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INTRODUCTION

3.1 This Chapter describes the way in which the proposed development would be constructed, including a general description of the turbine layout and the associated infrastructure. It outlines the anticipated construction activities connected with the proposed development and a description of its operational elements. An outline of the approach to decommissioning is provided.

3.2 The layout for the proposed development is shown on Figure 3.1. Additional details on construction methods are provided in the draft Construction Environmental Management Plan (CEMP) included in Technical Appendix 3.1.

PROPOSED DEVELOPMENT

3.3 The key component parts of the proposed development include the following, as shown on Figure 3.1:

- up to 14 wind turbines with a maximum blade tip height of 180m;
- up to 14 external transformers with dimensions 6.25m(l) x 4m(w) x 3.6m(h);
- up to 14 turbine foundations (20-22m in diameter) and associated crane hardstandings (approx. 74.75m x 42m in extent);
- approx. 33.8km of track, including approx. 10.9km of new access tracks with a typical 5m running width and associated drainage; upgrading of up to 1.9km of the existing onsite access tracks; and approx. 21km of track which would not be upgraded, except in a limited number of locations where vertical and horizontal realignment is required;
- passing places;
- underground cabling along access tracks to connect the turbine locations and electrical substation;
- widening of the existing access bell mouth to the Site from the A920 for construction traffic;
- a substation compound (30m x 35m), including a control building;
- a temporary construction compound during the construction period (50m x 50m);
- a central laydown area (150m x 100m) to include a concrete batching compound;
- one permanent met mast 112m in height; and
- three borrow pits: one forming an extension to an existing borrow pit and two additional search areas, should they be necessary.

3.4 There are up to two proposed new watercourse crossings for the Site. It is proposed that the existing watercourse crossings on the existing tracks would be utilised and upgraded where required.

3.5 Typical details for the proposed wind turbines, foundations, crane hardstandings, access track, electrical infrastructure, construction compound and met masts are shown on Figures 3.2 to 3.11.

ACCESS TO THE SITE

3.6 Access to the Site would be at the existing access point near Craighead/Wellheads at the junction with the A920. Depending on their origin, vehicles are likely to either travel on the A96 from Aberdeen onto the A9001, the A920 and then the A96, to the access junction, or are likely to approach via the A9 from Inverness onto the A96 to the junction with the A920.

3.7 Abnormal loads would be required to transport turbine components to the Site. The access route for these abnormal loads would be via Aberdeen Docks, then travelling on the A96 from Aberdeen onto the A9001, the A920 and then the A96, to the Site access junction with the A920.

3.8 The turbine components would be delivered on vehicles between 41-55m in length. The existing site access would require to be slightly widened in order to allow a turning circle for these vehicles.

GRID CONNECTION

3.9 The proposed development would connect to the Transmission Grid network near Craighead/Wellheads, at the same location as the existing Scottish and Southern Electricity (SSE) substation associated with the Clashindarroch Wind Farm. The existing substation is located at NGR 349100, 840600, close to the A920 and surrounded by the boundary of the Site, but is not included within it. A new control building would be built within the Site boundary at NGR 345459, 835954, near to the existing Clashindarroch Wind Farm control building, to connect the proposed development to the network (Figure 3.1). The grid connection cable would be wholly underground and within the Site boundary, therefore it is included within this EIA and applied for under Section 36 of the 1989 Act.

OPERATIONAL LIFE

3.10 It is anticipated that the proposed development would have an operational life of up to 30 years. At the end of this period, the proposed development would be decommissioned and the turbines removed. Alternatively, a new application may be made to extend the life of the proposed development or to replace the turbines.

EMBEDDED MITIGATION

3.11 A key benefit of the EIA process is the opportunity it gives to integrate environmental considerations into the careful, iterative design of a project. This allows potential effects to be considered and minimised so that environmental effects are accounted for in the project design from the earliest stage, as described previously in Chapter 2: Site Description and Design Evolution. Effects can be further taken into account through other forms of good design, standard practice and environmental measures, which are described below.

DESIGN PRINCIPLES AND ENVIRONMENTAL MEASURES

3.12 A number of design principles and environmental measures have also been implemented and incorporated into the project as standard practice. They typically include design choice in siting of infrastructure or activities, the use of alternative materials, technologies or other features of

design that can be predicted to avoid or reduce potential effects. Embedding mitigation throughout design has been a feature of the process that has led to the design of the proposed development.

3.13 Reference to good practice and standards, guidelines and legislation relied upon in the assessment methodology are referred to within each of the individual specialist topics, see Chapters 7 to 17. However, for clarity, details of these additional principles and measures are listed in Technical Appendix 3.1 of this EIA Report. Such environmental measures are also commonly included in the CEMP (see paragraph 3.21 below).

ENVIRONMENTAL MITIGATION MEASURES

3.14 Mitigation comprises those additional measures applied after the consideration of the embedded design and environmental measures to address any remaining, predicted effects from the proposed development (see Chapter 5: Environmental Impact Assessment).

3.15 Reference should be made to Chapter 18 which provides a Schedule of Mitigation for the proposed development.

3.16 Additionally, although a specific area has been outlined for future Habitat Management (see Chapter 8: Ornithology and Chapter 9: Ecology), the exact detail of the proposal(s) are yet to be defined.

CONSENTS PRIOR TO COMMENCEMENT OF OPERATIONS

3.17 Prior to commencing construction on the Site, it may be necessary for the Applicant to obtain a number of other statutory authorisations and consents to enable the proposed development to be implemented. Where relevant, these are covered in the Technical Chapters of this EIA Report.

CONSTRUCTION PHASE

CONSTRUCTION TIMETABLE

3.18 The proposed development would be constructed over a period of approx. 18 months, followed by a short period of reinstatement. An indicative construction timetable is shown in Table 3-1.

Table 3-1
Indicative Construction Timetable

Activity	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr
1. Establish Temporary Compound																					
2. Install Welfare Services & Establish Water Supply																					
3. Borrow Pit Development and Operation																					
4. Establish Central Laydown Area & Procure Materials																					
5. Widen Site Access Entrance at A920																					
6. Move Felled Lengths, Logs and Tree Harvesting																					
7. Wind Farm Tree Felling																					
8. Construct Access Tracks																					
9. Import Materials (Road Capping, etc.)																					
10. Construct Turbine Foundations & Hardstandings																					
11. Construct Buildings & External Equipment																					
12. Internal Fit																					
13. Met Mast Construction and Erection																					
14. Install Wind Farm Cabling																					
15. Erect WTGs																					
16. Commission WTGs																					
17. WTG/WF Reliability Run & Grid Compliance																					
18. Take Over																					
19. Site Restoration																					

CONSTRUCTION EMPLOYMENT

3.19 The number of people employed during the construction period would vary depending on the stage of construction and the activities ongoing onsite. Peak numbers would be around 84 staff.

CONSTRUCTION HOURS

3.20 Any noisy activities and Heavy Goods Vehicle (HGV) deliveries would be restricted to the hours of 0700 to 1900 Monday to Friday and 0700 to 1300 on Saturdays. However, turbine delivery may need to take place outside of these days/times, subject to agreement with Aberdeenshire Council (AC).

CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN

3.21 A draft Construction and Environmental Management Plan (CEMP) is provided as Technical Appendix 3.1. In acknowledgement that the CEMP is a live document, that would evolve throughout the life of the proposed development, only the principles of the CEMP are outlined at this stage (see Technical Appendix 3.1). It is anticipated that the CEMP would be the subject of a condition should consent for the proposed development be forthcoming.

MICROSITING

3.22 There may be a requirement to microsite elements of the proposed development infrastructure (e.g. due to unsuitable ground conditions). It is proposed that a 50m micrositing tolerance from turbines and other infrastructure would be applied to the proposed development and that within this distance any changes would be subject to approval of the Ecological Clerk of Works with specialist archaeological advice as required and consideration of other known environmental constraints. It is anticipated that the agreed micrositing distance may form a condition accompanying consent for the proposed development.

3.23 Consideration of the micrositing tolerance has been incorporated into the technical assessments where appropriate.

SITE PREPARATION AND ESTABLISHMENT

3.24 Site preparation works would include the following key tasks, some of which would be undertaken concurrently:

- widening of the existing Site entrance;
- staff welfare facilities;
- forestry works;
- establishment of internal tracks or upgrading of existing tracks; and
- formation of a construction compound and central laydown area.

Forestry Works

3.25 Details of the proposed forestry works are included in Technical Appendix 3.2. The Forestry Study Area (FSA) extends to approximately 6,279.3ha and is comprised of one large forest block. The forest contains a range of woodland types and age classes due to original planting and current felling programmes, together with areas of unplanted land. The crops are comprised largely of commercial conifers with areas of mixed broadleaves and open ground. The woodlands are in the production phase, with rotational felling and restocking underway.

3.26 The species composition of the forest would change as a result of the proposed development forestry proposals. In particular, felling would be advanced on 125.3ha, the area of productive conifer woodland would decrease by 79.9ha, and the area of broadleaf woodland would decrease by 2ha. Overall, there would be a net loss of woodland area of 88.5ha.

3.27 In order to comply with the Scottish Government's Control of Woodland Removal Policy, compensation planting would be required to mitigate for the loss of woodland area. The Applicant is committed to providing appropriate compensatory planting. The extent, location and composition of such planting is to be agreed with Scottish Forestry taking into account any revision to the felling and restocking plans prior to the commencement of operation of the wind farm.

Access Tracks

3.28 Access to the Site from the A920 would be provided along much of the same route as used for Clashindarroch Wind Farm, initially via existing forestry routes. Access to the turbine locations would be via new spur roads from the main forestry spine track, using Forestry and Land Scotland (FLS) tracks and rides as much as practical, with upgrading of existing tracks where necessary. The proposed track has been carefully considered to ensure that the larger turbines can be transported through the Site. In some cases, 2 options are shown for tracks to turbines. This is to allow flexibility in construction. The technical chapters have considered both options to ensure a worst case scenario.

3.29 The access track would also cross existing Scottish Water assets and infrastructure near the Site entrance. It is anticipated that a protective cover slab would be required to cover the pipes.

3.30 A new track would be created as a result of the proposed development. Figure 3.2 provides a typical illustration of the design of an onsite track. The design of tracks would take account of recognised good practice guidance as noted in Chapter 11: Hydrology, Hydrogeology and Geology.

3.31 A peat depth survey has identified that there is minimal peat on the Site and as such no floating tracks are required. Track formation would be by cut and fill or by a cut operation where there is a slope. Risk of soil or sediment loss during run-off would be mitigated by silt traps located within drainage ditches, with the additional use of settlement ponds at the discretion of the Ecological Clerk of Works (ECoW), as outlined in Technical Appendix 3.1. Erosion processes on the roadside embankments and cuttings would be mitigated by ensuring that gradients are below stability thresholds, which would also enable effective regeneration of vegetation. Sediment traps would be required in the early years following construction until natural regeneration is established.

3.32 The new (and existing) onsite access tracks would have an average running width of 5m. Existing

passing places would be used as much as practical; however, a number of new turning heads would need to be created along some of the new spur roads to act as passing places and to allow turning points for long vehicles (see Figure 3.1). It is anticipated that the crane hardstandings located at the turbine bases would also be used as passing places, as required.

3.33 Material for the construction of onsite tracks would, where possible, be derived from borrow pits within the Site should the materials be found to be suitable. It is anticipated that the topping stone required for the roads would be imported to Site, as the stone won onsite is unlikely to be suitable. The tracks would be left in place following construction to provide access for maintenance, repairs and eventual decommissioning of the proposed development. At the end of the construction period, the edges of all new tracks would be restored using materials stripped from excavations. Further information in respect of the restoration of the Site is contained in Technical Appendix 3.1: Draft CEMP.

Borrow Pits

3.34 Extension of the existing borrow pit located at NGR 345709, 834516 is expected to provide the majority of the aggregate required to build the new onsite access tracks. Two additional borrow pit source areas have also been identified, and these would be used to provide additional stone as necessary, or to provide alternative stone sources, with the exception of the top dressing stone which would be imported to Site (see paragraph 3.33).

3.35 Further information regarding the borrow pits is contained in Technical Appendix 11.2: Borrow Pit Assessment.

Table 3-2
Borrow Pits

Borrow Pit Search Area	Easting (Central Point)	Northing (Central Point)	Notes
1	345641	834464	Proposed Extension to existing Borrow Pit
2	345634	834623	Potential Borrow Pit - Extension Option
3	345645	834256	Borrow Pit Search Area

Temporary Construction Compound

3.36 A temporary construction compound would be required for the duration of the construction phase. This would be created at NGR 348500, 837630, on the site of the original temporary construction compound used during the construction of Clashindarroch Wind Farm. The location of the compound is near to Kye Hill at the north-eastern site boundary, as shown on Figure 3.1.

3.37 The temporary construction compound would have a footprint of 50m x 50m (2500m^2). The compound area is an area of existing aggregate covered by a thin layer of topsoil that was reinstated during site restoration of Clashindarroch Wind Farm. This topsoil would be removed, with the stripped soils stored adjacent to the compound for use in reinstatement during the Site restoration.

3.38 The temporary construction compound is likely to contain the following:

- site offices;
- welfare facilities;
- parking for construction staff and visitors;
- temporary storage building for secure storage of tools;
- fuelling point or mobile fuel bowser;
- tool store and workshop;
- waste storage facilities;
- reception area; and
- borehole to fill water bowsers.

3.39 The temporary construction compound would be cleared upon commissioning of the wind farm and the area reinstated using the previously stripped soil from the area.

Concrete Batching

3.40 Concrete would be batched onsite using water bowsers filled at the temporary construction compound. Batching would occur within the central laydown area (see Figure 3.1 and paragraph 3.51). The batching plant area would be approximately 50m x 50m in extent to allow storage of materials and vehicle movements.

WIND TURBINE LAYOUT

3.41 The proposal is to erect and operate up to 14 three-bladed horizontal axis wind turbines at the Site. The proposed turbine locations are shown on Figure 3.1 and the proposed co-ordinates for each are provided in Table 3-3.

Table 3-3
Turbine Coordinates

Turbine No.	Easting	Northing	Altitude
1	344086	833617	390
2	343640	831705	358
3	343415	832583	393
4	344357	832735	375
5	344076	831659	381
6	344821	833268	342
7	344002	832977	344
8	343603	833107	396

Turbine No.	Easting	Northing	Altitude
9	344460	833440	359
10	344118	832206	417
11	343713	832298	429
12	342964	832151	388
13	343286	831912	384
14	344533	832177	393

WIND TURBINES AND TRANSFORMERS

3.42 The exact model of wind turbine to be installed at the Site would be selected through a competitive procurement process. This EIA Report has considered the use of an indicative turbine which is referred to as a candidate for the wind farm. The candidate wind turbine is shown on Figure 3.7.

3.43 The turbines could have a rating of between 4 and 6MW (or greater, subject to future advances in turbine technology), and each turbine would have a maximum height of 180m to blade tip in an upright position. In each assessment, a worst case scenario of the turbine dimensions/characteristics has been used. Final installed dimensions would depend on the actual turbine selected, but the tip height would be less than or equal to 180m. The turbines would each incorporate a tapered tubular tower and three blades attached to a nacelle that would house a turbine generator and other operating equipment, e.g. a gear box. The turbines would be semi-matt pale grey (in line with RAL 7038) or a finish agreed with AC.

3.44 Each turbine would be served by an electrical transformer that would be located externally in housing at the turbine base. The transformer housing would measure approximately 6.25m(l) x 4m(w) and 3.6m(h). The external finishes would typically be rendered masonry or glass reinforced plastic (GRP), the colour of which would be agreed with AC prior to construction.

3.45 The turbines, towers and transformer units to be used in the proposed development would be brought onto Site in sections via the access point from the A920.

FOUNDATIONS AND CRANE HARDSTANDINGS

3.46 Turbine foundations would be designed to accommodate the final choice of turbine and to suit site-specific ground conditions. The final design specification for each foundation would depend on the findings of detailed ground investigation of the land on which each turbine would be located. An illustration of a typical turbine foundation is provided on Figure 3.5.

3.47 The turbines would be likely to have gravity foundations over an area of 20-22m diameter and would be laid using a reinforced concrete. The depth of the excavation would depend on the ground conditions. As a minimum, foundations would be 3.5m deep. The sides of the excavation would be graded back from the foundation to approximately a 28m diameter and battered to ensure that they remain stable during construction. In the event that shallow rock is found, rock

anchored foundations may be used. Any mitigation associated with such an approach would be covered in the final version of the CEMP.

3.48 The turbines would be erected to their full height using mobile cranes brought onto the Site for the construction phase. A crane hardstanding would be built adjacent to each wind turbine. The actual crane pad design and layout would be determined by the turbine supplier according to their preferred erection method. An indicative design has been considered for the purposes of this assessment and is provided in Figure 3.6. The crane pad design also includes laydown areas for turbine blades. These areas would remain *in situ* for the duration of the operational phase of the proposed development.

3.49 Soils that are excavated during the foundation, excavation and formation of the laydown and assembly areas, etc. would be set aside for backfilling of foundations and reuse in restoration of disturbed areas around the turbine locations and hardstandings. Further details of soil storage are contained in the Draft CEMP, Technical Appendix 3.1.

CENTRAL LAYDOWN AREA

3.50 A central laydown area would also be required for the duration of the construction phase. This would be created at NGR 343806, 832926 opposite Turbine 4, as shown on Figure 3.1.

3.51 The central laydown area would have a hardstanding footprint of 150m x 100m and would include the concrete batching plant compound for use during foundation construction (see Figure 3.11). Once the foundations are finished, the batching plant would be taken away, but the same hardstanding area would be used for additional wind turbine component storage.

3.52 The laydown area would be formed by stripping topsoil, laying down a geotextile membrane and a working surface of aggregate over the stripped area. The stripped soils would be stored adjacent to the compound for use in reinstatement during Site restoration.

LIGHTING

3.53 Artificial lighting may be required during the construction phase to ensure safe working conditions, because there would be periods during the construction programme when natural light would be limited. Examples include vehicle and plant headlights, construction compound lighting, floodlights and mobile lighting units, to be used around specific construction activities. It is intended that the type of lighting would be non-intrusive to minimise impact on local properties and any other environmental considerations.

ANEMOMETER MAST

3.54 A 112m anemometer mast would be installed onsite at NGR 343080, 832481. The mast would be lattice in structure to hub height, as shown on Figure 3.8. The purpose of this is to provide operations and performance monitoring data.

3.55 The mast would be delivered to the Site in sections and constructed using a crane located on a hardstanding measuring 20m x 20m adjacent to the proposed mast location.

3.56 The mast would be supported using a reinforced concrete pad measuring approximately 8.5m x

8.5m and 2.5m thick. The mast would be bolted to a concrete pedestal measuring 3m x 3m and 1.3m high, centred on this concrete pad.

3.57 A 3m high anti-climb fence would also be installed around the base of the mast to restrict access.

SUBSTATION AND ELECTRICAL CABLING

3.58 A new substation compound would be built at NGR, 345459, 835954, parallel to the forestry access track and near to the existing substation compound of Clashindarroch Wind Farm. A single-storey control building would be built as part of the proposed development. The control building would measure approximately 15m x 8m and would be circa (c.) 5.5m high. The control building would be built on a pre-cast concrete base. The external finishes would be agreed with Aberdeenshire Council. The switch room would form part of the control building.

3.59 The control building would form part of a wider substation compound, measuring approximately 30m x 35m (4200m^2) in total (see Figure 3.7). The compound would include an area for car parking and High Voltage (HV) equipment, such as transformers and circuit breakers.

3.60 Underground power cables would run from each of the turbines to the proposed substation and then to the existing SSE substation near Craighead/Wellheads. Cables would run along the side of the access tracks, on the same side of the track as existing cables, wherever possible. The distance from existing cabling would be a minimum separation width of 3m. Where the topography of the land does not allow the cables to lie alongside the existing cables, they would be laid under the existing access track or along the opposite side of the track, if necessary.

3.61 The cables would be laid in a trenching operation. Indicative cable trench arrangements are provided in Figure 3.9. The final cable link to the SSE substation would be alongside the existing onsite access tracks.

MATERIALS SOURCING AND WASTE MANAGEMENT

3.62 The proposed development would require a range of materials for construction (e.g. top stone for access tracks, temporary site compounds and substations) and would generate a range of wastes (e.g. general construction waste). Excavated material from the turbine bases and access tracks would be used onsite for restoration/reinstatement.

3.63 A Materials and Waste Management Strategy would be developed for the proposed development; the outline of this is provided as part of the draft CEMP (see Technical Appendix 3.1). This outlines details of the materials requirements and waste generation across the proposed development and outlines how the Applicant intends to consider the management of these aspects.

SITE RESTORATION

3.64 Any topsoil and subsoil excavated during site preparation or construction would be stored separately alongside the working area, in accordance with best practice, so that it can be reinstated as appropriate once construction activities are complete. It is anticipated that most of the soil resources within areas directly affected by construction activities would be retained and reinstated *in situ*.

3.65 Standard practice would be for areas of temporary land take to be restored to their original use. The level of restoration works would be assessed on the basis of the ongoing land use where the tracks and working areas are constructed.

OPERATION AND MAINTENANCE PHASES

DURATION

3.66 The proposed development would have an operational life of up to 30 years from first commissioning. The wind farm would largely be controlled and managed remotely, however there would be technicians onsite regularly.

LIGHTING

3.67 The turbines are over 150m to blade tip and, in line with current guidance from the CAA, are required to be lit with medium intensity (2000 candela) steady red aviation warning lights in accordance with Article 222 of the UK Air Navigation Order (ANO) 2016. A second light serving as an alternative should be provided in case of failure of the operating light. Additionally, at least three (to provide 360 degree coverage) low-intensity (32 candela) lights should be fitted at an intermediate level of half the nacelle height.

3.68 The CAA Policy Statement on Lighting of Onshore Wind Turbine Generators in the United Kingdom with a maximum blade tip height at or in excess of 150m Above Ground Level (June 2017) allows lights to operate in a lower intensity mode "*if the horizontal meteorological visibility in all directions from every wind turbine generator in a group is more than 5km.*" In these circumstances, the 2000 candela lights could be operated at "*not less than 10% of the minimum peak intensity specified for a light of this type*" (200 candela). It is therefore proposed that visibility sensors be installed on turbines. Should atmospheric conditions (for example, low cloud cover, rain, mist, haze or fog) mean that visibility around the Site is greater than 5km, lights would operate in a lower intensity mode of 200 candela. If visibility is restricted to 5km or less, lights would operate at 2000 candela.

3.69 Furthermore, it is proposed to explore the possibility of using 'smart' aviation lighting (aviation obstruction lighting detection system), whereby the lights would only be switched on when aircraft approach them (discussed further in Chapter 15: Aviation). This would include a reduction in the impact of night-time light pollution and extend the life expectancy of the obstruction lights.

ELECTRICITY GENERATION

3.70 The turbines would start to generate electricity at wind speeds of around 3m/s. Electricity output would increase as the wind speeds increase up to around 15m/s, when the wind turbines would reach their maximum power output. The turbines would continue to operate at maximum capacity up to wind speeds of around 25m/s when they would cut-out and automatically stop as a safety precaution.

MAINTENANCE

3.71 A service team would be set up to maintain the proposed wind farm throughout its operational

life. A full-time operations manager would oversee day-to-day wind farm operations, managing a team of up to 1-2 technicians who may be based in the local area. This team would either be employed directly by the Applicant or by the turbine manufacturer. Turbine maintenance would be carried out, along with any other maintenance required by manufacturers' specifications, and would likely include the following:

- initial servicing;
- annual civil maintenance of tracks and drainage;
- scheduled routine maintenance and servicing;
- unplanned maintenance or call outs; and
- blade inspections.

3.72 Maintenance could include the performance of tasks such as maintenance of bolts to the required torque, adjustment of blades, inspection of welds and relubrication of moving components. In addition, sampling and testing of oil from the main gearbox and replacement of oil as required would be undertaken. Oil filters would be replaced at regular intervals.

DECOMMISSIONING PHASE

3.73 At the end of its operational life, the proposed development would be decommissioned or an application may be submitted to repower the Site. The decommissioning period is expected to take up to one year.

3.74 The ultimate decommissioning protocol would be agreed with Aberdeenshire Council and other appropriate regulatory authorities in line with best practice guidance and requirements of the time. This would be done through the preparation and agreement of a Decommission and Restoration Plan (DRP). Financial provision for the decommissioning would be provided, most likely via a planning condition requiring a bond.

3.75 Over the period of the operation of the wind farm, it is recognised that there are likely to be changes in legislation and guidance, environmental designations, the status/condition of sensitive environmental receptors and stakeholder objectives that may affect decommissioning and restoration methodologies. The detailed DRP would reflect the scientific ideas and best practice current at the time of decommissioning and restoration. With this in mind and to aid the future development of the detailed DRP, a series of guiding principles have been developed, which would be adhered to during future iterations of the DRP:

- the detailed DRP would be implemented such that it "provides the most benefit or least damage to the environment as a whole, at acceptable cost, in the long term as well as in the short term" (Ref. 3.1). Results of the Best Practicable Environmental Option (BPEO) evaluation would inform whether the most benefit or least damage would be achieved by completely removing all infrastructure or retaining some elements of some infrastructure. This would be agreed with Aberdeenshire Council prior to decommissioning;
- the detailed DRP would be consistent with the final agreed Habitat Management Plan (HMP). This would serve to maintain the biodiversity and geodiversity of the Site. Furthermore, it would be consistent with any conditions required for flood relief or other

nature conservation objectives;

- the final DRP would include full details of pollution prevention and control measures, and silt control measures that would be implemented during the decommissioning and reinstatement period to prevent impact on the watercourses to avoid adverse impacts to water quality;
- the detailed DRP would be in accordance with the National Planning Framework/Scottish Planning Policy and local planning policies in place at the time of writing; and
- the detailed DRP would aim to minimise the generation of waste and seek to re-use and recycle materials as much as possible, adhering to waste management licencing principles in place at the time of writing. Any waste that is generated during the decommissioning and restoration process would be removed from the Site and dealt with appropriately in line with best practice at the time of writing.

3.76 It is anticipated that pre-decommissioning surveys would be required to provide new baseline data on any potential environmental receptors such as protected species, other identified ecological receptors, hydrology and peatland, which may be potentially impacted during decommissioning. Prior to the planned commencement of decommissioning, consultation would be undertaken with statutory consultees, including Scottish Environmental Protection Agency (SEPA) and Scottish Natural Heritage (SNH) regarding the requirements for the scope of pre-decommissioning surveys.

REFERENCES

Ref. 3.1: HMSO (1988). Royal Commission on Environmental Pollution (1988), Twelfth Report, Best Practicable Environmental Option. London, February 1988.