

Our Ref:01471AA_R_001I_JMB-Sequence

LLWR CAPPING PLANNING APPLICATION SEQUENCE OF WORKS 23 MARCH 2011

1 INTRODUCTION

The schematic construction sequence for the ESC capping of the vaults and trenches is described below and should be read with reference to the following programme and drawings. The components of each phase of the construction sequence are to be verified by detailed design.

Programme

- 01471AA_X_003H_JMB-ESCprogramme – Phase Programme (indicative)
- 01471AA_X_003H_JMB-ESCprogramme – Overall ESC Programme (indicative)

ESC Drawings

- ESC 2010/D-01 – Single Dome – Plan and typical cross-section (schematic)
- ESC 2010/D-03 – Single Dome – Cap typical details
- ESC 2010/D-04 – Single Dome – Vault and edge details
- ESC 2010/D-07 – Single Dome – Trench cap edge details (schematic)

Cap Planning Application Drawings

- 01471AA/C-01 Rev C – ESC Single Dome – Construction Sequence (schematic)
- 01471AA/C-02 Rev C – ESC Single Dome – Phase 1 (schematic)
- 01471AA/C-03 Rev C – ESC Single Dome – Phase 2 (schematic)
- 01471AA/C-04 Rev C – ESC Single Dome – Phase 3 (schematic)
- 01471AA/C-05 Rev C – ESC Single Dome – Phase 4 (schematic)
- 01471AA/C-06 Rev C – ESC Single Dome – Phase 5 (schematic)
- 01471AA/C-07 Rev C – ESC Single Dome – Phase 6 (schematic)
- 01471AA/C-08 Rev C – ESC Single Dome – Phase 7 (schematic)
- 01471AA/C-09 Rev C – ESC Single Dome – Phase 8 (schematic)
- 01471AA/C-10 Rev B – ESC Single Dome – Surface Water Management (schematic)

2 SITE CONDITION AT THE START OF PHASE 1

The trenches are covered by an interim cap and surface runoff is captured in the interim trench cap perimeter drainage.

Vaults 8 and Vault 9 are open and operational.

There are two stockpiles of material won from the construction of Vault 9 – Mound 1 & Mound 2.

3 CONSTRUCTION PHASES

3.1 Phase 1 – Site Preparation

Initial preparatory works are required prior to the permanent capping of the vaults and trenches.

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Indicative period for Phase 1: 2013 to 2015

Phase 1a

Clear areas – The areas to be designated as Stockpile Area C and Stockpile Area D are cleared for use, including any relocation of wildlife.

Install final cap perimeter drainage – A new perimeter drain is constructed around the toe of the ESC cap, designed to accommodate surface runoff from the ESC cap. Along the north and east of the site, the drain will be an open surface water drainage channel. Along the south of the site the new perimeter drain is connected to the existing interim trench cap drain by a temporary drainage channel. The existing Drigg Stream will be diverted along the western edge of the site to complete the perimeter drainage channel. A settlement pond will be provided at the south of the site.

Screening preparation works to east – The existing vegetation along the east of the site will be progressively cleared and replaced with material from Mound 2 to form the shoulder of profiling fill required along the eastern edge of the ESC cap.

Install cut off wall – A cut off wall is required around the perimeter of the ECS cap. There is an existing cut off wall along the eastern edge of the site. This cut off wall is extended along the northern edge of the cap and the western edge of Vault 8. Plant is brought in by road. All materials are brought in by train except for bentonite and concrete powders which are brought in by road. Material excavated during installation of the wall is stockpiled in Stockpile Area C.

Install haul road – A haul road is installed to the west of the crest of the existing interim trench cap.

Import capping materials – Capping materials are brought in by train and stockpiled in Stockpile area A (over the trenches) and Stockpile Area C. The sequence of works assumes that all capping materials are imported to the site and stockpiled prior to being placed on the cap. In practice the import of capping materials may be in parallel with the construction capping activities.

Phase 1b

Place profiling fill – Material from onsite stockpiles Mound 1 & Mound 2 is used to place the profiling fill layer over the northern portion of the trenches and the northern shoulder of the ESC cap. The remainder of Mound 1 is used to increase the height of profiling fill over the trenches adjacent to Vault 8 to the final ECS cap profile. Any interim edges to the layers are profiled at 1 in 4.

Place cap over ESC cap shoulders – The ‘shoulders’ of the ESC cap are the annulus of the dome outside the cut off wall. The low permeability barrier and geomembrane layers are omitted from the cap construction in this area. Capping materials are taken from these stockpiles to place capping materials over the eastern and northern shoulders of the ESC cap. Any interim edges to the layers are profiled at 1 in 4.

Provide screening – Screening vegetation is planted along the capped shoulder areas to provide visual screening. The area of planting is extended along the eastern boundary to the railway sidings and vegetation is also increased at the south western corner of the site.

Provide temporary drainage - The north eastern section of the existing interim trench cap drain is covered by profiling fill and is therefore not usable. The interim trench cap drain adjacent to Vault 8 and Vault 9 is replaced with a temporary drain that flows south. Temporary drainage is provided at the toe of any temporary 1 in 4 slopes at the edges of the profiling fill (as a minimum), connected to the interim trench cap perimeter drain.

3.2 Phase 2 – Cap V8 & Construct V10

Phase 2 commences after Vault 8 is filled to 8HHISO stacking and three years before Vault 10 and Vault 9A are required. Vaults V9A and V10 are to be constructed by 2021 (ESC Engineering Report, Case A).

Indicative period for Phase 2: 2018 to 2022

Phase 2a

Import capping materials – Capping materials are brought in by train and stockpiled in Stockpile area A (over the trenches) and Stockpile area C. The sequence of works assumes that all capping materials are imported to the site and stockpiled prior to being placed on the cap. In practice the import of capping materials may be in parallel with the construction capping activities.

Demolish magazines – The magazines at the south of the site are demolished and the area cleared.

Install cut off wall – The cut off wall along the west of the site is extended along edge of Vault 9. Plant is brought in by road. All materials are brought in by train except for bentonite and concrete powders which are brought in by road. Material excavated during installation of the wall is stockpiled in Stockpile Area C.

Install secant pile wall – A secant pile wall is required at the eastern extent of each new vault prior to excavation, as existing in Vault 8 and Vault 9. The secant pile wall for Vault 10 is installed. Plant is brought in by road. All materials are brought in by train except for bentonite and concrete powders which are brought in by road.

Import profiling fill – There is an overall shortfall of material for the ESC cap scheme of some 230,000m³. Material suitable for use as profiling fill is therefore imported at appropriate junctures and placed over the trenches and vaults. Material suitable for use as profiling fill is imported by train and stockpiled in Stockpile Area D.

Phase 2b

Excavate and construct V10 – The area of V10 (including the area of Vault 9A) is excavated and the material reused as profiling fill over the trenches, and the ESC cap shoulder adjacent to Vault 8 and Vault 9. The lining system for Vault 10 is then constructed. Plant is brought in by road. All materials are brought in by train except for bentonite and concrete powders which are brought in by road.

Place profiling fill – The additional profiling fill material over the trenches adjacent to Vault 8 is used to place the profiling fill layer over Vault 8. Material from Stockpile Area D and excavated from Vault 10 is used to place the profiling fill layer over the trenches adjacent to Vault 9 and Vault 10 and the shoulder of the ESC cap adjacent to Vault 8 and Vault 9. Any interim edges to the layers are profiled at 1 in 4 and temporary drainage is provided at the toe.

Provide temporary drainage – Temporary drainage is provided at the toe of any temporary 1 in 4 slopes at the edges of the profiling fill (as a minimum), connected to the interim trench cap perimeter drain and the final cap perimeter drain.

Phase 2c

Place cap over vaults and trenches – Capping materials are taken from Stockpile Areas A and C to place capping materials over Vault 8 and the adjacent trenches. Any interim edges to the layers are profiled at 1 in 4 and temporary drainage is provided at the toe.

3.3 Phase 3 – Cap V9 & Construct V11

Phase 3 commences after Vault 9 (including Vault 9A) is full. Vault 11 is to be constructed by 2026 (ESC Engineering Report, Case A).

Indicative period for Phase 3: 2023 to 2026

Phase 3a

Import capping materials – Capping materials are brought in by train and stockpiled in Stockpile area A (over the trenches) and Stockpile area C. The sequence of works assumes that all capping materials are imported to the site and stockpiled prior to being placed on the cap. In practice the import of capping materials may be in parallel with the construction capping activities.

Install cut off wall – The cut off wall along the west of the site is extended along edge of Vault 10. Plant is brought in by road. All materials are brought in by train except for bentonite and concrete powders which are brought in by road. Material excavated during installation of the wall is stockpiled in Stockpile Area C.

Install secant pile wall – The secant pile wall for Vault 11 is installed. Plant is brought in by road. All materials are brought in by train except for bentonite and concrete powders which are brought in by road.

Import profiling fill – Material suitable for use as profiling fill is imported by train and stockpiled in Stockpile Area D.

Excavate and construct V11 – The area of V11 is excavated and the material reused as profiling fill over Vault 9 (including Vault 9A) and the trenches. The lining system for Vault 11 is then constructed. Plant is brought in by road. All materials are brought in by train except for bentonite and concrete powders which are brought in by road.

Place profiling fill – Material from Stockpile Area D and excavated from Vault 11 is used to place the profiling fill layer over Vault 9 and the trenches adjacent to the areas of Vault 11 and Vault 12. Any interim edges to the layers are profiled at 1 in 4.

Provide temporary drainage – Temporary drainage is provided at the toe of any temporary 1 in 4 slopes at the edges of the profiling fill (as a minimum), connected to the interim trench cap perimeter drain and the final cap perimeter drain.

Phase 3b

Place cap over vaults and trenches – Capping materials are taken from Stockpile Areas A and C to place capping materials over Vault 9 and the adjacent trenches. Any interim edges to the layers are profiled at 1 in 4.

3.4 Phase 4 – Cap V10 & Construct V12

Phase 4 commences three years before Vault 12 is required. Excavation of Vault 12 is undertaken once Vault 10 is filled so that excavated material can be used directly as profiling fill over Vault 10. Preliminary works (cut of wall and secant pile wall) can be undertaken prior to filling of Vault 10. Vault 12 is to be constructed by 2029 (ESC Engineering Report, Case A).

Indicative period for Phase 4: 2027 to 2029

Phase 4a

Install cut off wall – The cut off wall along the west of the site is extended along edge of Vault 11. Plant is brought in by road. All materials are brought in by train except for bentonite and concrete

powders which are brought in by road. Material excavated during installation of the wall is stockpiled in Stockpile Area C.

Install secant pile wall – The secant pile wall for Vault 12 is installed. Plant is brought in by road. All materials are brought in by train except for bentonite and concrete powders which are brought in by road.

Import capping materials – Capping materials are brought in by train and stockpiled in Stockpile Area A (over the trenches) and Stockpile Area C. The sequence of works assumes that all capping materials are imported to the site and stockpiled prior to being placed on the cap. In practice the import of capping materials may be in parallel with the construction capping activities.

Import profiling fill – Material suitable for use as profiling fill is imported by train and stockpiled in Stockpile Area D.

Excavate and construct V12 – The area of V12 is excavated and the material reused as profiling fill over Vault 10, the shoulder to Vault 10 and the trenches. The lining system for Vault 12 is then constructed. Plant is brought in by road. All materials are brought in by train except for bentonite and concrete powders which are brought in by road.

Place profiling fill – Material from Stockpile Area D and excavated from Vault 12 is used to place the profiling fill layer over Vault 10, the shoulder to Vault 10 and the trenches. Any interim edges to the layers are profiled at 1 in 4.

Provide temporary drainage – Temporary drainage is provided at the toe of any temporary 1 in 4 slopes at the edges of the profiling fill (as a minimum), connected to the interim trench cap perimeter drain and the final cap perimeter drain.

Phase 4b

Place cap over vaults and trenches – Capping materials are taken from Stockpile areas A and C to place capping materials over Vault 10 and the adjacent trenches. Any interim edges to the layers are profiled at 1 in 4.

3.5 Phase 5 – Cap V11 & Construct V13

Phase 5 commences after Vault 11 is full. Vault 12 is to be constructed by 2033 (ESC Engineering Report, Case A).

Indicative period for Phase 5: 2031 to 2033

Phase 5a

Install cut off wall – The cut off wall along the west of the site is extended along edge of Vault 12. Plant is brought in by road. All materials are brought in by train except for bentonite and concrete powders which are brought in by road. Material excavated during installation of the wall is stockpiled in Stockpile Area C.

Install secant pile wall – The secant pile wall for Vault 13 is installed. Plant is brought in by road. All materials are brought in by train except for bentonite and concrete powders which are brought in by road.

Import capping materials – Capping materials are brought in by train and stockpiled in Stockpile Area D and Stockpile Area C. The sequence of works assumes that all capping materials are imported to the site and stockpiled prior to being placed on the cap. In practice the import of capping materials may be in parallel with the construction capping activities.

Import profiling fill – Material suitable for use as profiling fill is imported by train and stockpiled in Stockpile Area D.

Excavate and construct V13 – The area of V13 is excavated and the material reused as profiling fill over the trenches adjacent to Vault 13 and the ESC cap shoulder adjacent to Vault 11 and Vault 12. Any excess material is stockpiled in Stockpile Area D. The lining system for Vault 13 is then constructed. Plant is brought in by road. All materials are brought in by train except for bentonite and concrete powders which are brought in by road.

Place profiling fill – Material from Stockpile Area D and excavated from Vault 13 is used to place the profiling fill layer over Vault 11, the ESC cap shoulder to Vaults 11&12 and the remainder of the trenches. Any interim edges to the layers are profiled at 1 in 4.

Provide temporary drainage – Temporary drainage is provided at the toe of any temporary 1 in 4 slopes at the edges of the profiling fill (as a minimum), connected to the interim trench cap perimeter drain and the final cap perimeter drain.

Phase 5b

Place cap over vaults and trenches – Capping materials are taken from Stockpile Areas D and C to place capping materials over Vault 11 and the adjacent trenches. Any interim edges to the layers are profiled at 1 in 4.

3.6 Phase 6 – Cap V12

Phase 6 commences after Vault 12 is full.

Indicative period for Phase 6: 2035 to 2036

Phase 6a

Clear areas – The area of the southern shoulder of the ESC cap is cleared, including demolition of office buildings and relocation of services.

Install final cap perimeter drainage – A new perimeter drain is constructed around the toe of the ESC cap, designed to accommodate surface runoff from the ESC cap. Along the south of the site, the drain will be an open surface water drainage channel.

Install cut off wall – The cut off wall along the west of the site is extended along edge of Vault 13. The cut off wall along the southern edge of the trenches is also constructed. Plant is brought in by road. All materials are brought in by train except for bentonite and concrete powders which are brought in by road. Material excavated during installation of the wall is stockpiled in Stockpile Area C.

Import capping materials – Capping materials are brought in by train and stockpiled in Stockpile Area D and Stockpile Area C. The sequence of works assumes that all capping materials are imported to the site and stockpiled prior to being placed on the cap. In practice the import of capping materials may be in parallel with the construction capping activities.

Import profiling fill – Material suitable for use as profiling fill is imported by train and stockpiled in Stockpile Area D.

Place profiling fill – Material from Stockpile Area D is used to place the profiling fill layer over Vault 12. Any interim edges to the layers are profiled at 1 in 4.

Provide temporary drainage – Temporary drainage is provided at the toe of any temporary 1 in 4 slopes at the edges of the profiling fill (as a minimum), connected to the interim trench cap perimeter drain and the final cap perimeter drain.

Phase 6b

Place cap over vaults and trenches – Capping materials are taken from Stockpile areas D and C to place capping materials over Vault 12 and the adjacent trenches. Any interim edges to the layers are profiled at 1 in 4.

3.7 Phase 7 – Cap V13 & Construct V14

Phase 7 commences two years before Vault 14 is required. In order to meet this constraint, excavation of Vault 14 is may be undertaken before Vault 13 is filled and the excavated material used as profiling fill in areas outside the cut of wall at the south of the site. Profiling fill and capping of Vault 13 commences after Vault 13 is filled. Vault 14 is to be constructed by 2052 (ESC Engineering Report, Case A).

Indicative period for Phase 7: 2050 to 2055

Phase 7a

Install cut off wall – The cut off wall along the south of the site is extended around the edge of Vault 14. All materials are brought in by train except for bentonite and concrete powders which are brought in by road. Material excavated during installation of the wall is stockpiled in Stockpile Area C.

Install secant pile wall – The secant pile wall for Vault 14 is installed. Plant is brought in by road. All materials are brought in by train except for bentonite and concrete powders which are brought in by road.

Excavate and construct V14 – The area of Vault 14 is excavated and the material reused as profiling fill over the ESC cap shoulder to the south of the trenches. The lining system for Vault 14 is then constructed. Plant is brought in by road. All materials are brought in by train except for bentonite and concrete powders which are brought in by road.

Place profiling fill – Material excavated from Vault 14 is used to place the profiling fill layer over the ESC cap shoulder adjacent to the south of the trenches. Any interim edges to the layers are profiled at 1 in 4.

Provide temporary drainage – Temporary drainage is provided at the toe of any temporary 1 in 4 slopes at the edges of the profiling fill (as a minimum), connected to the interim trench cap perimeter drain and the final cap perimeter drain.

Phase 7b

Import capping materials – Capping materials are brought in by train and stockpiled in Stockpile Area D and Stockpile Area C. The sequence of works assumes that all capping materials are imported to the site and stockpiled prior to being placed on the cap. In practice the import of capping materials may be in parallel with the construction capping activities.

Import profiling fill – Material suitable for use as profiling fill is imported by train and stockpiled in Stockpile Area D.

Place profiling fill – Material from Stockpile area D is used to place the profiling fill layer over Vault 13. Any interim edges to the layers are profiled at 1 in 4.

Provide temporary drainage – Temporary drainage is provided at the toe of any temporary 1 in 4 slopes at the edges of the profiling fill (as a minimum), connected to the interim trench cap perimeter drain and the final cap perimeter drain.

Phase 7c

Place cap over vaults and trenches – Capping materials are taken from Stockpile Areas D and C to place capping materials over Vault 13 and the remaining trenches. Any interim edges to the layers are profiled at 1 in 4.

Import capping materials – The stockpile areas available for capping material are limited such that materials for the capping of the ESC cap shoulder to the south of the trenches are imported after capping of Vault 13 and the adjacent trenches is complete. Capping materials are brought in by train and stockpiled in Stockpile Area D and Stockpile Area C. The sequence of works assumes that all capping materials are imported to the site and stockpiled prior to being placed on the cap. In practice the import of capping materials may be in parallel with the construction capping activities.

Place cap over vaults and trenches – Capping materials are taken from Stockpile Areas D and C over the ESC cap shoulder to the south of the trenches. Any interim edges to the layers are profiled at 1 in 4.

3.8 Phase 8 – Cap V14

Phase 8 commences after Vault 14 is filled.

Indicative for Phase 8: 2078 to 2079

Phase 8a

Import capping materials – Capping materials are brought in by train and stockpiled in Stockpile Area D and Stockpile Area C. The sequence of works assumes that all capping materials are imported to the site and stockpiled prior to being placed on the cap. In practice the import of capping materials may be in parallel with the construction capping activities.

Import profiling fill – Material suitable for use as profiling fill is imported by train and stockpiled in Stockpile Area D.

Place profiling fill – Material from Stockpile Area D and Stockpile Area C (cut off wall stockpile) is used to place the profiling fill layer over Vault 14 and adjacent ‘shoulder’.

Phase 8b

Place cap over vaults and trenches – Capping materials are taken from Stockpile Areas D and C to place capping materials over Vault 14 and adjacent ‘shoulder’ to complete the ESC cap.

4 PLANT

It is anticipated that the types and quantities of plant used to construct each of the vaults will be as per the construction of Vault 9. It is anticipated that the quantities of plant used during placing of the cap will be not more than that used for the construction of Vault 9. Likely plant types used for each activity are listed below:

Install final cap perimeter drainage	Excavators (8t to 13t) and dump trucks (6t)
Screening preparation works to east	Excavators (8t to 13t) and dump trucks (6t)
Install cut off wall	Excavators and dump trucks
Install secant pile wall	Piling rig

Place profiling fill	Excavators (20t), articulated dump trucks (20t), bulldozers and vibratory rollers (19t)
Place cap over vaults and trenches	Excavators (20t), articulated dump trucks (20t), bulldozers and vibratory rollers (19t)
Demolish magazines	Excavators (20t) with breaker, dump trucks (6t) and articulated dump trucks (20t)
Excavate and construct V10	Excavators (8t to 13t), dump trucks (6t), articulated dump trucks (20t), telehandlers, vibratory rollers (19t), concrete pump, concrete truck (8m ³), power generators, tractors, road sweep, dust suppression unit trailer
Loading / unloading train	Wheeled excavators (20t) with telescopic cab. The wheeled excavators will also be required in areas where there is hardstanding which would otherwise be damaged by a tracked excavator.

5 PROGRAMME ASSUMPTIONS

5.1 Import of material - rail

The programme is based on that assumption that 1350t of material can be imported per day, i.e. one train. This is equal to 13,500m³ of material suitable for profiling fill or capping, based on a five day week and four week month.

5.2 Import of material - road

The programme is based on the assumption that all powders for bentonite and concrete batching will be brought in by road.

The batching process is considered to be on the critical path for placing the cap materials and it is assumed that batching of BES for the vault liner and the cap will not be undertaken simultaneously. Batching of 2,000m³ of BES per week, assuming 7% bentonite powder, requires five 28t deliveries per week. Batching 700m³ of concrete per week, assuming 13% cement powder requires five 28t deliveries per week. On this basis it is estimated that a total of ten deliveries per week are required throughout the periods of vault construction, and five deliveries per week are required throughout periods of capping.

The programme assumes six month periods for installation of each section of the cut off wall. The Cut Off Wall report recommends a cement bentonite slurry trench methodology. This is subject to detailed design. The Cut Off Wall report states a typical rate of construction of 100m²/day which would indicate construction periods somewhat less than this e.g. 3 months for phases 1 & 6 and less than 2 months for the rest of the phases. It seems prudent to allow the longer period within the sequence to allow for ancillary works. However, vehicle movements presented here are based on a rate of 100m²/day being achieved with material requirements of 5% Bentonite and 20% Cement. This leads to eight 28t deliveries per week (3 bentonite & 5 cement). The programme shows cut off wall and secant pile wall installations to be concurrent. It may be assumed that the secant pile wall will require an additional five 28t deliveries per week for concrete materials. On this basis it is estimated that a total of 13 deliveries per week are required by road through the periods of secant pile and cut off wall installations.

5.3 Placing of materials

The programme is based on the assumption that 50,000m³ of material can be internally handled on the site per month i.e. ten 20t dump trucks on a twenty minute turnaround, 8 hour days, and 5 days a week. Placing and compaction operations for profiling fill area assumed to be able to accommodate this rate of material availability. It is assumed that placing the capping layers will require 50% longer, or the length of time required to batch the quantity of BES required, whichever is the longer.

5.4 Fill over the trenches

The programme is based on the assumption that profiling fill material is available for use upon the progressive excavation of each vault. There is an overall shortfall of material for the ESC cap scheme of some 230,000m³. Material suitable for use as profiling fill is therefore imported at appropriate junctures and placed over the trenches and vaults. The programme shows the fill being placed over the trench area as available and over the vaults in turn after each is filled. The 2011 ESC Engineering Design Report states the need to control during construction settlements of waste due to final cap loading noting Trenches 3 & 7 are expected to experience the greatest total settlements. To achieve this, profiling fill may be placed up to final cap profile adjacent to each vault in turn when available and left in place for 1 to 2 years prior to placement of the final cap. At cap placement, the additional profiling fill would be stripped and placed over the trenches adjacent to the next vault in a similar way to that shown on Drawing C-03 for Phase 2. Alternatively, stockpiles of capping material may be managed so as to provide similar preload over the trenches.

6 STOCKPILES

6.1 Stockpile Area A

Stockpile area A is over area of the trenches. The area is only available for use during Phases 1 to 4. Individual stockpiles for the various capping materials may be placed on within Stockpile area A. It is assumed that material may be stockpiled to 4m height in areas that have no profiling fill and to 3m height in areas where profiling fill has been placed. No stockpiles may be placed in areas that have been capped. It is assumed that Stockpile area A will be used for capping materials, excluding surface soil and BES.

6.2 Stockpile Area B

Stockpile Area B is over the area of vaults that are yet to be constructed. The area is only available for use during Phases 1 to 5 (reducing in size for each successive phase). Prior to demolition of the magazines, the area around them may be used. It is assumed that material may be stockpiled to 4m height. It is assumed that Stockpile Area B will be used for material excavated during vault construction.

6.3 Stockpile Area C

Stockpile Area C is to the south of the vaults. The area is available for use during Phases 1 to 8. It is assumed that material may be stockpiled to 4m height. It is assumed that Stockpile Area C will be used for surface soil and BES capping materials and material excavated during installation of cut off walls.

6.4 Stockpile Area D

Stockpile Area D is adjacent to the south east corner of the trenches. The area is available for use during Phases 2 to 8. It is assumed that material may be stockpiled to 4m height. It is assumed that

Stockpile area D will be used for imported material suitable for use as profiling fill, material excavated during vault construction (Phases 5 & 6) and capping materials, excluding surface soil and BES (Phases 5 to 8).

6.5 Stockpile volumes

The volumes of material anticipated to be stockpiled in each stockpile area during each phase are indicated on the programme. Where a number of stockpiles are included within an area, the total anticipated stockpile volume is given.

6.6 Contractors' Area

The contractors' area is adjacent to the railway siding. It is assumed that this will be used for storage of plant and materials associated with installation of the cut off wall, installation of the secant pile wall and the batching plant for BES and concrete.

