5 CHAPTER 5: CHANGES TO THE PROPOSED DEVELOPMENT

5.1 Introduction

The submitted scheme for the Proposed Development was defined in the ES Volume 1 Chapter 5: Project Description, and this Chapter of the ESA provides an update describing the changes that have been made to the Proposed Development to address the issues raised during consultation. It should be assumed that any details of the scheme not described in this Chapter have not been changed since the submission of the ES, and therefore Volume 1, Chapter 5 of the ES should be referred to and read in conjunction with this Chapter.

The main drivers of the changes were the following:

- Issues relating to dust, noise, and visual impact as a result of the proposed extractive and restoration processes within the High-Rise and Low-Rise areas within Area A. The scheme has now been amended to provide more clarity and detail, as well as improve the robustness of measures to manage these potential impacts as detailed in Chapters 7, 12, and 13 in Volume 1 of this ESA.
- The loss of land and habitat from the Sutton and Lound Gravel Pits Site of Special Scientific Interest (SSSI) and the level of provision for biodiversity net gain reflected in the proposed restoration plan as provided within ES Volume 3 Appendix 8.5. This has now been revised to retain the small area within the SSSI that overlaps with the Site and, in addition, further refinements to the landscape and habitat design to significantly improve biodiversity net gain. Further information can be found in Chapters 7 and 8 of this ESA. An updated restoration plan is also provided in Figures 7.12 to 7.14 in ESA Volume 2, and in Appendix 5.4, ESA Volume 3.

The changes to the Proposed Development relating to the extraction (operational) phase are detailed in Section 5.2 , the changes relating to construction are detailed in Section 5.3, changes to the Main Processing Site are discussed in Section 5.5, and changes to the restoration phase are detailed in Section 5.4 of this Chapter.

This Chapter is supported by the following drawings which have been updated since submission of the ES and are included in the following Technical Appendices. Plans marked with an asterisk (*) are new for the ESA.

- Technical Appendix 5.1 Site Layout Plans
    - Drawing 001 - Outline Site Layout
    - Drawing 002 - Main Processing Plant Site Layout
    - Drawing 003 – Optimisation Stage Site Layout*
    - Drawing 009 - Main Processing Plant Cross Section
    - Drawing 032 - Existing Site Layout Plan*
    - Drawing 015 - Conveyor – Crossing Plan & Typical Details
    - Drawing 018 – Cross Sections*
    - Drawing 004 – Office / Welfare Accommodation Elevations*
    - Drawing 005 – Materials Storage Building – Elevations*
    - Drawing 006 – Silos Elevations*
    - Drawing 007A – Drying Module – External View Elevations*
    - Drawing 007B – Drying Module – Internal View Elevations*
    - Drawing 007C – Filter Unit – Plan & Elevations*

- Drawing 007D – Drying Plant Condenser – Plan & Elevations*
- Drawing 007E – Drying Plant Stack – Plan & Elevation*
- Drawing 008 – CHP Unit Elevations*
- Drawing 010 – Gas Tanks & Vaporisers – Plan & Elevations*
- Drawing 011 – Weighbridge Elevations*
- Drawing 012 – Wheel Wash Elevations*
- Drawing 013 – Gas Main Kiosk Elevations*
- Drawing 016 – Mobile Screen Details Plan*
- Drawing 019 – Typical Sections for Temporary Haul Road & Boundary Treatments*
- Drawing 034 – Water Treatment Plant Elevations*

- Technical Appendix 5.2 Site Phasing Plans
  - Drawing 020 - Stage 1 Site Establishment & HR Phase 1 Excavation
  - Drawing 021 – Stage 2 HR P1 Excavation, Settlement Ponds / Soakaway
  - Drawing 022 – Stage 3 HR Phase 1 Restoration & HR Phase 2 Excavation
  - Drawing 023 – Stage 4 HR Phase 2 Restoration & HR Phase 3 Excavation
  - Drawing 024 – Stage 5 HR Phase 3 Restoration & HR Phase 4 Excavation
  - Drawing 025 – Stage 6 HR Phase 4 Restoration & HR Phase 5 Excavation
  - Drawing 026 – Stage 7 HR Phase 5 Restoration & HR Phase 6 Excavation
  - Drawing 027 – Stage 8 HR Phase 6 Restoration & LR Phase 3 Excavation
  - Drawing 028 – Stage 9 LR Phase 3 Restoration & LR Phase 4 Excavation
  - Drawing 029 – Stage 10 LR Phase 4 Restoration & LR Phase 5 Excavation
  - Drawing 030 – Stage 11 LR P5 Restoration & LR P1 & P2 Excavation,
  - Drawing 031 – Stage 12 LR P1 & P2 Restoration*
- Technical Appendix 5.4 Site Restoration Plans*
  - Updated Indicative Restoration Masterplan (Figures 7.12, 7.12a, and 7.12b)
  - Updated Indicative Restoration Masterplan – Annotations (Figure 7.13)
  - Updated Indicative Restoration Masterplan – Indicative Section Plan (Figure 7.14)
  - Drawing 017C – Landform Change
  - Figure 02 – Conceptual Restoration Contours
  - Rest 02 – Proposed Restoration Cross Sections

5.2 Changes to the Extraction Phase

5.2.1 Details of the Proposed Development in the ES

The Proposed Development, as described in the ES and the planning application, described the extraction processes beginning at the western end of Area A in HR P1, with operations moving from there to the eastern end of Area A then working progressively westwards back to HR P1 (refer to ES, Volume 3 Appendix 5.2). This resulted in the following:

- A requirement for the conveyor and maintenance / haul road to cross a significant amount of unworked area over most of the High-Rise to reach the extraction stages in the eastern end of Area A;
- Which in turn, necessitated raising the conveyor and maintenance / haul road in an elevated position over most of the extraction phase, predominantly on top of the southern lagoon embankments, close to the SSSI; and
- Moreover, the elevated conveyor and maintenance / haul road were placed in relatively close proximity to the residential properties at Bellmoor Farm, due to the nature of the crossing between HR P1 and HR P6, and the engineering requirements for a shallow angle down the lagoon embankment.

The Proposed Development also provided three semi-fixed Processing Areas 1-3 within Area A (Refer to ES Volume 3, Appendix 5.1) that moved progressively over a number of years as extraction commenced. Two of these areas were located on the southern boundary of Area A, close to the SSSI. The semi-fixed nature of the Processing Areas also required lengthy haul distances to get extracted PFA from the operating extraction face/cut to the relevant Processing Area – in some cases requiring vehicle haulage of over 300 m.

5.2.2 Design Principles of the Amended Proposed Development

To address these points, changes have been made to the Proposed Development to include further embedded mitigation (mitigation by design) and management for noise, dust, biodiversity and visual amenity impacts. This updated proposal is referred to as the 'Amended Proposed Development', as previously stated, and is described within this Chapter. This Chapter also provides clarification on certain aspects of the scheme where consultees expressed uncertainty regarding details expressed in the ES.

The extraction process for the Amended Proposed Development within Area A is based on the following overarching design principles:

- More prescriptive measures to reduce potential for dust, visual and noise impacts, considering receptors north (residential properties) and south of Area A (designated ecological sites, including the SSSI);
- Methods of working to reduce the area of influence/working area, including splitting extraction into small micro-phases (each no greater than 1% of Area A);
- Greater use of dig cuts and working through the Site progressively;
- Working at a lower level using the existing lagoon embankments to screen activities;
- Progressive extraction and processing operating behind the existing lagoon embankments;
- The minimisation of vehicle movements and tracking through Area A;
- The maximisation of covered conveyor use;
- The containment of working extraction areas wholly within each phase, with no travel to remote semi-fixed Processing Areas; and
- No dewatering of the extraction void.

5.2.3 Changes to the General Extraction Activities and Phasing Order

5.2.3.1 Revised Phasing Order

The phasing order has been revised to work from west to east through the Site, aside from a small amount of extraction in LR P1 and LR P2 in the early years of the Amended Proposed Development

to facilitate construction of the filter and soakaway ponds. The phasing order and activities are detailed in Table 5.2 below and shown in Appendix 5.2, ESA Volume 3.

This change has resulted in the re-numbering of the phases since the production of the ES. The only phases that have changed numbers are located within the High-Rise due to the change in the working order, from west to east, rather than from the east of the High Rise to the west (excluding HR P1) detailed within the ES. For ease of reference, Table 5.1 details the phase numbers used within this ESA and the corresponding phase numbers used within the ES, so comparisons can be made between the two documents. The phase numbers that have changed are shaded in grey within Table 5.1. A comparison can also be made between the phasing plans in Technical Appendix 5.2 in Volume 3 of this ESA, and in Technical Appendix 5.2, Volume 3 of the ES, as these demonstrate the numbers used for each phase in the ESA and ES respectively.

Table 5.1: Revised Phase Numbers

Phase Number within the ESA	Phase Number within the ES
HR P1	HR P1
LR P1	LR P1
LR P2	LR P2
HR P2	HR P6
HR P3	HR P5
HR P4	HR P4
HR P5	HR P3
HR P6	HR P2
LR P3	LR P3
LR P4	LR P4
LR P5	LR P5

Table 5.2: Revised Indicative Scheme Phasing Order

Stage	Phase	Comments
1	HR P1 (extract)	• Conveyor and maintenance / haul road extended into HR P1, including 'digging down' to form the extraction base • Soil strip progressively • Extract PFA
2	LR P1 & LR P2 (construction) HR P1 (continue extraction)	• Construct filter ponds (LR P2) and soakaway (LR P1) • Continue extraction in HR P1 • Following extraction, remove embankments where required to create the restoration landform • Landform profiling, planting and seeding
3	HR P2 (extract)	• Extend conveyor and maintenance / haul road • Soil strip progressively • Extract PFA • Following extraction, remove embankments where required to create the restoration landform • Landform profiling, planting and seeding

4	HR P3 (extract)	• Extend conveyor and maintenance / haul road • Soil strip progressively • Extract PFA • Following extraction, remove embankments where required to create the restoration landform • Landform profiling, planting and seeding
5	HR P4 (extract)	• Extend conveyor and maintenance / haul road • Soil strip progressively • Extract PFA • Following extraction, remove embankments where required to create the restoration landform • Landform profiling, planting and seeding
6	HR P5 (extract)	• Extend conveyor and maintenance / haul road • Soil strip progressively • Extract PFA • Following extraction, remove embankments where required to create the restoration landform • Landform profiling, planting and seeding
7	HR P6 (extract)	• Extend conveyor and maintenance / haul road • Soil strip progressively • Extract PFA • Following extraction, remove embankments where required to create the restoration landform • Landform profiling, planting and seeding
8	LR P3 (extract)	• Extend conveyor and maintenance / haul road • Soil strip progressively • Extract PFA • Following extraction, remove embankments where required to create the restoration landform • Landform profiling, planting and seeding
9	LR P4 (extract)	• Extend conveyor and maintenance / haul road • Soil strip progressively • Extract PFA • Following extraction, remove embankments where required to create the restoration landform • Landform profiling, planting and seeding
10	LR P5 (extract)	• Extend conveyor and maintenance / haul road • Soil strip progressively • Extract PFA • Following extraction, remove embankments where required to create the restoration landform • Landform profiling, planting and seeding
11	LR P1 & LP P2 (extract)	• Conveyor extended into LR P1 and LR P2 • Extract any remaining PFA and decommission filter ponds and soakaway
12	LR P1 & LP P2 (final restoration of Area A)	• Remove embankments where required for the restoration landform • Following extraction, remove embankments where required to create the restoration landform • Landform profiling, planting and seeding • Extraction stage complete

The revised phasing order has a number of distinct advantages compared to the Proposed Development as described in the ES, including:

- Enabling the maintenance / haul road and the conveyor to be extended progressively at a lower level through the created void behind the lagoon embankments as extraction progresses easterly through Area A, thereby reducing the potential environmental impacts (noise, visual and dust impacts) from needing to construct large distances of maintenance / haul road in advance of extraction beginning (as proposed in the ES for the High-Rise Phases). An example cross-section of extraction activities is shown in Figure 5.2, ESA Volume 2;
- The removal of the semi-fixed Processing Areas 1-3 and the positioning of mobile processing equipment (shredder, screen and conveyor hopper) close to the extraction face moving with each micro-phase, thereby reducing overall haulage distances and minimising the zone of influence from extraction, thereby reducing the potential for noise and dust impacts;
- The repositioning of the main conveyor further away from the SSSI and Bellmoor Farm properties, and the addition of an adjustable spur conveyor to move the reception hopper as close as possible to the extraction face within the void at a lower level and behind the lagoon embankments, rather than being more remote. This minimises the zone of influence from extraction, utilises the lagoon embankments as screening, and increases the distance between sensitive receptors and the main conveyor, and therefore reduces the impact of any noise, visual or air quality effects; and
- The permanent retention of a large section of the lagoon embankment along the southern boundary of Area A, including where the Site overlaps with the SSSI, to avoid any direct impacts on the SSSI and to ensure a permanent buffer is retained.

Importantly, the combined effect of these changes would further reduce potential impacts on the SSSI bordering the southern boundary, and residential properties including at Bellmoor Farm, by removing the need for the elevated maintenance / haul road and conveyor close to the boundary of the Site.

As noted above, this new working arrangement would also significantly reduce the distances between the extraction face, screen, and conveyor hopper in comparison to the working practices described for Area A in the ES (in excess of 300 m to reach the Low-Rise phases) and would confine open-air extraction operations to a singular, small micro-phase (less than 1% of Area A at any given time). This would enable improved and simplified management of potential dust emissions.

In addition to reducing the potential for dust emissions, these changes to the extraction process would also be beneficial in reducing noise and visual impacts for sensitive ecological receptors close to and within the SSSI. Similarly, these changes would reduce impacts for nearby residential receptors to the west and north as extraction machinery and activities would be concealed by the existing lagoon embankments, which would act as screens for noise, dust, and visual receptors. Further information is provided in Chapters 7, 8, 12, and 13 of this ESA, and Technical Appendix 13.7 in ESA Volume 3.

5.2.3.2 Indicative Working Timings

Table 5.3 below sets out the working timings associated with each extraction phase as part of the Amended Proposed Development, including:

- Soil stripping;
- Extraction of PFA;
- Lagoon embankment removal following extraction to fill the void (part of site restoration); and
- Landform profiling, planting and seeding (part of site restoration).

The working timings included in Table 5.3 demonstrate that the number of days required for soil stripping and embankment removal (activities with the potential to generate the most noise, dust, and visual impacts) would be limited when considering the full lifetime of the Amended Proposed Development. These activities would take place for a maximum of approximately 15 days per year

and a minimum of approximately 5 days per year, thereby demonstrating that any potential impacts from these activities would be short-term and temporary.

Table 5.3 Phase working timings

			Establishment, Extraction and Restoration - approx. timings			
Phase ID	**PFA Tonnes**	**Size (ha)**	**Soil Stripping (Days)**	**Extraction (Years)**	**Embankment removal & infilling (Days)**	**Landform profiling, planting & seeding (months)**
HR P1	916,000 t	11.5	12	3.1	15	9 to 12
HR P2	933,000 t	10.3	11	3.1	15	9 to 12
HR P3	1,109,000 t	14.6	11	3.7	15	9 to 12
HR P4	1,323,000 t	12.2	11	4.4	15	9 to 12
HR P5	583,000 t	6.1	11	1.9	10	9 to 12
HR P6	584,000 t	8.6	11	1.9	10	9 to 12
LR P3	208,000 t	6.3	10	0.7	8	9 to 12
LR P4	344,000 t	8.2	10	1.1	8	9 to 12
LR P5	254,000 t	7	10	0.8	8	9 to 12
LR P1	87,000 t	3.3	6	0.3	5	9 to 12
LR P2	116,000 t	4.4	5	0.4	5	9 to 12

5.2.3.3 Micro-Phasing

The Amended Proposed Development would adopt the principle of micro-phasing, whereby each of the larger extraction phases (HR P1-P6 and LR P1-P5) would be split into small ‘micro-phases’. The example in Image 5.1 shows HR P4 split into micro-phases.

Importantly, extraction would only take place in a single micro-phase at any given time, working progressively through the micro-phases until extraction is complete within the whole phase before moving onto the next phase. Each micro-phase would be no larger than 1.0 hectare in area, and therefore less than 1% of Area A would be worked at any given time.

The micro-phasing approach means that extraction, including open-air operations, would be focussed in a much smaller area at any given time, therefore potential dust, noise and visual impacts would be of a lower magnitude (due to the smaller area of influence) and easier to manage through management and mitigation measures detailed predominantly within Technical Appendices 5.3, 9.1 and 13.7 within Volume 3 of this ESA, and throughout Chapters 7, 12, and 13 within Volume 1 of this ESA.

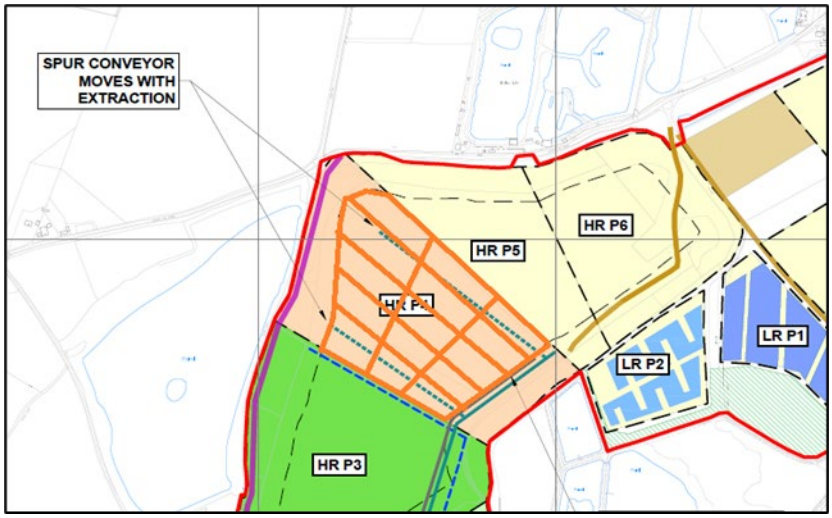

Image 5.1: Example micro-phases

5.2.3.4 Soil Stripping

Soil stripping by its nature needs to take place at surface level, and therefore has the potential to produce noise, dust, and visual impacts as only the existing embankments form screening at this level. All other extractive activities, aside from soil stripping, have been designed to take place at a lower level within the extraction void to benefit from the screening offered by both the existing lagoon embankments and the depth of the extraction face.

Each phase would be split into micro-phases, as shown in the example in Image 5.1 above. These would be topsoil stripped individually, followed progressively by the PFA extraction process, so only one micro-phase would be worked on at a time. The soil stripping would take place progressively by micro-phase, with no need to strip and uncover the entire phase, thereby limiting exposed areas and the associated potential dust, noise and visual impacts.

Soil stripping as a result of the micro-phase approach would be limited to a small number of days in any given year, as detailed in Table 5.3 and Section 5.2.3.2 in this Chapter. Any potential impacts would therefore be temporary and focussed over a short timeframe. It would be possible to strip approximately 3500 m^2 of soils per day based on the assumption that the soil thickness averages at approximately 300 mm across Area A. This would imply that an entire phase would be stripped in as little as 5 days (LP L2), assuming the phase was stripped continuously within working hours over those days. The soil stripping of large phases, such as HR P1, would require more time in comparison (12 days), but, in the case of HR P1, this would be split over approximately 3 years; meaning only around 4 days of soil stripping per year.

The number of days required for soil stripping of each phase are detailed in Table 5.3 earlier in this Chapter. It should also be noted, as stated above, that these days would be split across the years worked on each phase; therefore, the number of days in any given year would be very limited. Furthermore, soil would only be stripped from one micro-phase at a time, and therefore the number of days required for soil stripping per year would be split across the year and would be unlikely to occur concurrently as the micro-phases are worked progressively.

The number of days where soil stripping would be required close to sensitive receptors is further limited as many of the micro-phases would not be close to the sensitive receptors, which are concentrated along the southern and northern boundaries of Area A. In order to minimise potential impacts further, no soil stripping would be undertaken during adverse weather conditions (for example, particularly windy or dry conditions), and to work outside of key seasons for sensitive ecological species, e.g. turtle doves.

Stripped soils would be stored in a designated area within each phase for later replacement or stored in a longer-term soil store adjacent to LR P5, if necessary. The use of the longer-term soil store would

only be used when necessary, in order to reduce the need for longer haulage distances to transport soil.

Soil stripping would also be subject to the stringent measures set out in the Updated Dust Management and Monitoring Plan (Appendix 13.7, ESA Volume 3), which would further reduce any potential impacts from dust.

5.2.3.5 Dust Management and Monitoring

Further information regarding the improved dust management and monitoring regime is provided in the Updated Dust Management and Monitoring Plan (DMMP), which is included as Appendix 13.7 in ESA Volume 3.

The updated DMMP, in addition to the detailed measures already proposed in the ES, has been updated to ensure that dust is stringently managed in conjunction with the limitation of open air working to a single and very small area within Area A at any given time. The updated DMMP also includes the addition of a dust monitoring regime that is more consistent with the higher level of detail usually reserved by planning condition and/or environmental permitting (the latter being twin tracked by the Applicant in conjunction with the planning application).

The contents of the DMMP have also benefitted from specialist input from Hatfield Site Services Ltd ('HSSL'), the contracting division of Roy Hatfield Ltd, who have over 20 years of experience operating mineral processing operations, including PFA recovery operations. HSSL is actively managing operational PFA and resource recovery sites in the UK. The company is a highly regarded specialist in the area with a recognised track record in the recovery of PFA. They are currently actively carrying out the measures set out in the DMMP on numerous sites, where they are successfully managing dust impacts.

HSSL has been engaged to provide further practical expertise on how best to mitigate dust generation and release from the Amended Proposed Development.

5.2.3.6 High-Rise Phase Extraction

Approximately 82% of the extraction process would occur within the High-Rise area, as this is where the majority of the PFA resource is located. By changing the direction of extraction, i.e. working progressively eastwards from HR P1, the extraction process would:

- Take place at a lower level; and
- Be contained behind the existing sandstone lagoon embankments.

An example of the existing High-Rise embankments, which vary between 6-8 m in height above ground level, is shown in Image 5.2, and profiles of the sandstone embankments can also be found in Figure 5.1, Volume 2 of this ESA.

Image 5.2: Example of a lagoon embankment.

The former PFA lagoons in the High-Rise, where extraction would take place, are located beyond the fence line on top of the embankment shown in Image 5.2 and are largely obscured from public view. Image 5.2 was taken from the grass to the south of Lound Low Road; note the significant standoff from Lound Low Road to the base of the embankment, and then the further significant standoff and screening provided by the embankment from extractive activities, which would take place below and behind the embankment.

In addition to the existing embankments, the Amended Proposed Development also includes the potential provision of temporary targeted amenity mitigation soil bunding to the west of HR P3, to the north of HR P5 and HR P6, and to the south of LR P2 and LR P1. These would be used for specific activities (for example embankment remodelling or removal, and surface working) to minimise potential impacts, such as from noise, dust, or visual disturbance. The indicative locations of these bunds are shown on Figure 5.4 in ESA Volume 2, and they would be approximately 2 m in height, and seeded with wildflower annuals. They would then be removed once the extraction activity is completed. These bunds would assist in the screening of extraction operations, particularly in terms of potential visual impacts, and have therefore been included as embedded mitigation. Similarly, a temporary landscape bund or timber fence and hedgerow has been proposed along the western edge of Area B (the Conveyor and Link Road, as shown on Figure 1.3 in Volume 2 of the ES) to screen views of the conveyor and maintenance / haul road from receptors to the west. Finally, wind dissipation bunding has been proposed across the centre of the Site between HR P3 and P4, HR P4 and P5, and HR P5 and P6. These are located to shield the phases from strong winds, and therefore, reduce the risk of dust impacts from extraction activities.

The key elements of the extraction process in the High-Rise are as follows:

- The extraction process would begin by digging a cut into the southwestern corner of HR P1 (the proposed starting phase) and digging down to an extraction base of approximately 5 m below surface level. This process would facilitate the start of extraction and is a temporary construction/site establishment activity, requiring no more than 5-10 days.
- The ‘digging down’ and construction of the cut would then enable extraction to continue at a lower level and to be concealed by the lagoon embankments.
- The maintenance / haul road and conveyor would then be extended into the cut to create the working / extraction area. Once the conveyor is operational, this would be the sole means of transporting PFA from the extraction area to the Main Processing Site (Area C) under normal operations. The only time it is anticipated that the conveyor would not operate is during planned maintenance following early site establishment.

- Following extraction of the PFA, HR P1 would be restored using material available from the lagoon embankments to achieve the required restoration levels. Importantly, the sandstone embankments would only be removed once the extraction phase is complete and the restoration phase begins, enabling them to continually screen the extraction area as works are ongoing. The illustrative section in Image 5.3 demonstrates the process.
- The conveyor and maintenance / haul road would be extended from HR P1 into HR P2 over a revised crossing location (shown in Appendix 5.1 in Volume 3 of this ESA) which would be located further from Bellmoor Farm and at ground level compared to the elevated positioning of the conveyor as described in the ES.
- From this point, the conveyor and maintenance / haul road would be progressively extended at the lower level through the High-Rise area easterly, with extraction continuing to be screened by the sandstone lagoon embankments and following the same process as HR P1.

Note that the maintenance / haul road and conveyor would potentially need to be lowered periodically as the extraction level drops.

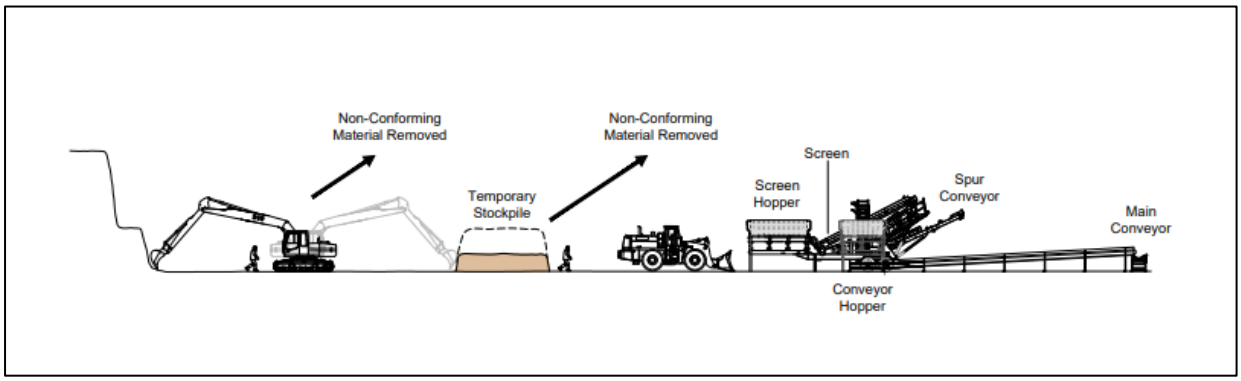

Image 5.3: Illustrative section to demonstrate working in the High-Rise

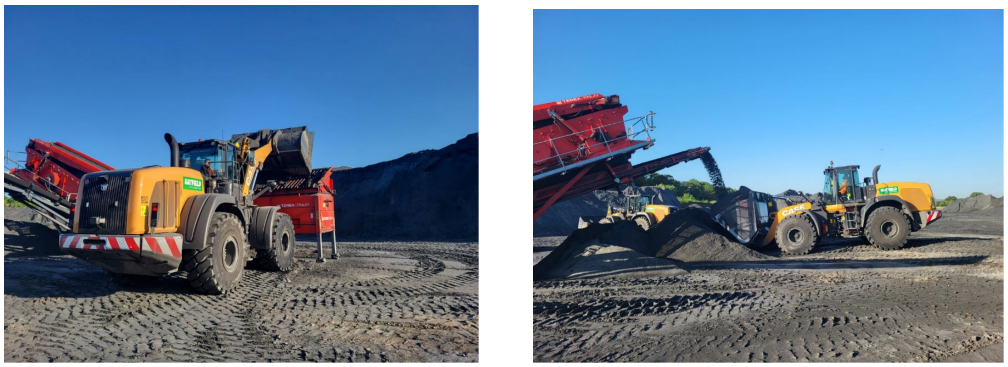

Image 5.4: Examples of operational machinery and vehicles on a similar site

Note the zero fugitive dust in Image 5.4, taken on a dry day in summer 2023. This is due to a combination of water bowsers in active use, limited drop heights and small haulage distances; all of which would be employed by the Amended Proposed Development as part of the updated DMMP.

5.2.3.6.1 'Dig Down' Activities

A major embedded mitigation proposal within the Amended Proposed Development is to ensure the maintenance / haul road remains at a lower level within the extraction void in order to fully benefit from the screening provided by the existing lagoon embankments and the extraction face in terms of potential noise, dust, and visual impacts. To reach the desired lower level (approximately 5 m within the High-Rise and approximately 2 m within the Low-Rise), 'dig down' works need to take place, where cuts are dug to establish the below surface level extraction base.

These works are limited to three areas within the Site, as shown on Image 5.5, and would be short-term and temporary. 'Digging down' in the southwestern corner of HR P1 (the proposed starting phase) to begin extraction would occur during site establishment, and would be completed after a maximum of approximately 10 days. 'Dig down' would then also need to occur at the southwestern corner of HR P2, and to the south west of LR P5, to allow the progressive extension of the maintenance / haul road and conveyor. The initial 'dig down' cut would be approximately 15 m wide, and from there extraction would take place at the lower level, following the simultaneous extension of the maintenance / haul road and conveyor through Area A from west to east.

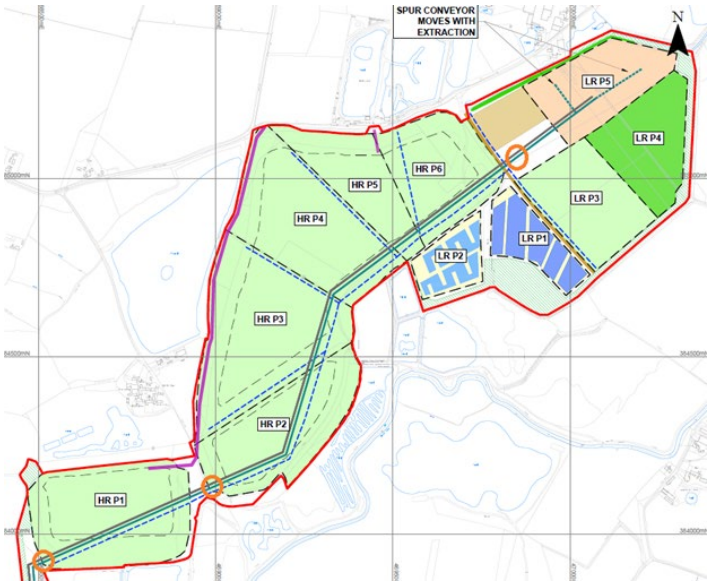

Image 5.5: Indicative 'dig down' area locations

5.2.3.7 Low-Rise Phase Extraction

The Low-Rise area of the Site has smaller embankments than the High-Rise, although these are still between 2-3 m high (as shown on Figure 5.1 in Volume 2 of this ESA).

It is notable that most of the Low-Rise is located further away from the SSSI and does not border it other than for a small section of LR P2, unlike the High-Rise which borders the SSSI along most of its southern boundary. There are also fewer residential receptors located in proximity to the Low-Rise, although Low Farm is situated adjacent to the northern boundary and is an important consideration.

Some key elements of the works in the Low-Rise are as follows:

- The maintenance / haul road and conveyor would be extended from the High-Rise into the Low-Rise, as shown in the amended phasing plans in Technical Appendix 5.2, ESA Volume 3.
- Extraction would begin by digging a base down to approximately 2 m below the surface. This would be a temporary construction/site establishment activity, requiring no more than 5-10 days.
- The main objective of working in this way would be to maintain the extraction base as low as possible to benefit from the screening effect of the lagoon embankments. It is acknowledged however that the lower level embankments within the Low-Rise would offer less mitigation in terms of screening than those within the High-Rise.
- It is therefore proposed to provide temporary 2-3 m high acoustic fencing and/or a temporary seeded earth bund along the northern and southern boundaries of the Low-Rise close to sensitive receptors. The proposed locations are denoted by the orange and purple lines as shown in Image 5.6.

- This additional mitigation, forming a new part of the Amended Proposed Development, would remain for the duration of the extraction process in the Low-Rise and would effectively provide a combined height of up to approximately 5 m of screening for sensitive receptors (comprising the minimum 2 m extraction base and up to 3 m of fencing/bund).

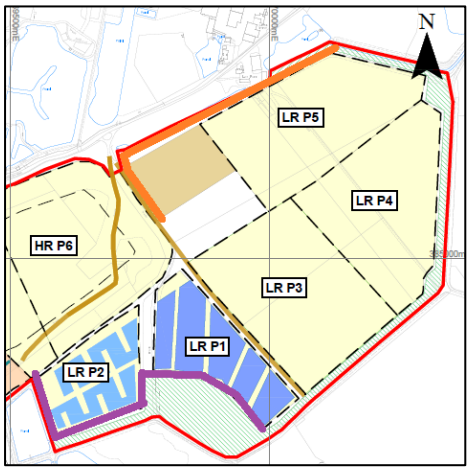

Image 5.6: Proposed location for additional acoustic/visual mitigation

5.2.3.8 Working Below Groundwater

In the ES, Chapter 5, Section 5.6.1.1, it was stated that groundwater would be drained to a sump or a series of sumps within the base of the excavation. Water would then be pumped from the sumps to the settlement ponds to dewater the void. Consideration was also given to the requirement for interceptors/treatment in addition to the filter ponds as part of the Environmental Permitting process.

This is no longer the case, as the dewatering/pumping of groundwater has been removed from the Amended Proposed Development. As discussed in Chapter 9, Hydrology, Hydrogeology and Flood Risk within this ESA, the method of extraction of the PFA now provides for a 'wet working' approach.

The wet working approach involves the following key features and has been adopted to address concerns raised by consultees:

- No pumping of water from the extraction void, with the PFA instead extracted with groundwater in-situ. The PFA would be extracted with a dredger and/or conventional plant (e.g. an excavator).
- When the excavation reaches the water table within the PFA the material would be stripped in thin horizons to allow the water level in the working area to reach an equilibrium with the surrounding groundwater to prevent a significant buildup of head and to prevent basal heave.
- The excavation would be left until the water level within the excavation has stabilised (inflows from leaching through the sides and base of the excavation, rainfall and surface water run-off) and reached an equilibrium with the surrounding groundwater before taking the next strip.
- The PFA would be extracted to approximately 0.2-0.5 m above the top of the sandstone bedrock, although the exact thickness of PFA remaining at the base of the excavation would be determined during detailed design based on local hydrogeological conditions at each phase. This would prevent direct mixing of groundwater within the underlying Sandstone and PFA water within the working area.
- Once extracted, the wet PFA would be placed along the side of the excavation onto in-situ PFA to allow any water within the PFA to drain naturally back into the excavation.

The main advantages of this dewatering process would be:

- The avoidance of active abstraction of the groundwater and discharge into soakaway ponds; and
- No mixing of groundwater within the underlying Sandstone and the PFA water within the working area.

5.2.3.9 Water Treatment Plant

The Amended Proposed Development includes the addition of water treatment plant infrastructure, to be contained within shipping type containers. An indicative footprint for the water treatment plant and further detail is provided in Technical Appendix 9.3, Drainage Management Plan in Volume 3 of this ESA.

The water treatment plant, if selected as the treatment and discharge option, would be situated in Area A and/or Area C. The plant would treat any water draining from the PFA at the Main Processing Site, together with any condensate from the drying plant, prior to discharge. The Applicant has undertaken monitoring of groundwater quality upgradient of the Site, within the underlying sandstone aquifer, and within the PFA for comparison with Environmental Quality Standards and Drinking Water Standards.

Based on the results of the chemical analysis, the applicant has identified potential treatment options that would ensure that any water discharged to groundwater would meet either the Environmental Quality Standards (EQS) or Drinking Water Standard (DWS), whichever is lowest.

Final selection of the treatment technology and optimisation of the treatment process would be undertaken once formal discharge limits have been established and agreed with the Environment Agency via the bespoke Permit Application process for discharge to groundwater. Note that it may be that a water treatment plant is not necessary if contaminants are low or absent, and/or if water is to be discharged direct to sewer or disposed of using tankers.

5.3 Changes to the Construction Phase

The Amended Proposed Development, as noted earlier in this Chapter, no longer includes Processing Areas 1-3. These comprised a large amount of the construction activities required in Area A and would also have required removal after their use.

The Processing Areas were to move as extraction progressed through the Site, with three separate areas provided over the lifetime of the Proposed Development. Each Processing Area would have been dug into the lagoon embankment to provide stability, and each would have comprised a concrete pad or hardstanding. Each pad would cover an area of approximately 6,000 m^2. The Processing Areas had the most potential, without suitable mitigation, to have adverse effects on sensitive receptors.

The removal of the Processing Areas from the scheme therefore means that construction activities, particularly those in close proximity to the SSSI along the southern boundary of the Site, would be reduced. The construction activities in Area A are therefore, under the Amended Proposed Development, largely limited to:

- The initial dig down in HR P1 at the start of operations;
- Construction of the filter and soakaway ponds; and
- Progressive extension of the maintenance / haul road and conveyor.

The majority of these construction activities comprise the progressive extension of the maintenance / haul road and conveyor, which would for the most part take place at a lower level and behind the High-Rise lagoon embankments under the Amended Proposed Development, therefore minimising potential impacts from noise, dust, and visual effects.

5.4 Changes to the Restoration Phase

5.4.1 Details of the Original Scheme

Changes have also been made to the Indicative Landscape Restoration plan, as shown on Figure 7.12, Volume 2 in the ES, in response to comments made by Nottinghamshire Wildlife Trust (NWT) and NCC relating to the balance of agricultural land and biodiversity enhancement. The plan submitted as part of the ES identified:

- Extensive areas of open water;
- Long and narrow areas of wet grassland and reedbed, with more extensive areas of pasture; and
- Scattered blocks of woodland and extensive shelterbelts.

The original scheme included a biodiversity net gain (BNG) of approximately 12.66%

5.4.2 Design Principles

Taking on board the comments received from NCC and NWT the overarching principles of the restoration strategy have been amended to provide the following:

- Greater emphasis on biodiversity with more wet grassland and reedbeds, and a reduction in pasture;
- The complete retention of the embankment located within the Site which also coincides with the SSSI;
- The provision of increased public access through the addition of a new permissive byway within Area A;
- No importation of dedicated fill material from off-site;
- Progressive restoration and landscape management;
- The minimisation of vehicle movements over the restored landscape through the use of covered conveyors;
- The replacement of large open water bodies with more shallows and clusters of ponds to encourage amphibians and aquatic invertebrates, using on-site restoration materials to raise levels, including the lagoon embankments thereby unlocking valuable soils;
- Fewer but larger woodland blocks to maximise and improve woodland habitats; and
- A commitment to manage the land (aftercare) for up to 30 years for each extraction phase following restoration.

5.4.3 Amended Restoration Plan

These principles have been addressed through the Updated Indicative Restoration Plan, Figure 7.12 – 7.14 in ESA Volume 2. The amended plan now incorporates the following:

- Fewer areas of open water which would be located within the Low-Rise where the lack of fill material necessitates their presence;
- The inclusion of shallows, reedbed, scrapes, and groups of ponds in the Low-Rise and eastern section of the High-Rise;
- The repositioning of wet grassland in larger blocks towards the eastern end of Area A, rather than as a thin strip running through Area A;
- The removal of the large shelter belts and scattered trees, substituted with extensive open areas of wet grassland, sustained by water levels maintained on/around existing groundwater

levels to facilitate natural, seasonal flooding, which is possible owing to the fill material balance in this part of the Site;

- The provision of a new drainage ditch system to moderate water levels and facilitate seasonal flooding;
- An increase in the areas of wet grassland, shallows and reed bed balanced against the area of pasture across the Site, and the removal of pasture within the Low-Rise to be replaced with species rich grassland;
- The concentration of new woodland in one or two larger blocks within HR P1, HR P2 and HR P3, away from the areas of wet grassland. It is proposed that the woodland areas would also include areas of scrub along the woodland edges; and
- An increased BNG of up to 43% overall once all extraction and restoration is completed due to increased focus on wet grassland and habitat creation, and importantly, a commitment to 30-years of aftercare from the completion of each phase.

5.4.4 Retention of the SSSI Embankment

The Restoration Plan has now been amended (Figure 7.12 – 7.14 in ESA Volume 2, and Technical Appendix 5.4 in ESA Volume 3) to retain the small section of SSSI as highlighted on the plan extract below (Image 5.7). Previously it was proposed to partially remove this embankment (lowering of the lagoon embankment) to facilitate restoration proposals as part of the Proposed Development described in the ES, and to replace it with improved habitats. With the Amended Proposed Development, the embankment would be retained to mitigate potential impacts to the SSSI.

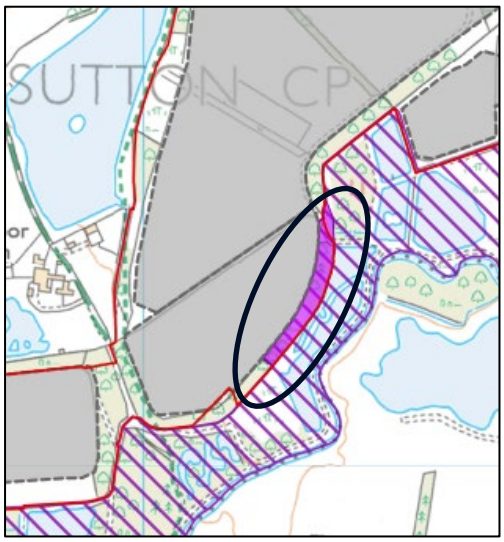

Image 5.7: Section of SSSI embankment to the retained

5.4.5 Areas of open water

One of the issues raised by both NCC and NWT was around the amount of 'open water', with a preference to avoid these areas as far as possible. However, it should be noted that where it is necessary to extract material from below groundwater and, in the case of the Amended Proposed Development, where it is proposed to avoid importing fill material from off-site, some areas of open water are necessary. This is evident across the Idle Valley where the extraction of sand and gravel, and subsequent restoration, has resulted in areas of open water interspersed with reed bed, shallows and drier habitats.

It is often an unavoidable fact of mineral extraction, particularly in close proximity to rivers; although, it is possible to strike a balance, which the Amended Proposed Development seeks to do.

The only available option to completely avoid areas of open water when extracting below groundwater is to import purpose fill material, often waste, from off-site. A principal feature of the Amended Proposed Development is to avoid importing material specifically for the purpose of infilling the extraction void, and the additional operations and vehicle movements associated with this. This decision was taken following stakeholder engagement with the local community and consultees such as NWT who were not supportive of the importation of large volumes of, for example, inert waste.

To overcome this issue, the reuse of the sandstone lagoon embankments to fill the extraction void and create the restoration landform has been identified as the most pragmatic and sustainable solution. This would utilise approximately 1.4 million m^3 of soil, sand and sandstone located:

- On top of the former lagoons; and
- In the lagoon embankments themselves.

The design of the restoration scheme therefore reflects where fill material is available, retaining the SSSI embankment, and the requirement to progressively restore Area A. The basic concept being to:

- Extract the PFA from a phase leaving a void; and then,
- Use the soil and sandstone embankments from within that phase to fill the void created to the proposed restoration levels.

An estimate of the restoration fill material balance has been undertaken as follows:

- Total restoration material requirement, approximately 1.96 million m^3;
- Total of restoration materials (topsoil, sandstone embankments etc.), approximately 1.47 million m^3; and
- Total Deficit, approximately 0.49 million m^3.

Most of the fill material is available within the High-Rise, as this is where the largest embankments occur. It is therefore achievable, by using the embankments as fill, to avoid areas of open water within the High-Rise area and to satisfy NWTs request for woodland in the western end of the High-Rise. This lends itself to this drier habitat, due to most fill material being located in the western end of the Site.

In HR P4, HR P5 and HR P6, the quantum of fill material is less. Therefore, these areas of land have been designed to be restored to on or around groundwater, which facilitates the creation of wet grassland.

Within the Low-Rise there would also be a shortage of fill material because this area does not benefit from the significant amount of embankment material that is available in the High-Rise. Although there would be some material within the sandstone embankments in this area, there would not be enough to fully fill the created void to on/above groundwater. Therefore, in these areas, standing and seasonally wet water bodies designed to support the water habitats in the adjoining Idle Valley Nature Reserve would be provided.

The areas of ‘open water’ in the Low-Rise would be limited by suitably profiling the land and importing some excess restoration material from the High-Rise.

5.4.6 Agriculture

5.4.6.1 Use of sheep and pasture

NCC commented that the Restoration Plan as shown in the ES (Figure 7.12 in ES Volume 2) provided too much pasture and also questioned whether sheep grazing as was proposed was complementary to wet grassland management, with cattle grazing favoured. NWT made similar comments.

However, notwithstanding these comments, there are justifiable reasons for retaining agricultural practices and grazing capacity in a biodiversity led restoration design. Wet grassland requires grazing

management for most of the year, and sheep grazing would facilitate this. Furthermore, even though it is accepted that the design should be biodiversity led (and it is biodiversity led), food production and agriculture remain of significant importance; therefore, preserving some agricultural element is desirable, particularly here as it facilitates the habitats proposed – forming a symbiotic relationship.

Policy at paragraph 5.42 of the Nottinghamshire Minerals Plan (March 2021) supports this view, stating that (paraphrased) many habitats of principal importance, such as wet grassland, '*can be compatible with commercial livestock systems and are dependent upon agricultural management'*.

The Royal Society for the protection of Birds ('RSPB') handbook for wet grassland[1] also states, that (paraphrased):

- *'Wet grassland should not be treated in isolation to the rest of the farm holding;*
- *Grazing management is required from March through to November; and*
- *Grazing can be with cattle or sheep'.*

5.4.6.2 Working with the existing agricultural operation

Sutton Grange Farm, on which the PFA extraction site (Area A) would be located, has been farming/grazing sheep for over 50 years. The low-density grazing is spread over approximately 100 hectares, including Area A and other land in the farm holding, currently split between:

- 30% wet grassland (currently under DEFRA Natural England stewardship); and
- 70% dry grassland (pasture).

The photographs below (Image 5.8) show existing wet grassland at the farm (beyond the Site) in January 2023 and are images of land that is separate to Area A but able to flood naturally owing to its level relative to the groundwater. They provide an example of the wet grassland that would be provided as part of the Amended Restoration Plan.

Image 5.8: Images of wet grassland at Sutton Grange Farm (January 2023)

As part of the management of this land, sheep are grazed on the wet and dry grassland at the farm from April through to October, rotating around the different areas as appropriate. There is a further 50 hectares of dry grassland available for the sheep from November to March, when conditions become too wet for the sheep to continue to graze. It is intended that this rotational grazing pattern would also be used to naturally manage the grassland habitats proposed as part of the Amended Restoration Plan for Area A to ensure that the new habitats would be maintained in optimum condition.

The Amended Restoration Plan design includes the reduction of dry grassland that would be available on the farm (most of which is currently on the High-Rise within Area A), in compliance with the biodiversity led approach. However, to provide a sustainable environment for the sheep that are

[1] https://www.rspb.org.uk/globalassets/downloads/documents/conservation-projects/wet-grassland-manual.pdf

necessary to manage the scheme, some dry grassland (pasture) would be retained in Area A to provide land in wetter months.

The proposed restoration scheme therefore takes advantage of the existing farming enterprise, whilst at the same time leading on biodiversity – forming a sustainable and symbiotic relationship that can be maintained in the long-term.

5.5 Main processing Site (Area C)

In addition to changes to the extraction process and restoration in Area A, the Main Processing Site (Area C) has been revised to improve the effects of noise, air quality and visual impacts. The updated layout can be seen in Technical Appendix 5.1 in ESA Volume 3, and key differences between the layout submitted in the planning application and the updated layout include:

- A reduction in the number of drying lines, from 10 to 8, by providing an improved efficiency to above 40k tonnes per line per annum, which would still enable the 300k tonnes per annum target to be met.
- The addition of an external filtration system for each drying line (filters, stacks and condensers). Previously, as described in ES Volume 1, Chapter 5 and shown on the Site Layout (Appendix 5.1, ES Volume 3), these elements were proposed to be internal and vented, but to achieve more efficient exhaust air dispersal these are now external. More information can be found in ESA Volume 1 Chapter 13, Air Quality and the supporting Technical Appendices in Volume 3. The system also allows for more water vapour to be condensed and reused at the Site.
- The provision of two new weighbridges and an improved vehicle circulation system, to enable HGVs to be weighed, filled and then weighed again in a one-way loop to maximise efficiency of vehicle movements. These changes have been introduced to limit vehicle movements, condense the area of noise generation and reduce risks associated by contamination events.
- The office buildings have been increased in height to reduce land take and utilise existing screening. Silos and stacks have been repositioned closer to the adjacent third-party silos (on the Breedon site) and the plant would blend in with the existing infrastructure.

For other information relating to the processing of PFA, export to road, staffing and operational hours information can be found in the ES, Volume 1, Chapter 5, Sections 5.4.3 to 5.5.

5.6 Lighting

In addition to the proposed changes to the extraction and restoration processes within Area A and the Main Processing Site in Area C, further information is provided with regard to lighting for the Amended Proposed Development. The Amended Proposed Development now makes provision for the following:

5.6.1 Lighting within Area A during the extraction process

During the winter months (approximately four to six months of the year) lighting would be required at dawn and dusk i.e., at the start and finish of the working day (7.00am to 7.00pm on weekdays and 7.00am to 1.00pm on Saturdays). The lighting would be to illuminate the extraction micro-phase sited at ground level moving deeper into the void as the PFA is extracted. The transferral of PFA to the Main Processing Site within Area C would be undertaken via the covered conveyor and it is envisaged that there would be no requirement for this to be lit. It is envisaged that the lighting would comprise two mobile towers up to a maximum height of 7 m (or similar) with fully downward directional LED (20 lux) lighting lenses to concentrate lighting directly onto the working activities avoiding light spillage into the wider area. Overnight as a safety precaution, there may be a requirement to provide motion sensor security lighting.

5.6.2 Lighting within Area C at the Main Processing Site

During the main operational hours (7.00am to 7.00pm on weekdays and 7.00am to 1.00pm on Saturdays), it is envisaged that two mobile towers with the same/similar specification as those used within Area A (the extraction micro-phase), would be used to light the operational areas, including in front of the Materials Storage Building and the silo filling area, and around the offices and car park as required. The lighting would be fully downward directional LED (20 lux) lighting lenses to concentrate lighting directly onto the ground avoiding light spillage into the wider area. Outside of the main operational hours, all operations within Area C, i.e., the drying process, would be undertaken internally. There would however, be a requirement for motion sensor security lighting around the Materials Storage Building and the car park. These would be wall mounted and placed below the tree line. There may be a need to add additional, downward facing lighting towers if required for health and safety reasons, for example.

It is envisaged that the final and full details of site lighting would be secured by a suitable planning condition, as is normal practice.

5.7 Summary of Changes to the Proposed Development

A summary of the changes to the Proposed Development assessed within this ESA as the Amended Proposed Development are provided in Table 5.4.

Table 5.4: Summary of the Changes Made to the Proposed Development

Change	Description	Explanation
Soil Stripping	Soil stripping to be limited to up to 12 days per year and be completed progressively in micro-phases.	Each phase would be split into a number of smaller areas or cuts, known as 'micro-phases'. These would then be topsoil stripped individually followed progressively by the PFA extraction process. This would result in limiting the area of PFA exposed at any time to a small zone, approximately 0.5-1.0 ha per micro-phase, reducing potential noise and dust impacts as a result. Soil stripping as a result of the micro-phase approach would be limited to a small number of days in any given year. Any potential impacts would therefore be periodic, limited and focussed over a short timeframe.
Extraction starting in HR P1 and moving eastwards	Extraction to begin in area HR P1 in the western end of Area A, but then work progressively eastwards from HR P1 with LR P1 and LR P2 extracted last.	Approximately 82% of the extraction process would occur in the High-Rise area of Area A. By starting with digging down in HR P1 to create a lower-level extraction base and then moving progressively eastwards, extraction would be able to take place at a lower level within a void utilising the existing sandstone lagoon embankments as screening. This approach is aimed at minimising potential adverse effects, predominantly related to noise, dust and visual impacts on sensitive receptors closer to Area A.
Retention of the SSSI embankment	The SSSI embankment along the southern boundary of Area A would be retained	The section of wooded lagoon embankment that coincides with the SSSI and which was removed as part of the Proposed Development would now be avoided, reducing direct impacts further into the SSSI.
Maintenance / Haul Road and Closed Conveyor extended progressively	The repositioning of the maintenance / haul road and closed conveyor at a lower level through the created void screened by the sandstone lagoon embankments as extraction commences	As extraction continues through the phases, the conveyor and maintenance / haul road would extend progressively through the extraction void at a lower level behind the existing embankments, this would minimise and control the area for disturbance, limiting the potential for dust, noise and required vehicle movements. In addition, the maintenance / haul road and conveyor crossing between HR P1 and HR P2 would be moved further away from sensitive

	and progressively moves easterly through Area A.	receptors, including the properties within Bellmoor Farm and the SSSI. Once the conveyor is operational, it would be the sole means of transporting PFA from the extraction area to the Main Processing Site.
Removal of Semi-Fixed Processing Sites	The removal of the semi-fixed Processing Areas and instead utilising mobile positioning processing equipment close to the extraction face which would move progressively with each phase.	Two of the semi-fixed processing areas proposed in the ES were located close to the southern boundary of Area A, close to the SSSI. The semi-fixed nature of the Processing Areas also required lengthy haul distances; in some cases, requiring vehicle haulage of over 300 m. The removal of the Processing Areas and the use of mobile processing equipment (shredder, screen and conveyor hopper) facilitates processing at/closer to the extraction face, thereby removing the requirement for remote processing and long haulage distances, and associated potential noise and dust impacts. There would also be a significant reduction in the required construction activities in Area A.
Use of a spur conveyor to take reception hopper to extraction face. Screen and conveyor hopper would no longer be remote	The covered main conveyor has been repositioned and an adjustable covered spur conveyor would be used to take the movable reception hopper close to the working extraction face.	Progressive movement of the hopper, screen and conveyor would contain working extraction areas within each phase, with no travel to more remote / out of phase Processing Areas. In combination with the use of a spur conveyor and reception hopper this would reduce the distance between the extraction face, screen and conveyor hopper – enabling the PFA to be processed locally within the void at a lower level and behind the sandstone lagoon embankments, limiting potential for dust emissions from extraction to one area.
Dewatering and Wet Working	Change in excavation methodology would no longer require the process of dewatering reducing potential effects on groundwater.	Dewatering of the below groundwater PFA would no longer be required, as it is proposed that the PFA would be ‘wet worked’. Working the PFA wet and maintaining some moisture content within the extracted PFA would further increase dust protection. Extracting wet would also protect levels in adjacent water bodies, including within the SSSI.
Main Processing Site (Area C)	Changes to the layout of the Main Processing Site in Area C to improve the potential effects of noise, air quality and visual impact.	Changes to the Main Processing Site include a reduction of the number of drying lines and an increase in their efficiency, the addition of an external filtration system for each drying line, the provision of two new weighbridges and an improved vehicle circulation system, and the repositioning of office buildings. These design changes have been developed to further mitigate the potential effects of noise, air quality and visual impact to sensitive receptors.
Lighting	Temporary lighting within Area A. Lighting within The Main Processing Site, Area C.	Temporary lighting within Area A would be used during the winter when there is less available daylight to illuminate the extraction processes within the void. It is envisaged that this would comprise two mobile lighting towers with lights directed downwards into the void to avoid light spillage over the wider area. The transferral of PFA to the Main Processing Site within Area C would be undertaken via the covered conveyor and it is envisaged that this would not be lit.

		It is envisaged that lighting within the Main Processing Plant (Area C) would comprise mobile towers to light the operational areas, including in front of the Materials Storage Building and the silo filling area, and around the offices and car park as required. In addition, there would also be a requirement for motion sensor security lighting around the Materials Storage Building and the car park to provide security. These would be wall mounted and placed below the tree line.
Restoration	The Restoration Plan has been revised with a greater emphasis on biodiversity and a new permissive path to increase connectivity in the area.	The Restoration Plan for the Amended Proposed Development has been revised to further improve on-site biodiversity. Increased areas of wet grassland and reedbeds, and a reduction in pasture has been introduced. The southern embankment which coincides with the SSSI would be retained, and public access increased with the provision of a new permissive right of way, improving connectivity in the wider area. Water bodies have been redesigned to encourage a range of habitat (standing water, shallows and reedbeds) to encourage amphibians and aquatic invertebrates. Woodland blocks have been repositioned towards the western end of Area A, and a new drainage ditch system has been designed. Biodiversity Net Gain has been significantly increased to 43% with a 30-year commitment to aftercare.