other Estate properties slightly further afield (e.g. Parkall Farm) are all currently occupied. Although in Estate ownership, the potential impacts upon these properties has been considered as part of the EIA. A further property considered in the assessment is Gardens House, which lies on the north flank of the valley.

The settlement of Douglas lies 1 km to the west of the site boundary, the closest point being the Lady Home Hospital, which lies alongside the A70. To the east is the hamlet of Uddington, situated some 880 m from the site boundary on the opposite side of the M74.

Table 1 gives approximate distances between various properties and the site boundary, excavation area and overburden mound nearest to the property.

Property	Distance to Site Boundary (m)	Distance to Excavation Area (m)	Distance to Nearest Overburden Mound (m)
Newmains Home Farm (no. 10)	150	250	600
South Lodge	450	560	850
Coalgill	225	315	250
Castle Mains	360	450	400
Millbank	585	670	700
Parkhead Cottage	550	1160	750
Gardens House	1190	1245	1480
Douglas (37 Dale Street)	1210	1320	1360
Lady Home Hospital	1000	1060	1280

Recoverable Mineral Reserve and Geology

Planning permission will be sought for the recovery of approximately 1.7million tonnes of coal and a nominal 160,000 tonnes of fireclay.

The measures to be worked are in the Passage Group, Upper Limestone Group and the Limestone Coal Group. The southern limit to the extraction area is a major fault,

thought to be the Kennox Fault, which is seen at the Glentaggart site lying further to the west near Glespin. This fault downthrows the Carboniferous strata against volcanic rocks of Devonian age. The results of borehole investigations suggest very steeply dipping seams.

There are several separate coal group seams within the site:

- Manson and Lower Happendon;
- Gill Coal;
- Ponfeigh Gas;
- Ellenora; and
- Limestone Coal Group (Index, Gas, Wee Drum, Big Drum, Skaterig, Horn, Kirkrod, Stoney Back Robb, Fallowhill, and Coalypath).

It is possible that fireclay may be encountered of sufficient quality suitable for brick making purposes. However, it will only be possible to establish whether fireclay is present in marketable quantities and quality once extraction commences. Therefore, a nominal 160,000 tonnes has been proposed to remove over the life of the site.

There are no known shafts or adits within the site and no records of previous mining have been found. There are nearby former underground workings in the Coal Measures, primarily in the Seven Foot and Nine Foot seams. The closest adit, the Wilson Mine, lies just to the east of the Lady Home Hospital.

The drift material overlying the solid rock overburden is believed to range from 1m to 11.6 m in thickness and comprises clays with gravel also present. The overall depth of the excavation is likely to extend to around 50 m below ground level.

The nature of the rock strata within the site means that blasting will be required to allow fracturing of the rock in order to enable its removal.

Site Development Programme

The intended duration of the development is approximately 5 years made up of an initial start up phase of some 6 months; a mineral extraction phase of approximately 3½ years¹ and 12 months for final restoration. For the purposes of the cumulative assessment a start date of October 2008 has been assumed.

Broad swathes of conifer plantation will be retained on the eastern (M74) boundary; the southern boundary and on the western (Douglas) boundary. The conifer and broadleaved woodland either side of the Eggerton Burn falls outside the application site but will be within Scottish Coal's control. That woodland is to be retained.

A plan showing the site layout and progression of mining phases is shown in Figure 4. An indicative layout at the end of Phase 3 (27 months following initiation of site preparation works) is shown in Figure 7.

Method of Working

Similar techniques to those employed on Scottish Coal's other operational sites in South Lanarkshire will be used to mine the coal within the Mainhill site. The principle operational phases will be:

¹ This is based on a working day of 0600-2200 Monday-Friday and 0700-1300 Saturday.

- the progressive removal of the overlying soils and their placement either in storage bunds or for restoration of previously excavated and backfilled areas;
- the progressive removal of overburden (superficials and rock) and their placement initially in the above-ground storage mound or into previously excavated areas; and
- the extraction of coal and its processing within the site support area.

The mining operations are anticipated to progress across the site in a phased series of operations with progressive restoration; re-vegetation and aftercare following behind. Five primary phases are anticipated progressing in a generally westerly direction across the site (Figure 4).

It should be noted that site operations include movement of stored soils between phases. This is a result of the site design, to restrict the overall disturbed ground and to minimise potential impacts.

Advance Tree Planting

Tree planting is being carried out along part of the frontage to the A70 in advance of the site operations – the trees, which will comprise a belt of quick growing willow species with specimen deciduous trees within the existing hedge line, will be planted where the agricultural fields front the A70. The purpose of this planting will be to break up views of the soil storage bunds (e.g. T1 and T3 on Figure 4), which are to be placed along the field boundary. The location of this tree belt has only been indicated on the Indicative Site Layout (Figure 4) but is not shown on the phasing plan (Figure 7), for clarity, due to the small scale of the plan.

Initial Site Development – c.6 months

The first phase of site operations will involve initial preparatory works comprising the following tasks:

- delivery of initial mobile plant complement via an existing access point on the A70;
- securing the site boundary (where not already secured) with fencing;
- formation of an access from the B7078 involving the creation of link road from the B7078 to a redundant stretch of the former A70, with the provision of visibility splays on the B7078 (marked X on Figure 4);
- formation of a temporary link road from the former A70 into the proposed site support area (marked Y on Figure 4);
- tree and vegetation clearance followed by soils stripping within the site support area;
- establishment of site offices, hard-surfaced plant yard, car parks, weighbridge & office, wheelwash, plant maintenance buildings, bunded fuel storage area and ancillary works;
- formation of grassed soils mounds around the site support area using soils stripped from that area;
- formation of the coal processing facilities and coal stocking area;
- formation of surface water treatment lagoons and cut-off ditches; and
- tree felling works within the conifer plantation to give access to the overburden storage area.

Water Treatment Area 1 will be created at the eastern end of the site to receive surface water run-off from the eastern part of the site. This lagoon system will discharge into the watercourse, which currently leaves the site via a cascade by the

B7078. A second Water Treatment Area will also be formed at the western end of the site to deal with any runoff from areas stripped of soils, with water discharging to a culvert under the A70.

Coaling Period – c.3½ years

Following establishment of the site, the coaling period will begin and this is expected to last some 3½ years. Phasing plans will be produced for each of these phases in the Environmental Statement.

Phase 1

The first area to be worked lies in the north-east part of the site close to the site support area. Soils stripped from the agricultural part will be stored in a 5 m high mound alongside the former A70, with a standoff margin left to the hedge and stone dyke along this boundary. Subsoil will be stored behind it.

Soils will also be stored in a mound along the A70 boundary of the site, and at the far western extremity of the site along the frontage with the Eggerton Burn woodland. Woodland soils will also be stored in the western part of the site.

A haul road will be formed to link Phase 1 with the overburden storage area using rock excavated from the initial box-cut area within Phase 1. Trees will also require to be felled along the northern edge of Phase 1. Soils from the plantation areas will be stripped as one, with no differentiation between top and subsoils. Trees felled from the site will be removed by normal timber transporting lorries using the new access to the B7078.

Overburden from the developing void will be transported and deposited in the overburden mound (O1 on Figure 4) nearby. As working progresses this overburden mound will gradually be extended to its maximum capacity.

The design of the mound reflects the site's topography, with the mound being higher on the northern face, tapering in a southerly direction to merge with the undisturbed plantation along the site's southern edge. The outer faces of the mound will be dressed with soil forming materials and grass-seeded.

Phase 2

The void will be developed in a southerly direction into Phase 2 with overburden excavated from that area being used to gradually backfill the Phase 1 void. Trees will be felled from this phase and the soils stripped from Phase 2 will be stored in the western part of the site alongside an existing storage mound (W3 and W4 on Figure 4).

Overburden will be shaped along the northern flank of Phase 1 in such a way as to provide a gently rising screen to operations behind with hydroseeding of completed faces (O2 on Figure 4). This flank will be restored using soils from Phase 2. The underground electricity transmission line, which crosses Phase 2 and Phase 3, will be diverted in advance of operations in Phase 2.

Phase 3

Mining operations will continue from Phase 2 into Phase 3 with overburden being deposited into the Phase 2 void and surcharging the storage mound on Phase 1.

Phase 3 is partly plantation and partly agricultural land and soils from each area will be kept separate in terms of storage and replacement. Soils will be moved from the western area onto filled ground for storage purposes. Figure 7 shows the indicative status of the site at the end of Phase 3.

Phase 4

The working void will have progressed to the western extremity of the site with overburden being placed behind in the void. Soils will be stripped from the remaining area to be worked and used for restoration purposes.

Phase 5

This is the final working phase where mining operations will reach the area occupied by part of the site support area. Those activities will be condensed into that part of the support area which remains. Restoration will have taken place over parts of Phases 2 and 3.

Pre-Restoration (Prior To Restoration Contours Being Achieved)

By the end of 48 months, mining will have been completed for 7 months with further parts of Phase 3 and part of Phase 4 restored. Overburden will have been removed from the Phase 1 surcharge mound to infill void areas.

Restoration (Figure 8)

The final restoration phase is expected to take some 12 months and will involve the reduction of the overburden mound and the use of that material to reinstate Phases 4 and 5, with soils being taken from store in order to effect final restoration.

The proposed final restoration contours are shown in Figure 8. The contours will bring the site back close to existing ground levels, with similar features (e.g. a channel through the north of the site) re-introduced in restoration. After use of the site is still in consideration, and will draw on recommendations made by technical consultants, South Lanarkshire Council and SNH as a result of the EIA process. At this stage, it is proposed to incorporate an element of the existing Douglas Valley policy (designed) landscape immediately to the north of the site.

Water Management

Settlement lagoons will be formed in order to manage water collecting within the site i.e. rainwater and any groundwater seepage. The lack of flooded old underground mine workings within the site eliminates the need for a dewatering well to control water ingress from such workings. Any ingress of groundwater will be controlled through sump pumping.

Detailed design of the settlement lagoons will be produced as part of the application for a discharge consent under the *Water Environment (Controlled Activities) (Scotland) Regulations 2005*. This consent will place restrictions on the quality (in terms of chemical composition and pH) and also the volume of water that can be discharged from the lagoon systems into the receiving watercourses.

Cut-off ditching will be provided around the overburden, soils storage and excavation areas to intercept clean surface run-off (from rainfall), which would otherwise enter

the operational site. These ditches will be channelled through the treatment lagoons prior to discharge to connect with existing, retained watercourses.

If required in times of sustained or intense rainfall, flow balancing using the excavation void will be used in order to provide a buffer to the settlement lagoons, with water being transferred to lagoons when conditions allow.

Geotechnical Considerations

The safety and stability of both the extraction areas and soils and overburden storage areas are governed by the *Quarries Regulations 1999* and its associated Code of Practice. The regime that is put in place under those Regulations involves detailed and regular assessments of the extraction and storage areas by specialists, to ensure a safe working environment for the workforce and public. The site will also be subject to a regular inspection regime.

Plant Complement

The complement of plant listed in Table 2 will be utilised on site.

Plant Type	No	Item	Sound Power Level (dB(A))
Excavators	3	O&K RH120	118
Rigid Dump Trucks	12	Cat 777	112
Road Maintenance	1	Terex R50 Bowser	101
	2	CAT 16G Graders	112
Backfill/OB Mound	2	Cat D9 Dozers	113
Soil Stripping	1	Cat 345	109
	3	40t ADT	112
	2	Cat D6	111
Coal Operations	2	Cat 330	109
	2	Cat 325	107
	4	Bell 40t ADT	112
Ancillary Plant	1	SK40 Drill Rig	117
Coal Preparation		Various	120

Tractor-towed bowlers are likely to be employed from time to time for additional dust suppression purposes.

Hours of Operation

Consent is being sought for an extended day shift operation, namely 06.00 – 22.00 hours Monday to Friday and 07.00 – 13.00 hours on Saturdays. Coal dispatch will take place between 07.00 – 19.00 hours Monday – Friday and 07.00 – 13.00 hours on Saturdays.

Other than plant and equipment maintenance, and water management, no mining operations will take place on Sundays or Public Holidays, although from time to time coal may be dispatched by road on Public Holidays to meet customer requirements.

Transport of Minerals

A new access will be formed on to the B7078 just south of its junction with the A70. The B7078 is already used for the haulage of coal from the Mid Rig coal dispatch point, which receives coal by overland conveyor from the Glentaggart site. The Mid Rig facility is located next to the B7078 some 5 km further to the south of the site.

It is envisaged that the transport of coal from Mainshill will follow on from the cessation of coal haulage from Glentaggart, in essence replacing that traffic albeit at a reduced rate. It is envisaged that coal will be transported to customers via the M74, and/ or along the established coal haulage route to the Ravenstruther rail terminal near Lanark. Any fireclay traffic would travel via the M74.

There will be no HGV traffic passing through Douglas, and the routing of HGVs will not be through any sensitive residential areas.

Haulage of coal and fireclay will be by way of 6 axle, 42 tonne laden weight articulated tipper lorries each with a payload of approximately 29 tonnes.

So far as vehicle numbers are concerned Table 3 sets out anticipated movements (note: two scenarios are given for coal output):

Mineral	Weekly output	AVERAGE no. of loads/week	AVERAGE no. of loads/day
Coal	12,000 tonnes	414	76
	9,500 tonnes	328	60
Fireclay	667 tonnes	23	4

In addition to those vehicles involved in the haulage of coal and fireclay, there will be regular deliveries of fuel and other consumables, as well as the private cars belonging to site staff and visitors.

Site Staff

At this time it has not been determined how shift patterns will be established, but on the basis of some form of double shift system there would be a need for 93 directly employed site staff which includes plant operatives, plant maintenance operatives and site management.

1.3 Reasons for the Development

Need for the Development

The development of an Opencast Coal Site on the proposed area is considered to be beneficial for the region, and for Scottish Coal.

The economy of Scotland and South Lanarkshire in particular is in part dependent on mining. South Lanarkshire is rich in potentially exploitable mineral resources, such as coal, igneous rock, and sand and gravel.

In 2005, South Lanarkshire had an annual coal production of more than 1.25 million tonnes, which was approximately 16% of Scotland's coal production in the same year (7.75 million tonnes) and approximately 10% of the UK's production (10.44 million tonnes)². All coal production in Scotland now derives from opencast sites.

Scottish Coal's coal is therefore of high national strategic value and provides coal to a wide customer base including all of the major UK power generators, including Longannet Power Station. In the winter of 2005-06, 50% of UK electricity generation

² Coal: opencast coal mining statistics 2005 - <http://www.bgs.ac.uk/mineralsuk/minequar/coal/occ/home.html#TABLE1>

was coal-fired, and the low cost of coal compared to gas prevents extensive fuel poverty.

Other end-users include the cement, paper, textile and chemicals industries, local authorities and the domestic market.

Therefore, coal is important in the economy of Scotland, and provides valuable security and reliability of supply for electricity consumers. Scottish Coal requires further sites to fulfil this local and national demand.

As coal can only be worked where it is found, there is limited scope for consideration of alternative sites in the region. However, the project design process will make considerable effort to ensure wide consideration of alternative working schemes, to ensure adverse environmental impacts are kept to a minimum.

Benefits of the Development

The site at Mainshill is well situated for provision of coal to Longannet Power Station, Fife, and other users.

Coal mined in Scotland tends to be lower in sulphur, and therefore produces reduced atmospheric emissions compared to coal mined in other parts of the UK. This is of benefit to Longannet, which will have completed installation of Flue Gas Desulphurisation (FGD) plant in 2008, when mining at Mainshill commences.

Coal mining contributes £520m pa to the UK economy. In Scotland, it sustains many jobs in rural areas. It also maintains a key skill base, which is in increasing international demand. Development of the site at Mainshill will provide employment for 93 permanent staff and additional contract/temporary staff.

It is planned to increase the biodiversity and nature conservation value of the site through a sensitive restoration and aftercare programme, designed as part of the EIA process.

The proposed development will also provide further local benefits. For example, increased public access to the area will be provided for leisure and amenity use, following restoration.

The Minerals Local Plan also recognises the benefits from mineral workings and suggests *...when assessing the suitability of mineral developments appropriate consideration should be given to potential economic gains.*

1.4 Structure of the Scoping Report

This report is structured in a similar way to the proposed Environmental Statement (ES).

Chapter 2 provides an introduction to the EIA process, and the scoping exercise, of which this report forms part. It also explains the proposed “next steps” in the EIA process.

Chapter 3 describes the approach and methodologies to be used by the topic specialists to assess and quantify any effects on the environment deriving from the proposed development, as described in Section 1.2. This assessment will allow

determination of the significance to the environment as a result of the proposed development.

As Scottish Coal is committed to encouraging comment and input into the EIA process, Section 4 of this report acts as an Invitation to Comment on its content, and to draw to the attention of the EIA team any areas of concern that have been omitted. These can then be included for consideration at the next stage of the EIA.

2. Environmental Impact Assessment and Scoping

2.1 Environmental Impact Assessment

Regulatory Background

Environmental Impact Assessment (EIA) is legislated for under *The Environmental Impact Assessment (Scotland) Regulations 1999*. These Regulations implement the European EIA Directive (85/337/EEC, as amended by 97/11/EC).

The Regulations state that certain classes of development listed in *Schedule 1* require an assessment of the environmental impacts of the development to be submitted as a precondition of planning permission. Paragraph 19 of *Schedule 1* of the Regulations encompasses the proposed development:

...Quarries and opencast mining where the surface of the site exceeds 25 hectares, or peat extraction where the surface of the site exceeds 150 hectares.

A formal screening opinion was not obtained from South Lanarkshire Council, to determine whether an EIA was required, as the listing of the project under *Schedule 1* requires an EIA to be carried out, and an Environmental Statement (ES) to be submitted with the planning Application.

Under the Regulations, baseline survey and impact assessments must be carried out to determine what impacts the proposed development will have on the environment. In addition, mitigation measures to limit the environmental effect should be proposed.

EIA Process

Although the EIA process follows a series of stages, good practice stipulates that it should be both iterative and cyclic, and run in tandem with the project design. As potential adverse effects are identified, the design of the project will be adjusted and mitigation measures proposed.

The key stages for the EIA will be:

- scoping and consultation with South Lanarkshire Council, SNH, SEPA and all other relevant authorities;
- baseline studies/review;
- assessment and mitigation; and
- outputs.

The environmental assessment process will be conducted in accordance with the above regulations as well as best practice guidelines and standards. For example, Planning Advice Note (PAN) 58 published by the Scottish Executive in September 1999 on Environmental Impact Assessment provides background information and guidance on best practice.

Consultation

Consultation is a vital component of the EIA process. This includes consultation with both “statutory” consultees (SEPA, SNH, Historic Scotland etc) who provide technical

advice, and local communities and other stakeholders, who are able to draw attention to local concerns and provide detailed local knowledge.

The consultation process as enacted by Scottish Coal begins in advance of the submission of the planning application, and continues throughout each stage as an integral part of the EIA process and will continue post planning. This ensures that the development design, its environmental assessment and proposed mitigation measures are as robust and complete as possible.

Scottish Coal will assume a proactive role in community liaison and consultation during the course of this project, including the production of a Public Consultation Exhibition (PCE). This will act as a means for local people to express their views, and Scottish Coal intends to use input and legitimate public concerns arising from this PCE to inform the application. This pre-application engagement process is currently being promoted in the *Planning etc. (Scotland) Act 2006* and in PAN81 Community Engagement: Planning with People.

2.2 Scoping Exercise

Scoping is an integral component of the EIA process, to ensure that the investigation of any environmental impacts of the proposed project is robust and comprehensive. It highlights the key issues that are anticipated to be associated with the development and enables the finalisation of the scope of the EIA by taking into account the concerns of stakeholders.

By taking these concerns into account at an early stage of the project, any potential impacts can be investigated and assessed and, where necessary, any practicable, means to avoid them can be built into the overall design. This will act to minimise possible impacts of the proposed development.

Scoping Approach

This report is a “mid point” in the scoping exercise proposed for this project. The initial scope presented herein has been proposed by a series of technical experts, having viewed the site and project descriptions, and carried out preliminary desk-based studies. This has allowed identification of possible impacts of the development and therefore areas requiring further study as part of the EIA.

This scoping report is being issued to South Lanarkshire Council and other consultees to seek approval of the overall impact assessment methodology. Consultee responses will be sought at a meeting, prior to field studies being carried out. Any further issues considered to be worthy of study in the impact assessment will be identified at this meeting, and used to inform the next stages of the EIA. In particular, clarification will be sought on the need for specific cumulative impacts to be assessed, and any further consultations to undertake at this stage of the project.

Therefore, this report is important to ensure that environmental issues are fully addressed and integrated into the EIA and final design of the site.

Information Provided

In order to provide its considered Scoping Opinion, the Council as Planning Authority must be provided with:

- a plan indicating the proposed location of the development – Figure 1;

- a description of the nature and purpose of the development – Section 1.2 and accompanying Figures;
- a description of its possible environmental effects – Chapter 3; and
- a broad indication of the likely scale of these effects – Chapter 3.

These are provided in the Chapters and Figures indicated.

2.3 Next Steps in the EIA

Technical Assessments

The technical assessments for the EIA will be designed to determine the impact of potential effects identified during the scoping stage. These assessments will determine the current baseline environmental conditions, predict environmental impacts deriving from the proposed development, and assess their significance, taking into account the sensitivity of the surrounding environment, any potential receptors and cumulative effects arising from similar developments in the immediate area. Proposals to avoid or reduce these impacts will be made.

Assessments to be carried out and proposed methodologies to be used are described in Section 3 of this report.

Cumulative Impacts

Although individual sites may be judged to have insignificant environmental impacts, or effects on local communities when considered in isolation, these effects may be magnified when considered in conjunction with other similar developments in the region.

SPP16 deals with the issue of cumulative impacts, and seeks to ensure that proposals will not subject any community to a disproportionate burden of negative environmental impacts or perpetuate unacceptable disturbance to a particular community. Paragraphs 13 and 14 of SPP16 state:

...This will be particularly important if there are already two or more operational or consented sites that could raise similar impacts within 5 km of any nearby community. Such sites will include:

- *other opencast coal sites;*
- *sites for the extraction of other minerals; and*
- *landfill sites.*

In such circumstances, an assessment of the likely cumulative impacts of additional workings, if approved, on all communities within a radius of 5 km of the proposed site boundary should be undertaken. This should include site design, likely further increases in road traffic, period of disturbance to communities and the period that the landscape is likely to be disturbed. The developer should demonstrate what measures will be taken to mitigate likely cumulative impacts. Planning permission should be refused if unacceptable impacts cannot be adequately mitigated. Future applications in the same area may be considered where some sites have ceased to operate and have been returned to a condition acceptable to the planning authority.

The EIA Regulations also state that cumulative effects should be taken into account in the preparation of the ES. Schedule 4 (Paragraph 4 of Part I) states that the ES should include:

*...A description of the likely significant effects of the development on the environment, which should cover the direct effects and any indirect, secondary, **cumulative**, short, medium and long-term, permanent and temporary, positive and negative effects of the development.*

Developments considered in the cumulative impacts are shown in Figure 9. Table 10 in Section 3.12 also indicates their current status and approximate distance from the proposed site. Cumulative impacts are considered important as site effects may be magnified when considered in conjunction with other similar developments in the region. The cumulative assessment methodology is described in Section 3.12.

Environmental Statement

The findings of the EIA will be presented in an ES. Information that must be provided in this statement is specified in the *Environmental Impact Assessment (Scotland) Regulations 1999*.

The ES will address the following issues in relation to the proposed development:

- Introduction and Background;
- EIA Process and Scoping; and
- Project Description.

At this stage, it is anticipated that the ES will report on the significance of the impact of the proposed development, and propose mitigation against adverse effects on the following:

- Landscape and Visual;
- Ecology;
- Noise;
- Vibration;
- Air Quality;
- Traffic Impacts;
- Geology and Hydrogeology;
- Hydrology;
- Soils and Land Use;
- Cultural Heritage;
- Socio-economic Impacts; and
- Cumulative Impacts.

The ES will be produced as a single document and be accompanied by a Non-Technical Summary (NTS), a Planning Statement and Technical Assessments as required. The NTS will summarise the key points and recommendations arising from the EIA and seek to present the main findings and proposed mitigation measures in a non-technical and easily understandable manner. Electronic versions of the ES and NTS in pdf format will be made available for distribution to the Council, stakeholders and interested members of the public.

Planning Application and Submission

The ES will be submitted to South Lanarkshire Council, for consideration along with the Planning Application, following the relevant Notification and Certification.

The package will include a detailed Planning Statement that will consider and justify the proposals in the context of the extant Development Plan and other material considerations.

Implementation and Monitoring

The ES will include details of proposed restoration and monitoring. Any specific requirements will be agreed with South Lanarkshire Council during the EIA process.

3. Scope of Works Proposed

3.1 Landscape and Visual Impact Assessment

Introduction

The Landscape and Visual Impact Assessment (LVIA) will consider the potential effects of the development upon:

- individual landscape features and elements;
- landscape character and quality (condition); and
- visual amenity and the people who view the landscape.

Distinction Between Landscape and Visual Impacts

Landscape and visual effects are two distinct but related areas, which will be assessed separately in accordance with the approach outlined below. Landscape and visual impacts do not necessarily coincide and can be beneficial or adverse. A clear distinction will be drawn between landscape and visual impacts as follows:

- landscape impacts relate to the effects of the proposals on the physical and other characteristics of the landscape and its resulting character and quality; and
- visual impacts relate to the effects on views experienced by visual receptors (e.g. residents, footpath users, tourist's etc) and on the visual amenity experienced by those people.

Consultations and Guidance

A Landscape and Visual Impact Assessment of the proposed scheme will be undertaken by a Chartered Landscape Architect with experience of similar types of development. The assessment will be undertaken in accordance with best practice outlined in published guidance:

- *Guidelines for Landscape and Visual Impact Assessment*, 2nd Edition (2002) Landscape Institute and the Institute for Environmental Management and Assessment;
- *Landscape Character Assessment Guidance for England and Scotland* (2002) The Countryside Agency and Scottish Natural Heritage; and
- *Guidelines for Environmental Impact Assessment* (2004) Institute for Environmental Management and Assessment.

Key statutory bodies such as SNH and South Lanarkshire Council will be consulted at the outset of the process to establish the scope of the assessment.

These consultations will be undertaken to clarify the key issues for the landscape and visual impact assessment, such as location of potential sensitive receptors and important views into and out of the site. Other issues will be to establish any technical requirements, and confirm the study area. A Zone of Theoretical Visibility (ZTV) diagram (Figure 10) has been produced, identifying proposed viewpoints and points for photomontages. Agreement of these will be sought with consultees.

Collaboration with Cultural Heritage Assessment

There will be a certain degree of overlap in the landscape assessment with the assessment carried out by the Cultural Heritage specialists. This is due to the significance in the landscape of several cultural heritage resources, and the value of the existing visual resource in the setting of cultural heritage sites.

To avoid omission or duplication of work, it has been agreed that the Landscape and visual assessment will cover:

- historic aspects of the Landscape, including Inventory Historic Gardens and Designed Landscapes; and
- conservation areas.

The Cultural Heritage assessment will cover:

- archaeological sites including scheduled ancient monuments and undesignated sites;
- historic Buildings including listed buildings; and
- direct impacts and impacts on setting of these sites and buildings (if visualisations are required, these will be prepared by the landscape team).

Collaboration between experts will be required for:

- buildings that are component parts of historic designed landscapes; and
- selection of viewpoints for visualisations.

Methodology

The Landscape and Visual Impact Assessment will be undertaken in a series of stages:

- baseline data collection via desk-top, consultation and fieldwork;
- description of the baseline landscape character and visual amenity of the site and surrounding area to identify relevant landscape and visual receptors (including key viewpoints) and determine their sensitivity to change;
- description of the magnitude of change in the landscape and visual amenity as a consequence of the proposals;
- description of the potential landscape and visual impacts arising from the proposals both during operation and after restoration, including temporary and permanent effects, direct and indirect effects, short term and long term effects;
- development of mitigation proposals which will avoid or reduce adverse landscape and visual effects or provide compensation where unavoidable, and where possible enhance and safeguard beneficial effects;
- identification of residual impacts on the landscape and visual resource; and

- evaluation of the significance of landscape and visual impacts arising from the proposals both during operation (winter and summer) and after restoration (at times agreed with the Council).

A key element of the LVIA process involves establishing the sensitivity of the baseline landscape and visual receptors. Criteria thresholds have been established to determine landscape and visual sensitivity. These are for general guidance only and the assessment will also rely on professional judgement, which will be clearly explained where necessary in the ES.

The development of the scheme proposals and the EIA is an iterative process. Baseline information regarding landscape features and sensitive visual receptors, and the likely change in the landscape character and visual amenity of the site and its surroundings, will be used to identify potential impacts and inform the final scheme as appropriate. Elements of the proposals guided by this process will include the design and location of overburden, storage and temporary screen mounds, orientation of the working face, location of works area and lighting.

Mitigation measures will be developed in tandem with the proposals to minimise adverse impacts as part of the iterative design process. Options for screening various components of the scheme will be investigated and adopted as mitigation measures where appropriate.

Criteria thresholds for assessing the degree of change as a result of the scheme have been established and the final layout of the scheme will be reviewed to ascertain the magnitude of change in the landscape and in views. Visual impact on historic features of interest will also be assessed which will in turn inform the cultural heritage assessment of impact on setting of such features. Where appropriate the assessment will consider cumulative landscape and visual impacts including those arising from adjacent and nearby proposals that have planning consent or which are under construction or operation.

Landscape Assessment Methodology

Baseline Data Collection

The scope of the assessment relates to a 5 km study area as appropriate coverage to consider potential visual and cumulative impacts.

Baseline information on the landscape will be collated including landscape character, designations, Tree Preservation Orders, Public Rights of Way, and other features of note will be gathered through a combination of desk studies, consultation and field surveys. Review of documents will include:

- relevant planning policy documents;
- existing landscape character studies;
- OS maps at 1:50 000 and 1:25 000 scales; and
- Glasgow and the Clyde Valley Landscape Assessment.

In order to describe the character and condition of the landscape, the immediate study area will be classified into local landscape character units and for each landscape character unit, the key characteristics, condition and value attached to the area will be described.

Landscape Sensitivity

A judgement regarding the sensitivity of the landscape will be made based on the criteria in Table 4.

TABLE 4 – LANDSCAPE SENSITIVITY CRITERIA	
Sensitivity	Criteria
Low	<ul style="list-style-type: none"> • A landscape of few positive characteristics, poor condition or one that is not particularly valued for its scenic quality. • The character of the landscape, existing land use, pattern and scale are tolerant of change and offer considerable opportunities for successful mitigation and landscape enhancement. • The landscape may be a poor example of a locally abundant landscape type.
Medium	<ul style="list-style-type: none"> • A landscape that exhibits some distinctive characteristics but may have been slightly degraded or one that is moderately valued despite its alteration. • The character of the landscape, land use, pattern and scale offers some opportunities for successful mitigation and landscape enhancement. • The landscape may be a poor example of a locally scarce landscape type or a good example of a locally abundant landscape type. • Locally designated landscapes.
High	<ul style="list-style-type: none"> • A landscape of particularly distinctive characteristics, maintained in a good condition or one that is particularly valued for its scenic quality. • The character of the landscape, existing land use, landscape features, pattern and scale are intolerant of change and offer few opportunities for successful mitigation or landscape enhancement. • The landscape may be a good example of a locally scarce landscape type. • Nationally designated landscapes.

Magnitude of Landscape Change

A judgement regarding the magnitude of change to landscape features and character will be made based on the criteria in Table 5.

TABLE 5 - MAGNITUDE OF LANDSCAPE CHANGE CRITERIA	
Magnitude of change	Criteria
High	<ul style="list-style-type: none"> • Total loss of or severe damage to key characteristics, features or elements of the landscape • Introduction of highly unnatural or unattractive features into the landscape which do not fit well with the existing character • Major improvement or removal of several notable existing features or characteristics that significantly detract from the existing character • Introduction of major new features or elements into the landscape which significantly improve the existing character
Medium	<ul style="list-style-type: none"> • Partial loss of or damage to key characteristics, features or elements of the landscape • Introduction of some unnatural features into the landscape but which may be accommodated without major detriment to the existing character. • Moderate improvement or removal of some existing features or characteristics that currently detract from the existing character • Introduction of some new features or elements into the landscape which moderately improve the existing character
Low	<ul style="list-style-type: none"> • Minor loss of or alteration to one or more key characteristics, feature or elements of the landscape • Introduction of minor unnatural features into the landscape which do not detract significantly from the existing character • Minor improvement or removal of a small existing feature or characteristic that slightly detracts from the existing character • Introduction of minor new features or elements into the landscape which slightly improve the existing character
Negligible	<ul style="list-style-type: none"> • No notable loss or alteration of any key characteristics, features or elements of the landscape

TABLE 5 - MAGNITUDE OF LANDSCAPE CHANGE CRITERIA

Magnitude of change	Criteria
	<ul style="list-style-type: none"> No notable new features introduced into the landscape

Visual Assessment Methodology

Zone of Theoretical Visibility

The Zone of Theoretical Visibility (ZTV) is presented in Figure 10. For the purpose of this exercise, the major woodland areas within the surrounding area have been included in the model at an average height of 15 m, reflecting the average height of mature coniferous and mixed woodland. The ZTV of a scheme defines the broad scale area from within which it may be possible to see any part of the proposed works and helps to establish the potential for sensitive visual receptors. The site will not be visible outside this area or will be very difficult to perceive.

The ZTV map tends to overestimate the extent of the visibility, both in terms of the area from which the project is visible, and the extent of the proposal that is visible. It should be considered as a tool to assist in assessing theoretical visibility of the proposal and not to measure the visibility.

However, there will still be pockets within this zone from which there are no views of the study area due to the local screening effects of vegetation or other features such as fencing and buildings.

Landscape features, which form visual barriers and restrict views towards parts of the study area, such as landform, settlements and woodland, can then be evaluated and significant barriers identified to refine the baseline visibility of the proposals. Visual detractors and focal points will also be identified.

Key Viewpoints

Within the extent of the ZTV, it would not be practical to illustrate the visual impact on every individual visual receptor affected by a scheme. Representative viewpoints will be used to assess the impacts on the different range of views towards the site. The provisional list of Key Viewpoints presented in Table 6 has been produced following desktop digital modelling of an initial ZTV. The locations of the Key Viewpoints are indicated on Figure 10.

The number and location of viewpoints have been discussed with SNH, and their comments have been incorporated into the proposed viewpoints. Viewpoints will be illustrated photographically using a 50 mm lens SLR camera or digital camera and the site boundary and significant features such as overburden mounds and plant will be identified together with landmarks and features in the surrounding area. Photomontage visualisations of the proposed development from a selected number of these viewpoints will be provided to illustrate the “before, during and after” stages of the proposals. Suggested photomontages are given on Figure 10, but these will be finalised once the viewpoints have been assessed.

TABLE 6 – PROVISIONAL KEY VIEWPOINTS

No	Viewpoint	Distance from Site Boundary	Directions Towards Site	Viewpoint Type	Grid Ref
1	Edge of Douglas	0.9km	East	Residential	283710, 631110

TABLE 6 – PROVISIONAL KEY VIEWPOINTS					
No	Viewpoint	Distance from Site Boundary	Directions Towards Site	Viewpoint Type	Grid Ref
2	A70	1.8km	South-west	'A' road – vehicle	286450, 634070
3	M74 northbound	1.5km	North	Motorway – vehicle	286781, 629316
4	Maidengill	1.2km	North-west	Public Right of Way – pedestrian	286908, 630173
5	Parkhead Hill	0.2km	North-west	Public Right of Way – pedestrian	285950, 630520
6	Douglas Dale Street	1.2km	North-east	Residential	283680, 630438
7	Castle Douglas	0.7km	South-east	Public recreational – pedestrian	284130, 631810
8	South Lodge	0.4 km	East	Residential on A70	284515, 631289
9	Lady Home Hospital	1.0 km	East	Institution on edge of Douglas	284099, 630935
10	Bellfield	4.1 km	South-east	Residential	282390, 634930
11	Nether Fieldhouse	3.2 km	South-east	Minor road – vehicle	284500, 635410
12	Longmoor Hill	3.8 km	South-west	'B' road – vehicle	288740, 634620
13	Douglas Water	4.0km	South-west	Residential	287390, 636280
14	Hagshaw Hill Wind Farm	5.9km	West	Public Right of Way and vantage point	279220, 630770

Visual receptors, including the Key Viewpoints, will be recorded in a table detailing the following information:

- nature and location of the visual receptor/viewpoint;
- direction and angle of the view towards the scheme;
- distance from the scheme; and
- nature and key components within the baseline view including any details about existing visual barriers.

Visual Sensitivity

The sensitivity of visual receptors will depend on a number of factors including:

- location and context of the viewpoint;
- expectations and occupation of the visual receptor;
- number of receptors being represented by the viewpoint; and
- distance from the scheme.

The extent of visual intrusion by any existing development may also affect the sensitivity of visual receptors in this vicinity. A judgement will be made regarding the sensitivity of baseline receptor views based on a combination of these factors, as indicated in Table 7.. The sensitivity of the visual receptors is given as a guide only and other factors may also affect their sensitivity.

Sensitivity	Criteria
Low	<ul style="list-style-type: none"> • Users of industrial sites, offices and commercial properties. • Users of A and B roads (except on key tourist trails). • Users of active recreational and leisure facilities where the focus is on the activity and not the landscape. • Community buildings in an urban location.
Medium	<ul style="list-style-type: none"> • Residential properties with restricted views, distant and panoramic views, oblique views, and limited/partially screened views towards the scheme or surrounded by urban development. • Community buildings with a rural view. • Users of Public Rights of Way and local 'C' class roads, unclassified lanes, tracks used by non-motorised users and users of outdoor recreational facilities and public open space with restricted views towards the scheme, distant views or with views of existing urban development. • Users of local and regional tourist routes ('A' and 'B' class roads)
High	<ul style="list-style-type: none"> • Residential properties with predominantly open rural views from the curtilage, ground floor and upper floors directly towards the scheme. • Users of Public Rights of Way and local 'C' class roads, unclassified lanes, tracks used by non-motorised users which traverse open countryside with predominantly open views towards the scheme. • Users of recognised vistas and designated viewpoints. • Users of outdoor recreational facilities and public open space with open views towards the scheme at close proximity.

Magnitude of Visual Change

A judgement regarding the magnitude of change to visual amenity and Key Views will be made based on the general criteria presented in Table 8.

Magnitude of Change	Criteria
High	A significant deterioration or improvement in the existing view
Medium	A noticeable deterioration or improvement in the existing view
Low	A barely perceptible deterioration or improvement in the existing view
Negligible	No discernible deterioration or improvement in the existing view

Evaluation of Landscape and Visual Impact Significance

The evaluation of residual impact significance will take into account all agreed landscape and visual mitigation measures. The significance of impacts will be graded by relating the sensitivity of the baseline landscape or view to the magnitude of change as a result of the proposed development. The matrix presented in Table 9 outlines approximately how the significance of adverse and beneficial impacts will be determined. The criteria thresholds are for approximate guidance only, the assessment of landscape and visual impact significance will rely upon clearly explained professional judgement.

Sensitivity of Landscape/View	Magnitude of Change in the Landscape/View			
	High	Medium	Low	Negligible
High	Substantial	Substantial/Moderate	Moderate/Slight	Neutral
Medium	Substantial/Moderate	Moderate	Slight	Neutral
Low	Moderate/Slight	Slight	Slight	Neutral

Presentation of the LVIA in the Environmental Statement

The LVIA chapter of the ES will include the following sections:

- an outline of the methodology used;
- a description of the criteria thresholds used for assessing the baseline sensitivity of the landscape and visual amenity, the magnitude of change and the significance of impacts;
- a brief review of landscape policies and designations;
- a description of the baseline landscape and views including identification of any independent changes in the environment that may affect the landscape and views. The existing landscape will be classified into distinct character units (local landscape character areas). Their characteristics will be described and the sensitivity of each will be noted. Visual receptors will be identified and the sensitivity of each will be noted;
- identification of potential landscape and visual impacts;
- a discussion of the agreed mitigation measures and a comment on the alternatives considered; and
- an assessment and evaluation of the significance of residual and cumulative impacts on the landscape and views and on landscape planning, designations and policy.

The LVIA will be supplemented by tables identifying landscape and visual receptors, and by plans and photographs illustrating the baseline situation and assessments, including:

- topography and drainage map;
- landscape policies, designations and resources map;
- map showing Landscape Character Areas from published landscape character assessments;
- visual analysis map (identifying visual receptor locations, visual barriers, detractors and features);
- Zone of Theoretical Visibility map (as in Figure 10 of this report);
- mitigation proposals and Restoration Plan;
- Visual Impact Assessment Plan(s): Operation;
- Visual Impact Assessment Plan: After Restoration;
- photographs from Key Viewpoints, as agreed with SNH and South Lanarkshire Council; and
- photomontages from up to 4 agreed viewpoints (potential photomontage points are indicated in Figure 10).

3.2 Ecological Assessment

Key Issues Anticipated

The proposed site has some existing ecological interest. Part of the site is coniferous plantation, with the remainder comprising agricultural fields. Ecological surveys have been undertaken at appropriate times of year. These include:

- Phase 1 habitat survey;
- breeding bird survey;
- black grouse survey;
- red squirrel survey;
- water vole survey; and
- bat survey.

Preliminary results are listed below.

Phase 1 Habitat Survey

The total assessment area is around 164 ha. The assessment area is larger than the proposed application area (136 ha), to take in surrounding habitats around the proposed site that could be affected by the proposed operations.

Two thirds of the assessment area is under spruce plantation of variable age, with improved grassland and arable (crops in rotation) constituting about 28% of the site. Small fragments of other habitats constitute the final 6%, with broadleaved woodland plantation being the greater part and semi-natural broadleaved woodland and marshy grassland also present.

There are no statutory nature conservation designations on the site.

Breeding Bird Survey

Within the woodland, 32 species were recorded within the 100 m radius of sampled points, of which 28 showed behavioural evidence of breeding. Of these, common crossbill, bullfinch and song thrush are protected, and Valued Ecological Receptors. However, low numbers at the site suggest the species is not locally important.

Four species were particularly abundant within the open farmland. These were goldcrest, chaffinch, willow warbler and wren. None of these were considered Valued Ecological Receptors, due to local numbers.

Therefore, no breeding birds are regarded as being Valued Ecological Receptors at this site, though there is some breeding bird interest.

Black Grouse Survey

No black grouse were seen or heard during the three survey visits nor were any droppings found. Black grouse is therefore not a Valued Ecological Receptor at this site.

Red Squirrel Survey

Most of the forestry is immature with discrete stands of Scot's pine providing cones along the Eggerton Burn and along some boundaries. The stands of trees bordering the B7078 were notably more mature and had some Scot's pine. This area will be of most interest to red squirrels.

One or two dreys were noted in the south-east of the site within this area of older plantation and further work will be carried out to determine the status of these dreys.

23 hair tubes were placed systematically around the site. Of these, 21 were recovered, 3 containing hair (likely to be grey squirrel). Therefore it was considered

that red squirrel does not occur in any significant number at the site and therefore is not regarded as Valued Ecological Receptor.

Water Vole Survey

No evidence was found of water voles. The small watercourses on the site were not ideal habitat since they had moderately fast running water and stoney substrate. Equally, the forestry ditches were frequently dry. Water voles are therefore not regarded as a Valued Ecological Receptor at the site.

Bat Survey

A daytime assessment of the suitability of habitats concluded that the site as a whole provides marginal habitat for bats because dense upland conifer plantation is generally unsuitable for roosting. Bat activity was low, even where bats were recorded, at the western and northern edge of the plantation where there are larger deciduous trees.

The records of four species (common pipistrelle, soprano, a brown long-eared bat and a Natterer's bat), indicates that there is good quality bat habitat at the edge of the site and adjacent to it, and the common pipistrelle is regarded as of local importance and therefore a Valued Ecological Receptor.

Consultation

Pre-application consultations will be held with South Lanarkshire Council Ecologists, SNH and the RSPB. Further consultation to determine any additional surveys to be carried out and to discuss effects and mitigation will be undertaken throughout the EIA process.

Assessment Approach

Baseline Surveys

Guidelines for surveys produced by SNH, RSPB and other conservation organisations were followed during the surveys undertaken. These initial surveys provided an indication of the baseline conditions of the environment. The results of these surveys will be incorporated into the ES.

Impact Assessment and Mitigation

The impact assessment will comprise a review of the existing data, in conjunction with the Council and other ecologists. Further surveys considered necessary to complete an assessment of the impact of the proposed development on the ecology of the site will be carried out, as agreed with South Lanarkshire Council.

Potential cumulative impacts in conjunction with other developments within the surrounding area will be identified and assessed, and mitigation measures recommended where appropriate. Mitigation will also be agreed following consultation.

3.3 Noise

Key Issues Anticipated

Environmental Noise issues associated with the proposed development may include noise from plant associated with:

- soil stripping;
- overburden removal;
- coaling (including blasting);
- backfill;
- restoration;
- haulage on internal haul roads; and
- site restoration.

These potential impacts from the opencast operations will largely depend on:

- the amount and nature of plant used;
- the rate of excavation;
- the orientation of the mine cut;
- the depth of excavation; and
- the proximity to sensitive receptors.

There are several properties close to the site boundary, so potential noise impacts require careful consideration with regard to how the minerals are successfully exploited while meeting current planning standards.

The proximity of sensitive receptors to the site boundary means that the assessment will need to satisfy the Planning Authority that the proposed scheme can meet tight planning standards, while remaining a commercially viable scheme.

Consultations

An initial consultation with South Lanarkshire Council will be conducted, to confirm their requirements for baseline noise assessment and their noise criteria for adjacent dwellings. The noise prediction methodology will also be agreed. In addition, it will be confirmed with the Council that:

- noise assessment will need to consider at least four main operational scenarios as well as soil stripping; and
- transport noise assessment on the road network of generated HGV traffic for similar operations within the vicinity of Mainshill will be sufficient for the assessment, and no further data need be collected.

Liaison will also take place with SNH to identify any sensitive ecological sites that may be affected by noise from the proposed mine.

Confirmation will be sought as to whether a cumulative impact assessment is required, to consider noise from other operations, and which operations this should cover.

Assessment Approach

The baseline surveys shall include a site walkover to identify sensitive receptors, and confirmation of topographical features. Similar operations elsewhere within the Scottish Coal opencast portfolio will also be reviewed, to obtain up to date noise levels from plant and equipment.

Subject to the outcome of the consultation process and the site walkover, ambient noise monitoring will be conducted at receptor locations near the proposed site. It is proposed that monitoring sites at Coalgill Cottages (south-west corner), Parkhead Cottage (beside B7078), and Newmains Farm (by residential properties) will be used.

Background noise monitoring will be carried out for the properties within the vicinity of the site, using type 1 instrumentation in accordance with the requirements of BS 7445 1991 & 2003. The data will be in accordance with PAN 50 – *Controlling the Environmental Effects of Surface Mineral Workings* (1996). Measurements will be taken at the proposed above receptors, using hand-held monitors for 1-2 hours.

In addition, unattended noise monitors will be deployed at the nearby sensitive receptors to the site for a minimum period of 1 week (at locations to be agreed with South Lanarkshire Council). The noise monitors will measure background and ambient noise levels at regular intervals during the assessment period to obtain sufficient data in order to characterise the existing noise environment. Meteorological data including wind speed, wind direction and precipitation will also be monitored during the survey period.

Noise levels resulting from the operation of the development will be predicted at the closest sensitive receptors using noise-modelling software (following agreement with the Council). Noise levels will be predicted in accordance with planning guidance using recognised noise propagation models and favourable propagation conditions resulting in conservative, or 'worst case' predictions.

The results of the noise assessment will be assessed against noise criteria derived from the baseline noise survey data and a review of the relevant standards and guidelines. A review of the working method will be carried out, and where necessary, indicative mitigation measures such as noise barriers and bunds will be identified. This will ensure that the working scheme will be consistent with planning requirements. The assessment will not include the detailed design of mitigation options which may be subject to relevant planning conditions.

The ES noise chapter will be prepared detailing the assessment carried out and its findings. It will present the results of the baseline noise survey, discuss the assessment approach and detail predicted noise levels for the operation of the site. Noise contour plots will be provided along with indicative mitigation recommendations where required.

The ES noise chapter shall also include all necessary graphics, tables, calculations and other outputs necessary to allow independent third party review.

3.4 Vibration

Key Issues Anticipated

Blasting is used in opencast mining operations to loosen and fragment rock in the strata sections between coal seams. The controlled detonation of an explosive charge has the potential to produce both ground and air vibration.

The vibration study will assess the impact of these effects on nearby sensitive residential and other receptors. Instantaneous explosive charge weights used at a given separation distance will be recommended to ensure that current planning criteria are satisfied.

Consultations

An initial consultation with South Lanarkshire Council will be conducted, to confirm their vibration criteria for adjacent dwellings.

Liaison will also take place with the owners of utilities to identify any sensitive services that may be affected by blasting on the proposed site.

Confirmation will be sought as to whether a cumulative impact assessment is required, to consider vibration from other operations, and which operations this should cover.

Assessment Approach

The site geology will be studied to identify the areas where blasting may be required and the likely instantaneous explosive charges that will be utilised.

Relevant blast vibration data, from blast monitoring on existing opencast sites and taken from Vibrock's database, would be used to generate a blast regression curve for the proposed development. From this, a table of maximum charge weights for any given distance would be calculated for the Council's vibration criteria.

Predictions of likely ground vibration effects at nearby dwellings and other sensitive receptors would be made for blasting operations at various phases within the progressive working of the site.

Recommendations to minimise and/or mitigate potential problems associated with ground vibration as a result of blasting operations would be identified where necessary.

3.5 Air Quality

Key Issues Anticipated

Air Quality issues associated with the proposed development will primarily be related to dust impacts and traffic related emissions. These issues, including fugitive dust, gaseous pollutant emissions and PM₁₀ impacts, are likely to arise from the same phases of development as considered for noise, and their significance dependent upon similar operational factors.

The potential impact from the proposed opencast operations is likely to depend on the volume of materials being excavated, the area of disturbed ground and the proximity to sensitive receptors.

Generally, dust from coal extraction and vehicle exhaust emissions on mining sites tend to be minor sources of emissions. Most of the dust tends to arise from the transport of material within the site, from the entrainment of dusts on internal haul roads.

Consultations

An initial consultation with South Lanarkshire Council and SEPA will be carried out to confirm the proposed dust assessment methodology. Scottish Coal carry out dust monitoring at their existing sites, to ensure levels at site boundaries are within consented limits. The nearest existing operational opencast site is Glentaggart OCCS, approximately 3 km south-west of Mainhill. It is proposed to use this monitoring data as baseline data, as it will provide a "worst case" local baseline level.

Requirements for any additional baseline dust deposition and PM₁₀ measurements will be confirmed with the Council. In addition, the methodology to be followed for the assessment of traffic related emissions will be agreed.

SNH will also be consulted to identify any sensitive ecological sites that may potentially be affected by dust from the proposed site.

Assessment Approach

The baseline assessment will involve a site walkover to identify sensitive receptors, and confirmation of topographical features. Meteorological data for the nearby Drumalbin monitoring station will be obtained, to establish prevailing local weather conditions. South Lanarkshire Council's Air Quality Review and Assessment documents will be reviewed, as will relevant plans, correspondence and other data associated with the proposed extraction application. This will allow the current air quality in the area to be assessed, with specific regard to the findings of the Review and Assessment process and the results of local monitoring.

Air Quality data is already available for Glentaggart OCCS, as mentioned above, and this will be used to estimate baseline levels – although actual levels at Mainhill are likely to be slightly lower, as the Glentaggart monitoring site is on the edge of an operational coal mine. At this stage, it is proposed that a qualitative assessment for dust and PM₁₀ be taken. Therefore, recommended guidance will be used to estimate the likely levels of increased dust arising from the proposed OCCS.

The development is likely to extend beyond 2010 when the new Scottish Air Quality Objectives are introduced. The requirements for a more detailed baseline assessment will depend on the proximity of receptors and the views of South Lanarkshire Council.

Operational phase traffic impacts will be assessed by calculating existing and future air pollution with and without the development using the Design Manual for Roads and Bridges (DMRB) screening assessment.

A risk based qualitative assessment of the potential dust impacts from the proposed mineral extraction activities will be carried out, which will detail how dust emissions could be affected by local topography, and microclimate conditions.

The Air Quality Assessment shall assess the proposals in terms of the Newcastle Report, SPP16 (including consideration of diesel emissions), PAN50 and the air quality objectives for 2010. The air quality impact assessment shall include a review of the suggested dust mitigation measures associated with the scheme and suggest further measures that might be necessary to minimise dust impacts.

3.6 Traffic Impacts

An underlying assumption in this assessment will be that the traffic and transportation impacts associated with coal transport from this region to Ravenstruther rail terminal are likely to decrease, compared to the current position. This will be considered on the basis that the coal traffic from Glentaggart OCCS will be replaced by coal traffic from this proposal. It is considered that a full transport assessment will not be required.

Key Issues Anticipated

The transportation elements of the assessment will comprise a review of road traffic accident records, which considers the potential transport and safety implications of the proposed development on the local highway network.

Although the development of any opencast coal site has potential to impact upon the traffic status of roads surrounding the site, initial reviews of the development planned at Mainhill suggest that this will not be detrimental at the site. The road used to transport coal is currently used for coal traffic from Glentaggart OCCS, and is therefore proven to be appropriate for heavy goods vehicles (HGVs). Numbers of vehicles will remain as at present, as haulage from Glentaggart will be replaced by haulage from Mainhill – simply travelling a shorter distance along the road network to the M74.

However, the impact of these traffic movements on the adjacent highway network will be appraised and mitigation measures will be identified where necessary. The analysis will quantify the levels of HGV and other traffic and will assess the impacts cumulatively and separately.

There will be no HGV traffic passing through Douglas, and the routing of HGVs will not be through any sensitive residential areas. The existing consented haul route for Glentaggart OCCS also does not pass through sensitive areas.

Consideration will also be given to the impact of staff and visitor traffic movements to and from the coal reserve, and again, if impacts on the adjacent network would be detrimental, mitigation measures will be identified. Likely staffing levels at the site, and key shift patterns will be determined at the outset of the assessment.

Consultations

Consultation with South Lanarkshire Council will take place throughout the preparation of the ES.

The consultation process will include gathering of traffic flow and accident data on the adjacent local road network, as held by the Council and the police.

Assessment Approach

A site visit will be carried out, to observe existing conditions, carry out on-site measurements (highway geometries, sight distances etc), and provide supporting photographic evidence as necessary.

All relevant data will be processed and analysed, and anticipated trip generation will be calculated for both HGV and staff/visitor trips.

The capacity of the existing highway network to support the development will be assessed using Ordnance Survey (OS) data, existing traffic data, and the proposed site production and staffing levels. Comment on the likely impact of the site's operation upon road safety will be made.

The potential effects of the development proposals will be assessed and recommendations made for mitigating any effects where required.

The results of the traffic review will be presented within the ES, and any technical data as a technical appendix.

3.7 Geology and Hydrogeology

Key Issues Anticipated

The *Groundwater Regulations* 1998 prohibit List I substances from entering groundwater either directly or indirectly. The discharge of List II substances either directly or indirectly must also be limited or controlled. The risk of groundwater contamination from List I and II substances exists on site from use and storage of fluids such as oils, fuels and antifreeze at the site and from leaching from disturbed minerals.

Other hydrogeological issues that will be considered include:

- potential dewatering at the proposed site;
- the presence of any designated or non-designated water dependent features in the groundwater and hydrological catchment area of the proposed site (i.e. receiving rivers, wetlands, springs, boreholes);
- impacts on the quality of controlled waters or supported water features; and
- potential for a deterioration in groundwater quality following the cessation of work and proposed restoration.

The likely impact of activities at the proposed site will be determined following a risk-based approach. Mitigation measures will be suggested in line with current accepted remedial techniques, industry best practice and appropriate regulatory guidelines.

Consultations

It is anticipated that there will be a requirement for substantive discussions with the local authority, SEPA and SNH as part of this study in order to best determine risks and opportunities on the site.

Assessment Approach

The following baseline work will be carried out:

- interrogation of existing borehole data held by British Geological Survey (BGS);
- interrogation of other borehole records if available; and
- reference to geological and hydrogeological maps.

A preliminary risk assessment will be carried out considering the source, pathway and receptor of potential pollutants, which will be used for the identification of potential mitigation measures, such as control of source pollutants and removal of pathways.

The assessment is not anticipated to include a detailed site investigation, although on-site monitoring may have to be carried out if data available is limited. This will involve installation of groundwater monitoring boreholes in order to establish groundwater levels, hydraulic gradients, water balance and water quality.

The assessment will be carried out in accordance with the following documents and in order to comply with the following legislation:

Guidance

- Mineral Extraction: Code of practice for the owners and operators of quarries and other Mineral Extraction sites, 2006, under the *Water Environment (Controlled Activities) (Scotland) Regulations 2005* (CAR, 2005);
- SPP16 Opencast Coal;
- PAN 50 Controlling the Environmental Effects of Surface Mineral Workings;
- British Geological Survey hydrogeological Map of Scotland (1:625 000);
- British Geological Maps Solid and Drift; and
- SEPA Groundwater Vulnerability Map of Scotland (1:525 000).

Legislation

- *Control of Pollution Act (COPA) 1974* (as amended) – superseded by CAR, 2005;
- *The Groundwater Regulations 1998* - superseded by CAR, 2005;
- *Water Environment (Controlled Activities) (Scotland) Regulations 2005*; and
- *Water Environment and Water Services (Scotland) Act 2003* (Water Framework Directive).

3.8 Hydrology

Key Issues Anticipated

Contamination of Surface Water

The potential for contamination of watercourses, on the site and downstream of the site exists from a number of sources including:

- runoff arising from exposed ground;
- extensive stream realignment;
- leaching of metals from pyrite minerals; and
- spillage or leakage of chemicals and fuels used during operations.

The Douglas Water is a potentially sensitive receptor due to the existing high water quality, fisheries and recreational interests.

Realignment of Watercourses

The Eggerton Burn will not be affected by the proposal and its route will be maintained. However, three other minor burns may require realignment and subsequent reinstatement to ensure no deterioration of biological, chemical or morphological quality. This will be confirmed as part of the baseline assessment.

Water Resources

Consultation with Scottish Water and South Lanarkshire Council will be carried out to identify public and private drinking water supplies in the vicinity. Supplies will be identified and any risks to the quality or quantity of the water supply will be assessed. For example, it is known that a spring near the centre of the site supplies drinking water to Newmains Farm and other properties, so the integrity of this supply must be maintained, or an alternative source provided. Supplies considered to be potentially at risk from the opencast activities will be visited and their sources established.

Flooding

Consultation with SEPA and South Lanarkshire Council will be carried out to establish whether any existing flooding issues exist within and down stream of the site. Reference will also be made to SEPA's Indicative River Flood Map. If the risk of flooding exists, site mitigation measures and controls, such as retention ponds will be identified to control runoff patterns. At this stage, it is not anticipated that a detailed flood risk assessment will be required.

Consultations

Consultation will be carried out with the following statutory consultees:

- Scottish Environment Protection Agency (SEPA);
- District Salmon Fisheries Board where applicable;
- Scottish Water;
- Scottish Natural Heritage (SNH); and
- South Lanarkshire Council.

Non-statutory consultees, such as local angling groups will be identified and consulted as appropriate.

Specific issues will be developed in consultation with site engineers, and with the consultees.

Assessment Approach

In order to establish the existing hydrological conditions at the site, an initial desktop information gathering exercise will be carried out followed by site surveys, in order to verify the following baseline information:

- identification of catchment areas and flow data;
- site drainage patterns;
- location of springs and flushes;
- details of ground waters;
- location and nature of public and private water abstractions;
- existing water quality on site and downstream of the sites boundary;

- soil associations and distribution on site, including identification of areas vulnerable to erosion or sediment deposition;
- interrogation of existing borehole data held by British Geological Survey;
- interrogation of other borehole records held by Scottish Coal; and
- analogue data from other comparable opencast sites.

This information will be used as a basis for further assessment of the:

- impact of the potential realignment of the minor burn in terms of the *Water Framework Directive*;
- contamination of surface waters, namely the Eggerton Burn, the three other minor burns and Douglas Water;
- potential contamination of groundwaters via site activities and minewater;
- impacts on private water supplies, public water supplies and foul drainage infrastructure;
- surface water drainage – existing surface water drainage, drainage arrangements during site working and long term changes to drainage system including cumulative effects with existing excavations;
- control of surface water ingress;
- treatment/settlement and discharge of contaminated water;
- aspects of habitat enhancement proposals relating to hydrology; and
- conceptual design for mitigation of OCCS drainage.

Information from existing observation wells will be used in establishing groundwater levels, hydraulic gradients, water balance and water quality. This information will be used to assess the potential effects of the proposed development on water resources.

This assessment will involve the following:

- consultation with relevant statutory and non-statutory bodies to obtain details on the existing hydrological issues of the site and its surroundings;
- detailed desk studies and site visits to establish the existing baseline situation on the site (Scottish Coal will obtain water samples and provide RPS with the water chemical analysis);
- evaluation of the potential impacts of the proposed OCCS and the effect these could have on the current site conditions;
- evaluation of the significance of these impacts by consideration of the vulnerability of the site, the potential magnitude of these effects and the probability of these effects occurring;
- identification of possible measures to avoid and mitigation against any potential adverse impacts resulting from the development;
- assessment of residual impacts taking into account mitigation measures; and
- assessment of cumulative impacts on water quality, flow regimes, river morphology and catchment pressures deriving from other OCCS workings in the region.

The assessment will be carried out in accordance with the following documents and in order to comply with the following legislation and guidance:

- The *Water Framework Directive (200/60/EC) (WFD)*;
- *EC Dangerous Substances Directive (76/464/EEC)*;
- The *Water Environment and Water Services (Scotland) Act 2003*;

- *Control of Pollution Act (As Amended) 1974* (as amended) – superseded by CAR, 2005;
- The *Water Environment (Controlled Activities)(Scotland) Regulations 2005* (CAR, 2005);
- The *Control of Pollution (Oil Storage) (Scotland) Regulations 2003*;
- The *Groundwater Regulations 1998* – superseded by CAR, 2005;
- The *Private Water Supplies (Scotland) Regulations 1992*;
- PAN 58 Environmental Impact Assessment;
- PAN 50 Controlling the Environmental Effects of Surface Mineral Workings;
- PAN 61 Planning and Sustainable Urban Drainage Systems;
- Mineral Extraction: Code of practice for the owners and operators of quarries and Other Mineral Extraction sites, 2006, under CAR, 2005;
- Groundwater Regulations 1998, March 2003;
- SPP16 Opencast Coal; and
- Policies and Pollution Prevention Guidelines published by SEPA.

Any necessary diversions will be assessed in accordance with the *Water Environment (Controlled Activities) (Scotland) Regulations 2005*.

3.9 Soils and Land Use Assessment

Key Issues Anticipated

The opencast operations have potential to affect the soil resources on site, and their future use in restoration. The assessment will provide recommendations to ensure that different types of soil are maintained for restoration, and activities do not compromise the integrity of the soil, or its properties.

The area to be covered by the assessment covers agricultural and woodland areas.

Consultation

As the surveys follow standard techniques, consultation will comprise a review of the results and their significance with South Lanarkshire Council, as part of the pre-application discussions.

Assessment Approach

Soil types and soil properties will be assessed on a free survey basis at representative sampling points within the existing fields and woodlands shown on OS maps. Each field and woodland area will be surveyed and sampled (where access permits).

Sampling will follow standard techniques, set by the MLURI (Macaulay Land Use Research Institute) National Land Classification System.

At each soil assessment point, topsoil depth, texture, structure, stoniness, and vegetation cover will be described. Subsoil texture, structure, stoniness and overall profile drainage will be described.

As the area has been mapped mostly as LCA Class 4.2 “Non-Prime Land”, the intensity of assessment points will be not less than 1 location per 2 hectares for the agricultural fields and assumed less for the woodlands depending on accessibility.

Representative soil profiles of each main soil type will be fully described and the soil survey details will be mapped.

Composite topsoil samples will be taken from each field or woodland lot and analysed for Organic Matter, pH (and calculated lime requirement), Extractable Phosphorus, Potassium and Magnesium to assist with mitigation measures and restoration strategy.

The assessment will comprise the following aspects:

Land Capability Classification

Current land use and soil quality will be assessed and land will be classified on the MLURI National Land Classification System on a scale of 1-7 for agricultural production and F1-F7 for forestry production.

Soil Handling Recommendations

Based on soil survey data, recommendations on stripping and storage of topsoils and subsoils will be made. Guidelines on replacement of subsoil and the depth of placement of topsoil will be given. A summary of the soil restoration and aftercare programme will be provided.

Mitigation Measures

Potential cumulative impacts in conjunction with other developments within the surrounding area will be identified and assessed, and mitigation measures recommended where appropriate. Mitigation will include measures to reinstate land to its existing agricultural and forestry land uses, depending on the preferred end land-uses.

3.10 Cultural Heritage

Key Impacts Anticipated

The intrusive nature of opencast operations may result in the destruction of sub-surface features - particularly any that are non-scheduled. Therefore, this assessment aims to identify any potential remains, and suggest measures to be taken to either record or preserve them, to ensure unacceptable damage does not occur.

Consultation

Relevant cultural heritage bodies will be consulted regarding the proposed development and its impacts. These will include:

- Historic Scotland; and
- West of Scotland Archaeology Service (WoSAS).

Assessment Approach

The assessment will take place in collaboration with the Landscape and Visual assessment, as outlined in Section 3.1.

A systematic search will be undertaken of all readily available and relevant documentary sources. This will include:

- archaeological records including oblique air photos held in National Monuments Records of Scotland (NMRS);
- vertical air photos held by Royal Commission on the Ancient and Historical Monuments of Scotland (RCAHMS);
- published maps held in the National Library;
- manuscript maps held in the National Archives; and
- information in the South Lanarkshire Council Sites and Monuments Record.

The information will be collated in a gazetteer, cross-referenced to a map showing the location and extent of all features.

A walkover survey of the proposed site will be undertaken. This will check the results of the documentary research and confirm the condition and status of all sites. It will also provide an opportunity to assess the potential visual impact of the proposed development on sensitive cultural heritage sites in the surrounding area.

The potential impact of the development on the cultural heritage resource will be assessed. This assessment will include both direct impacts of the extraction programme on individual sites and the wider impact of the development on the setting of sensitive cultural heritage sites. In addition, potential indirect impacts resulting from blasting on sensitive sites of cultural heritage interest will be considered.

Potential cumulative impacts arising in conjunction with other developments within the surrounding area will be identified and assessed, and mitigation measures recommended where appropriate.

Suggestions for avoiding, reducing or mitigating any foreseen effects will be suggested, in collaboration with the Council, Historic Scotland and Scottish Coal. The significance of any residual effects following mitigation will also be assessed.

The cultural heritage studies will follow the approaches and procedures recommended in NPPG5 (Planning and Archaeology) and NPPG18 (Planning and the Historic Environment). Assessment of impacts on the setting of sites will follow the Historic Scotland's Assessment of impact on the setting of historic environment resources: general considerations (2005).

3.11 Socio-economic Impacts

Key Impacts Anticipated

The proposed project has the potential to impact upon local communities both positively and negatively. The socio-economic impacts of the project require to be assessed in support of the EIA. Impacts are expected to include:

- direct and indirect employment;
- contribution to the local economy; and
- impact on other industries (particularly tourism).

The assessment of these impacts will involve the collation of a range of baseline economic data in relation to the location of the proposed development and the development itself. The assessment will then consider their relative significance, and means of mitigating against negative impacts and promoting positive ones.

National Planning Policy relating to the proposal is Scottish Planning Policy 16: Opencast Coal (2005) (SPP16). This Policy sets out the considerations that Planning Authorities should take into account in development plan preparation and in determining planning applications for opencast coal extraction. The Policy seeks to ensure that the extraction of coal is carried out in an environmentally sensitive and locally beneficial manner.

Consideration of the provisions laid out in this Planning Policy will be an important consideration in the socio-economic assessment. In particular, the assessment will consider the proposals against the “500 m rule” within SPP16, which generally requires a minimum distance of 500 metres between communities and site boundaries. However, this is at the discretion of the Council, who must balance the local circumstances against this generalisation. Therefore, flexibility is built into the policy as to the relative benefits and disbenefits of the proposed development. However, if development within 500 m of a community is approved, the period and phasing of such working should be controlled through planning conditions and monitored by the planning authority to ensure minimum disruption to local communities and the environment.

As a guide, the Council should take into account the following test as to the relative benefits of the proposal:

...Does the proposal provide local or community benefits, which clearly outweigh the likely impacts to justify the grant of planning permission?

“Local or community benefits” will arise in the following circumstances (among others):

- *where there is improvement of local amenity or future development opportunities arising from the clearance of a substantial area of derelict or despoiled land, the stabilisation of a previously undermined site, or other similar benefits. These will include removal of mine gases and polluted mine drainage; or the removal of coal from a site prior to approved permanent development; and*
- *where extraction generates employment which is particularly beneficial in those areas where extraction takes place. Where such jobs are genuinely available to local communities, authorities may judge that there is a local benefit to be secured if the proposal satisfactorily safeguards the interest of impacted communities.*

The socio-economic assessment will therefore examine the relevant “local or community benefits” of the proposed OCCS at Mainshill, compared to the “likely impacts”, to evaluate the project against SPP16.

Consultations

South Lanarkshire Council will be consulted as part of the EIA process. Possible mitigatory measures will be established and agreed as part of these consultations. Discussions with the Council will assess which data they consider to be relevant and important in this area.

In addition, a Public Information Exhibition will allow comment and input from local people, including local community groups and local interest groups. This will inform

the design process, and maximise beneficial aspects of the development, while minimising those damaging or disruptive to the community.

Advice will be taken from South Lanarkshire Council regarding any statutory payments into a Community Fund necessary as Developer Contributions. These payments will be agreed with Scottish Coal as part of the design process.

Assessment Approach

The current socio-economic status of the communities surrounding the site will be described using Council and National data.

During the on-going course of the EIA a further range of baseline information will be gathered in relation to the socio-economic conditions of the wider area. This information will include:

- population (numbers and profile);
- economic activity;
- unemployment;
- occupations, qualifications and average earnings;
- deprivation;
- business mix;
- proposed indirect employment during construction; and
- information relating to communication links and tourism that influence the character of the region.

This information will be drawn from a range of sources and consultations, as required. It may include information from Local Plans and data produced by, for example, the local education authority and NHS. Data produced by Scottish Coal, from existing sites in the region will also be analysed. It is considered that there are likely to be positive impacts on socio-economics from the development.

Assessment of the baseline information will allow conclusions to be drawn in relation to the socio-economic impacts, in particular relating to economic gain and employment impact.

The requirement for the project will be outlined and established via the assessment of baseline data. This will include an assessment of potential benefits/impacts and market and legislative requirements. This will also take into account potential commercial effects and regeneration benefits as well as environmental gains of the extraction of coal locally to its end-users.

The significance of any identified impacts will be determined, using information acquired from the Council and other sources.

Local concerns will also be taken into account. Any major impacts, or any considered to be unacceptable to the communities will be addressed, and mitigation suggested to reduce the extent of the impact, or to offset it with planning gain elsewhere in the proposals.

3.12 Cumulative Impacts

Key Impacts Anticipated

Scottish Coal has a number of opencast coal sites within this part of South Lanarkshire. There is therefore potential for cumulative impact on nearby communities and environmental receptors to arise, either by incremental increase, or by combined impact from the additional works at Mainshill.

Both the *Environmental Impact Assessment (Scotland) Regulations 1999 (Schedule 4, Part I, [4])* and SPP16 require the consideration of cumulative impacts as part of an EIA. The Regulations do not provide a definition of cumulative impacts.

SPP16 requires that developers ensure that proposals will not subject any community to a disproportionate burden of negative environmental impacts or perpetuate unacceptable disturbance to a particular community. Paragraphs 13 and 14 of SPP16 state:

...This will be particularly important if there are already two or more operational or consented sites that could raise similar impacts within 5 km of any nearby community. Such sites will include:

- *other opencast coal sites;*
- *sites for the extraction of other minerals; and*
- *landfill sites.*

In such circumstances, an assessment of the likely cumulative impacts of additional workings, if approved, on all communities within a radius of 5 km of the proposed site boundary should be undertaken. This should include site design, likely further increases in road traffic, period of disturbance to communities and the period that the landscape is likely to be disturbed. The developer should demonstrate what measures will be taken to mitigate likely cumulative impacts. Planning permission should be refused if unacceptable impacts cannot be adequately mitigated. Future applications in the same area may be considered where some sites have ceased to operate and have been returned to a condition acceptable to the planning authority.

An incremental impact may occur when an impact from the project under consideration occurs at the same time as similar impacts from other development. For example, an increase in noise from Mainshill, occurring at the same time as that from another OCCS in the vicinity, such as Poniel OCCS, will be additional for surrounding communities.

A combined impact may arise when an operation, or operations, gives rise to several impacts on a single receptor, such as the combination of noise, air and visual impacts on a particular residential property, and where the increased impacts may cause significant loss of amenity.

Developments to be considered include any other extraction activities in the vicinity of the proposed site. Communities within 5 km of the site boundary have been identified, and all potential cumulative sites within 5 km of these communities will be considered (Figure 9). Any additional effects of the proposed extraction will be put into the context of the area as a whole.

Table 10 lists the sites that will be considered in the cumulative assessment. This table also indicates their current status and approximate distance from the proposed site. Site locations are shown on Figure 9.

Consultations

Information on the sites and impacts to be considered within the cumulative assessment will be confirmed with South Lanarkshire Council during the scoping and consultation process.

Information lodged for the Public Local Inquiry in connection with work carried out for past sites will also be used to determine potential impacts.

TABLE 10 – SCHEDULE OF DISTANCES (KM) BETWEEN MAINSHILL AND OTHER MINERAL EXTRACTION SITES

Site	Mineral	Operation	Company	Distance to closest site boundary
Hyndford Quarry	Sand and Gravel	Permitted to 2027	CEMEX	9.1 km NE
Hillhouse Farm	Peat	Permitted to 2017 (extraction to cease 2014)	Scotts Company	5.5 km N
Broken Cross OCCS (including extensions)	Coal	Permitted to 2020	Scottish Coal	3.4 km N
Poniel Sand and Gravel Quarry	Sand and Gravel	Permitted to 2014 but likely to be complete before then.	Tinto Sand & Gravel Co.	2.3 km NW
Poniel OCCS	Coal	Commencing 2008 until 2010.	Scottish Coal	0.6 km NW
Glentaggart OCCS/ Mid Rig disposal point	Coal	Permitted to 2022 (but likely to be completed by 2010)	Scottish Coal	3 km S to conveyor (Mid Rig) 5 km SW to site
Spieslack OCCS	Coal	Operational to 2010	Scottish Coal	8.3 km W
Dalquhandy OCCS	Coal	Largely restored.	Scottish Coal	2.2 km W
Duneaton Quarry	Hard rock	Permission in principle	Hodge Plant	8km SE

Assessment Approach

Combined potential impacts on sensitive receptors around the proposed site will be assessed and suitable mitigation measures proposed where required.

Developments to be considered within the assessment will be confirmed with South Lanarkshire Council.

Cumulative impacts will be considered in each technical chapter and a summary of the overall cumulative impact assessment will be presented as a separate chapter within the Environmental Statement.

4. Further Information

The scope of works detailed in the above sections is not exhaustive and will be subject to further consideration by Scottish Coal, the project team and consultees.

RPS, on behalf of Scottish Coal, is now seeking public and consultee views on the proposed Opencast Coal Site at Mainhill, in order to incorporate these into the EIA process. Comments are invited on the findings of this scoping exercise, the methodologies proposed and any concerns considered not to have been addressed in this document. This information will influence and inform the scope and approach to the Environmental Impact Assessment.

All responses should be addressed to either:

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