Ian Irwin

From: Ayres, Ben J (Dewsbury) GBR <Ben.Ayres@hanson.biz>
Sent: 12 May 2015 15:37
To: Planning Control
Cc: Julia Casterton; Ian Irwin; Amy Taylor
Subject: RE: Blubberhouses Quarry - Application ref NY/2011/0465/73 -Landscape & Visual Impact Assessment (LVIA)- revised photo montages
Attachments: Photomontage Views.pdf

Dear Sir/Madam,

I refer to my email dated 12th May 2015 in which I outlined the additional information provided to NYCC as part of the Landscape & Visual Impact Assessment (LVIA).

For completeness and for ease of quick reference I have also attached the revised photo montages that were prepared back in 2013.

As set out in my email of 12th May 2015 these are an addendum to the original LVIA submitted as part of the original Planning submission made in December 2011.

I would be grateful if you could acknowledge receipt of this submission.

If you have any questions then please contact me.

Ben Ayres
Land and Planning Manager
Land & Mineral Resources Department
Hanson UK
Howley Park Brickworks, Quarry Lane, Dewsbury, West Yorkshire, WF12 7JJ
07736 869 692 Mobile
0113 220 3538 Direct line

Ian Irwin

From: Ayres, Ben J (Dewsbury) GBR <Ben.Ayres@hanson.biz>
Sent: 12 May 2015 14:58
To: Planning Control
Cc: Amy Taylor; Ian Irwin; Julia Casterton
Subject: Blubberhouses Quarry - Application ref NY/2011/0465/73 - Email 1 of 3
Attachments: Blubberhouses Initial Management Plan March 2015.pdf; FW: Blubberhouses - Application ref NY/2011/0465/73

Email 1 of 3

Dear Sir/Madam,

Further to my email dated 26 January 2015 (copy attached) please find attached a copy of the Initial Management Plan prepared by our consultant ecologist Paul Benyon.

This document together with the Peat Management Plan (contained within appendix 1) were in our view the key documents to enable NYCC to determine the time extension application this year.

Details on the Establishment of a Management Advisory Committee (MAC) and Management Plans and how these will be incorporated into a Section 106 agreement are set out in the attached email which I am also happy to be sent out for wider consultation.

Subject to any comments from the consultation process a draft Section 106 document will be provided by our legal team prior to the planning committee date.

For completeness and to aid consultation with stat and non-statutory parties i have also provided the following:

i) Updated working Plans

Hanson submitted on 16/05/2014 a set of updated development plans which aimed to replicate "in modern form" the proposals approved as part of the original grant of planning permission ref C6/105/6A/PA dated 27th January 1986.

i) B-002 Phase 2 Working & Restoration
ii) B-003 Phase 3 Working & Restoration
iii) B-004 Phase 4 Working & Restoration
iv) B-005 Phase 5 Working & Restoration
v) B-006 Final Regrade works
vi) B-007 Restoration Plan
vii) B-008 Restoration Plan Sections

These plans were prepared in order to address the concern that the landscape impacts of the development were having to be assessed against old plans prepared in the 1980's and a modern set of plans would be preferred in order to be able to assess the development and the mitigation proposed, these plans have been provided again as part of this submission as I don't believe they were sent out formally by NYCC for comments in May 2014.

ii) Detailed Restoration Proposals

In light of the consultation responses received since the renewal application was submitted Hanson is happy to provide an updated restoration plan for the site.

Building on the information now contained within the initial management plan submission attached, detail will be provided on the mitigation measures and enhancement proposals for the restoration of the site.

The plans will also provide detail on the existing environmental stewardship agreements that have been entered into with Natural England and the landowner on the surrounding Moors so that NYCC and other organisations can see how the restoration proposal for the planning permission area fits within the wider site context.

Subject to the initial management plan and updated phasing plans being deemed as acceptable we will provide the updated restoration proposals prior to the determination of the planning application.

I would be grateful if you could confirm the likely date that the application will go to committee.

iii) Landscape & Visual Impact Assessment (LVIA)

In line with the additional information requested from the NYCC landscape officer (response dated 15th March 2012) revised photo montages have also been completed and provided to NYCC.

An additional photo viewpoint from the Yorkshire Dales National Park on Rocking Moor (Number 25) has now also been taken.

The ZVI analysis figures have also been updated with the additional photo viewpoint location shown. This photo and figures are an addendum to the original LVIA documents.

i) Fig 4.2 ZVI Analysis Phase 1 Crushing location
ii) Fig 4.3 ZVI Analysis Processing plant
iii) Fig 4.4 ZVI Analysis Extraction limit.
iv) Fig 4.11 Photo sheet 6

I would be grateful if you could acknowledge receipt of this submission.

If you have any questions then please contact me.

Ben Ayres
Land and Planning Manager
Land & Mineral Resources Department
Hanson UK
Howley Park Brickworks, Quarry Lane, Dewsbury, West Yorkshire, WF12 7JJ
07736 869 692 Mobile
0113 220 3538 Direct line

Ian Irwin

From: Ayres, Ben J (Dewsbury) GBR <Ben.Ayres@hanson.biz>
Sent: 12 May 2015 14:59
To: Planning Control
Cc: Julia Casterton; Ian Irwin; Amy Taylor
Subject: Blubberhouses Quarry - Application ref NY/2011/0465/73 - Email 2 of 3
Attachments: B168-22 ZVI Analysis Crushing Plant.pdf; B168-21 ZVI Analysis Processing Plant.pdf; B168-23 ZVI Analysis Extraction Area.pdf; B168-31 Photosheet 6 Dec 2014 AG.PDF

Email 2 of 3

Dear Sir/Madam,

Further to my email dated 26 January 2015 (copy attached) please find attached a copy of the Initial Management Plan prepared by our consultant ecologist Paul Benyon.

This document together with the Peat Management Plan (contained within appendix 1) were in our view the key documents to enable NYCC to determine the time extension application this year.

Details on the Establishment of a Management Advisory Committee (MAC) and Management Plans and how these will be incorporated into a Section 106 agreement are set out in the attached email which I am also happy to be sent out for wider consultation.

Subject to any comments from the consultation process a draft Section 106 document will be provided by our legal team prior to the planning committee date.

For completeness and to aid consultation with stat and non-statutory parties i have also provided the following:

i) Updated working Plans

Hanson submitted on 16/05/2014 a set of updated development plans which aimed to replicate “in modern form” the proposals approved as part of the original grant of planning permission ref C6/105/6A/PA dated 27th January 1986.

i) B-002 Phase 2 Working & Restoration
ii) B-003 Phase 3 Working & Restoration
iii) B-004 Phase 4 Working & Restoration
iv) B-005 Phase 5 Working & Restoration
v) B-006 Final Regrade works
vi) B-007 Restoration Plan
vii) B-008 Restoration Plan Sections

These plans were prepared in order to address the concern that the landscape impacts of the development were having to be assessed against old plans prepared in the 1980’s and a modern set of plans would be preferred in order to be able to assess the development and the mitigation proposed, these plans have been provided again as part of this submission as I don’t believe they were sent out formally by NYCC for wider comments back in May 2014.

ii) Detailed Restoration Proposals

In light of the consultation responses received since the renewal application was submitted Hanson is happy to provide an updated restoration plan for the site.

Building on the information now contained within the initial management plan submission attached, detail will be provided on the mitigation measures and enhancement proposals for the restoration of the site.

The plan will also provide detail on the existing environmental stewardship agreements that have been entered into with Natural England and the landowner on the surrounding Moors so that NYCC and other organisations can see how the restoration proposal for the planning permission area fits within the wider site context.

Subject to the initial management plan and updated phasing plans attached being deemed as acceptable we will provide the updated restoration proposals prior to the determination of the planning application.

I would be grateful if you could confirm the likely date that the application will go to committee.

iii) Landscape & Visual Impact Assessment (LVIA)

In line with the additional information requested from the NYCC landscape officer (response dated 15th March 2012) revised photo montages have also been completed and provided to NYCC.

An additional photo viewpoint from the Yorkshire Dales National Park on Rocking Moor (Number 25) has now also been taken.

The ZVI analysis figures have also been updated with the additional photo viewpoint location shown. This photo and figures are an addendum to the original LVIA documents.

i) Fig 4.2 ZVI Analysis Phase 1 Crushing location
ii) Fig 4.3 ZVI Analysis Processing plant
iii) Fig 4.4 ZVI Analysis Extraction limit.
iv) Fig 4.11 Photo sheet 6

I would be grateful if you could acknowledge receipt of this submission.

If you have any questions then please contact me.

Ben Ayres
Land and Planning Manager
Land & Mineral Resources Department
Hanson UK
Howley Park Brickworks, Quarry Lane, Dewsbury, West Yorkshire, WF12 7JJ
07736 869 692 Mobile
0113 220 3538 Direct line

Ian Irwin

From: Ayres, Ben J (Dewsbury) GBR <Ben.Ayres@hanson.biz>
Sent: 12 May 2015 15:01
To: Planning Control
Cc: Julia Casterton; Ian Irwin; Amy Taylor
Subject: FW: Blubberhouses Quarry - Application ref NY/2011/0465/73 - Email 3 of 3
Attachments: B-004_Rev-A_Phase 4 Working and Restoration.pdf; B-005_Rev-A_Phase 5 Working and Restoration.pdf; B-006_Rev-A_Final Regrade Works.pdf; B-002_Rev-A_Phase 2 Working and Restoration.pdf; B-003_Rev-A_Phase 3 Working and Restoration.pdf; B168_Blubberhouses_phase volumes.pdf; B-007 Restoration Plan.pdf; B-008 Restoration Plan Sections.pdf

Email 3 of 3

Dear Sir/Madam,

Further to my email dated 26 January 2015 (copy attached) please find attached a copy of the Initial Management Plan prepared by our consultant ecologist Paul Benyon.

This document together with the Peat Management Plan (contained within appendix 1) were in our view the key documents to enable NYCC to determine the time extension application this year.

Details on the Establishment of a Management Advisory Committee (MAC) and Management Plans and how these will be incorporated into a Section 106 agreement are set out in the attached email which I am also happy to be sent out for wider consultation.

Subject to any comments from the consultation process a draft Section 106 document will be provided by our legal team prior to the planning committee date.

For completeness and to aid consultation with stat and non-statutory parties i have also provided the following:

i) Updated working Plans

Hanson submitted on 16/05/2014 a set of updated development plans which aimed to replicate “in modern form” the proposals approved as part of the original grant of planning permission ref C6/105/6A/PA dated 27th January 1986.

i) B-002 Phase 2 Working & Restoration
ii) B-003 Phase 3 Working & Restoration
iii) B-004 Phase 4 Working & Restoration
iv) B-005 Phase 5 Working & Restoration
v) B-006 Final Regrade works
vi) B-007 Restoration Plan
vii) B-008 Restoration Plan Sections

These plans were prepared in order to address the concern that the landscape impacts of the development were having to be assessed against old plans prepared in the 1980’s and a modern set of plans would be preferred in order to be able to assess the development and the mitigation proposed, these plans have been provided again as part of this submission as I don’t believe they were sent out formally by NYCC for comments in May 2014.

ii) Detailed Restoration Proposals

In light of the consultation responses received since the renewal application was submitted Hanson is happy to provide an updated restoration plan for the site.

Building on the information now contained within the initial management plan submission attached, detail will be provided on the mitigation measures and enhancement proposals for the restoration of the site.

The plans will also provide detail on the existing environmental stewardship agreements that have been entered into with Natural England and the landowner on the surrounding Moors so that NYCC and other organisations can see how the restoration proposal for the planning permission area fits within the wider site context.

Subject to the initial management plan and updated phasing plans being deemed as acceptable we will provide the updated restoration proposals prior to the determination of the planning application.

I would be grateful if you could confirm the likely date that the application will go to committee.

iii) Landscape & Visual Impact Assessment (LVIA)

In line with the additional information requested from the NYCC landscape officer (response dated 15th March 2012) revised photo montages have also been completed and provided to NYCC.

An additional photo viewpoint from the Yorkshire Dales National Park on Rocking Moor (Number 25) has now also been taken.

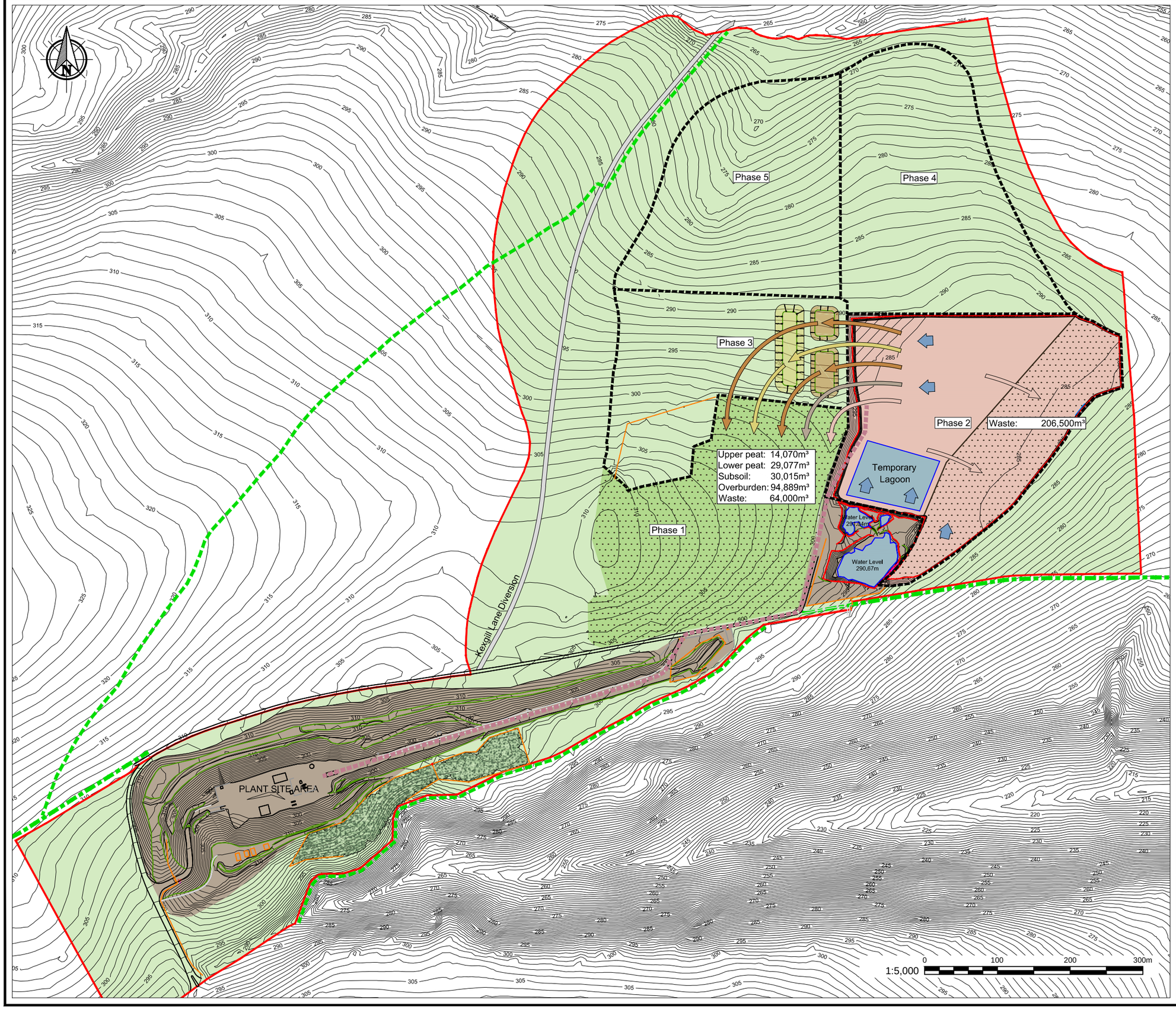
The ZVI analysis figures have also been updated with the additional photo viewpoint location shown. This photo and figures are an addendum to the original LVIA documents.

i) Fig 4.2 ZVI Analysis Phase 1 Crushing location
ii) Fig 4.3 ZVI Analysis Processing plant
iii) Fig 4.4 ZVI Analysis Extraction limit.
iv) Fig 4.11 Photo sheet 6

I would be grateful if you could acknowledge receipt of this submission.

If you have any questions then please contact me.

Ben Ayres
Land and Planning Manager
Land & Mineral Resources Department
Hanson UK
Howley Park Brickworks, Quarry Lane, Dewsbury, West Yorkshire, WF12 7JJ
07736 869 692 Mobile
0113 220 3538 Direct line



LEGEND

- Limit of planning permission for site
- Proposed extraction phases
- Footpath alignment
- Bridleway alignment
- Haul road
- Area of extraction
- Waste to be placed in quarry void
- Existing heathland to remain undisturbed
- Land to be restored
- Land previously restored
- Areas yet to be restored
- Peat movements
- Subsoil movements
- Overburden movements
- Production waste movements
- Open water
- Contours @ 1m intervals

NOTES:

1. Upper peat stripped to a depth of 0.15m and placed in temporary store.
2. Remaining peat stripped to a depth of 0.30m and placed in temporary store.
3. Subsoil Type 2 stripped to a depth of 0.30m and placed in temporary store.
4. Overburden and production waste directly placed into Phase 2 void, surplus waste to be placed in temporary store.
5. Temporary stored peat and subsoil replaced to original stripped depths over restored Phase 1 profile.

Rev	Description	PM	Review	Date
A	Updated waste factor to 25%	CD	NR	25/03/14

Client: Hanson HEIDELBERGCEMENT Group

Project: Blubberhouses

Title: Phase 2 Extraction & Restoration

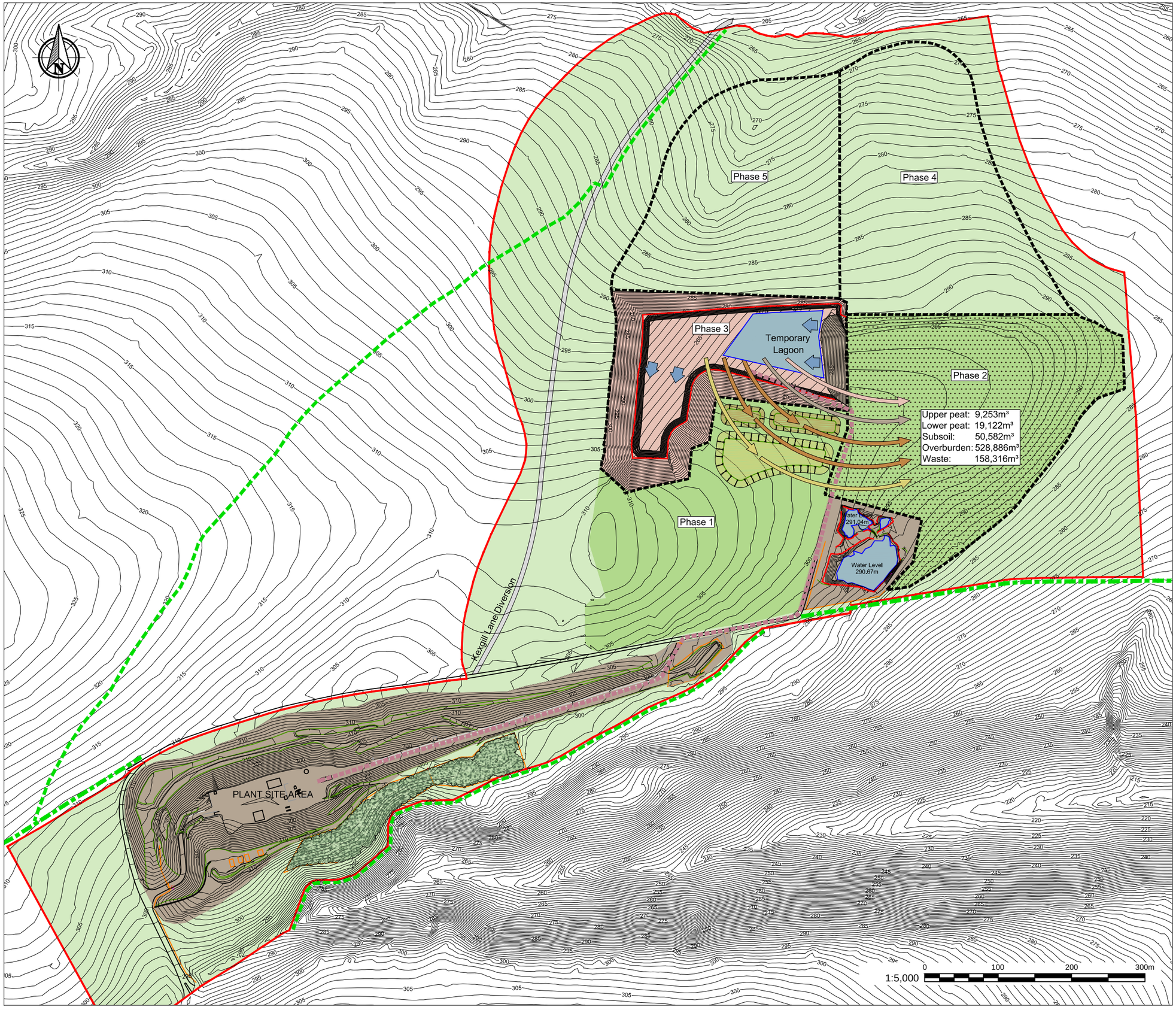
Created by	Requested by	Proj Manager	Reviewer	Date
CD	N/A	CD	NR	25.08.14

File No.	Project No.
n/a	135140234

Size	Scale	Status
A3	1:5,000	Planning

Drawing No.: **B-002** Rev: **A**

Golder Associates
Golder House
Tadcaster Enterprise Park
Station Road
Tadcaster
North Yorkshire
LS24 9JF
+44 (0)1937 837 800



LEGEND

- Limit of planning permission for site
- Proposed extraction phases
- Footpath alignment
- Bridleway alignment
- Haul road
- Area of extraction
- Waste to be placed in quarry void
- Existing heathland to remain undisturbed
- Land to be restored
- Land previously restored
- Areas yet to be restored
- Peat movements
- Subsoil movements
- Overburden movements
- Production waste movements
- Open water
- Contours @ 1m intervals

NOTES:

1. Upper peat stripped to a depth of 0.15m and placed in temporary store.
2. Remaining peat stripped to a depth of 0.30m and placed in temporary store.
3. Subsoil Type 1 stripped to a depth of 0.80m and placed in temporary store.
4. Overburden directly placed into Phase 2 void.
5. Temporary stored peat and subsoil replaced to original stripped depths over restored Phase 2 profile.
6. Production waste place into temporary store.

Rev	Description	PM	Review	Date
A	Updated waste factor to 25%	CD	NR	25/03/14

Client: Hanson HEIDELBERGCEMENT Group

Project: Blubberhouses

Title: Phase 3 Extraction & Restoration

Created by	Requested by	Proj Manager	Reviewer	Date
CD	N/A	CD	NR	25.03.14

File No.: n/a

Project No.: 135140234

Size: A3

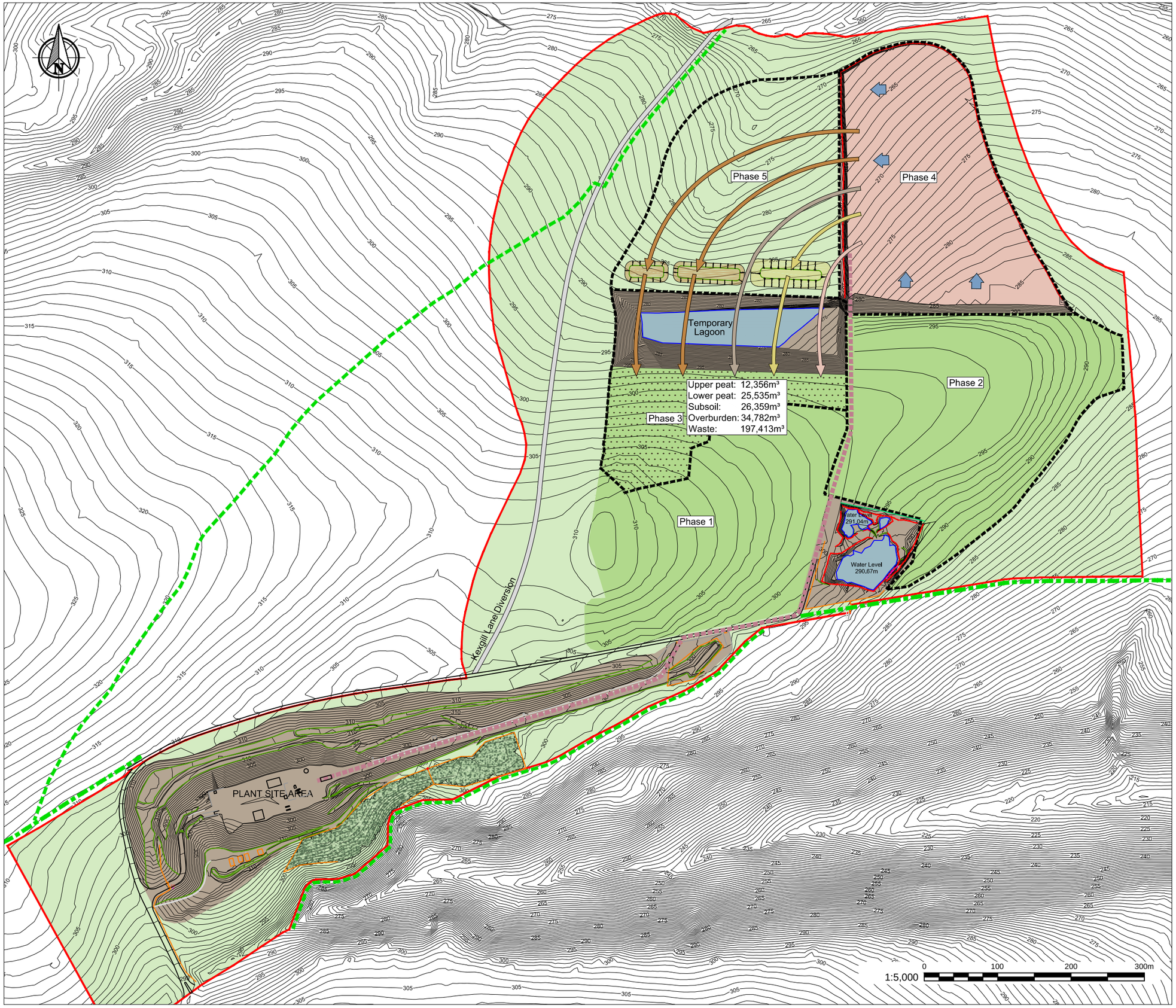
Scale: 1:5,000

Status: Planning

Drawing No.: **B-003**

Rev: **A**

Golder Associates
Golder House
Tadcaster Enterprise Park
Station Road
Tadcaster
North Yorkshire
LS24 9JF
+44 (0)1937 837 800



LEGEND

- Limit of planning permission for site
- Proposed extraction phases
- Footpath alignment
- Bridleway alignment
- Haul road
- Area of extraction
- Existing heathland to remain undisturbed
- Land to be restored
- Land previously restored
- Areas yet to be restored
- Peat movements
- Subsoil movements
- Overburden movements
- Production waste movements
- Open water
- Contours @ 1m intervals

NOTES:

1. Upper peat stripped to a depth of 0.15m and placed in temporary store.
2. Remaining peat stripped to a depth of 0.30m and placed in temporary store.
3. Subsoil Type 2 stripped to a depth of 0.30m and placed in temporary store.
4. Overburden and production waste directly placed into Phase 3 void.
5. Place stored production waste into Phase 3 void.
6. Temporary stored peat and subsoil replaced to original stripped depths over restored Phase 3 profile.

Rev	Description	PM	Review	Date
A	Updated waste factor to 25%	CD	NR	25/03/14

Client: Hanson HEIDELBERGCEMENT Group

Project: Blubberhouses

Title: Phase 4 Extraction & Restoration

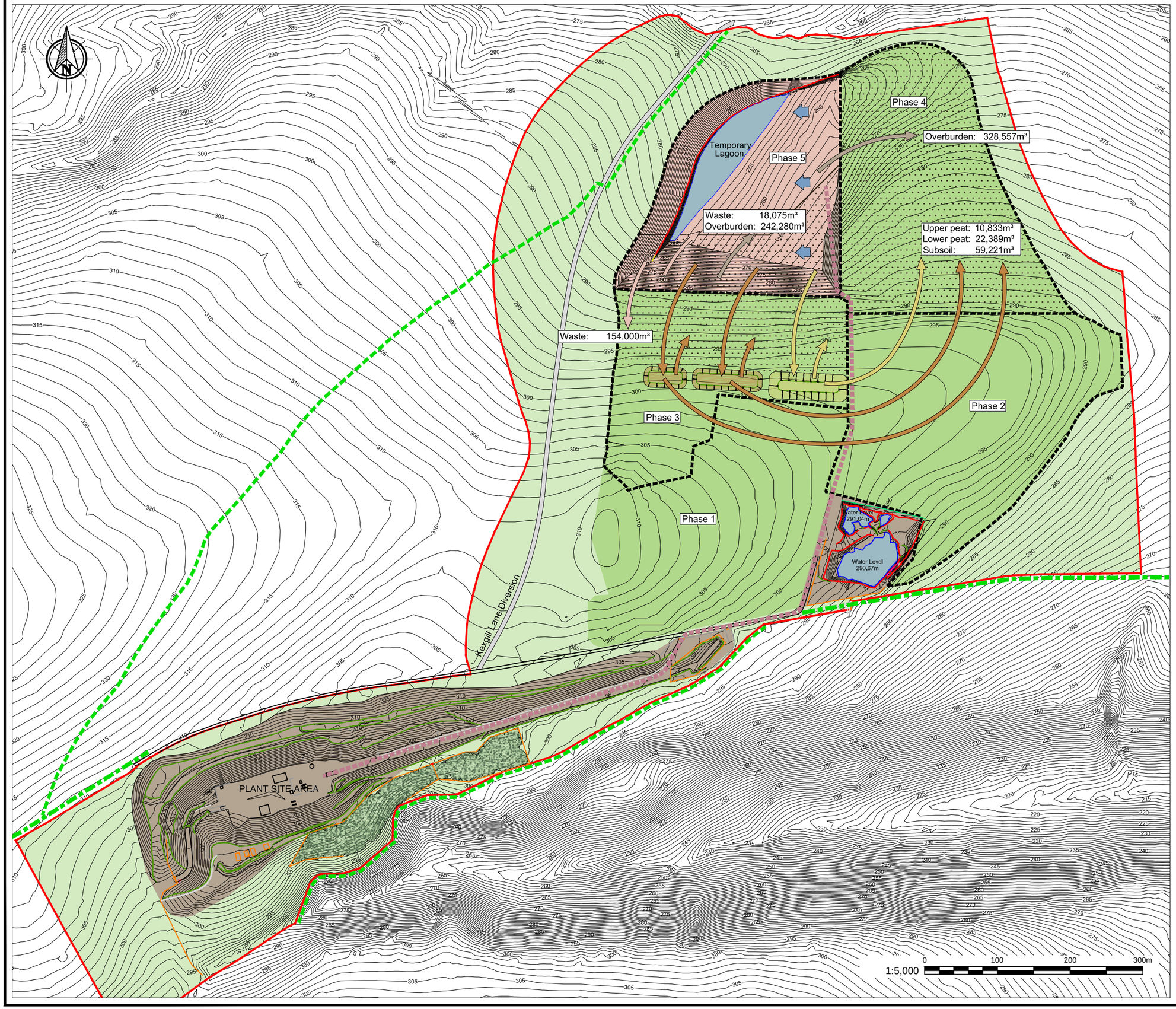
Created by	Requested by	Proj Manager	Reviewer	Date
CD	N/A	CD	NR	26.03.14

File No.	Project No.
n/a	135140234

Size	Scale	Status
A3	1:5,000	Planning

Drawing No.: **B-004** Rev: **A**

Golder Associates
Golder House
Tadcaster Enterprise Park
Station Road
Tadcaster
North Yorkshire
LS24 9JF
+44 (0)1937 837 800



LEGEND

- Limit of planning permission for site
- Proposed extraction phases
- Footpath alignment
- Bridleway alignment
- Haul road
- Area of extraction
- Overburden to be placed in quarry void
- Existing heathland to remain undisturbed
- Land to be restored
- Land previously restored
- Areas yet to be restored
- Peat movements
- Subsoil movements
- Overburden movements
- Production waste movements
- Open water
- Contours @ 1m intervals

NOTES:

1. Upper peat stripped to a depth of 0.15m and placed in temporary store.
2. Remaining peat stripped to a depth of 0.30m and placed in temporary store.
3. Subsoil Type 1 stripped to a depth of 0.80m and placed in temporary store.
4. Overburden directly placed into Phase 4 void.
5. Production waste placed into temporary stone and Phase 5 void.
6. Temporary stored peat and subsoil replaced to original stripped depths over restored Phase 4 profile.

Rev	Description		PM	Review	Date
A	Updated waste factor to 25%		CD	NR	25/03/14

Client: Hanson HEIDELBERGCEMENT Group

Project: Blubberhouses

Title: Phase 5 Extraction & Restoration

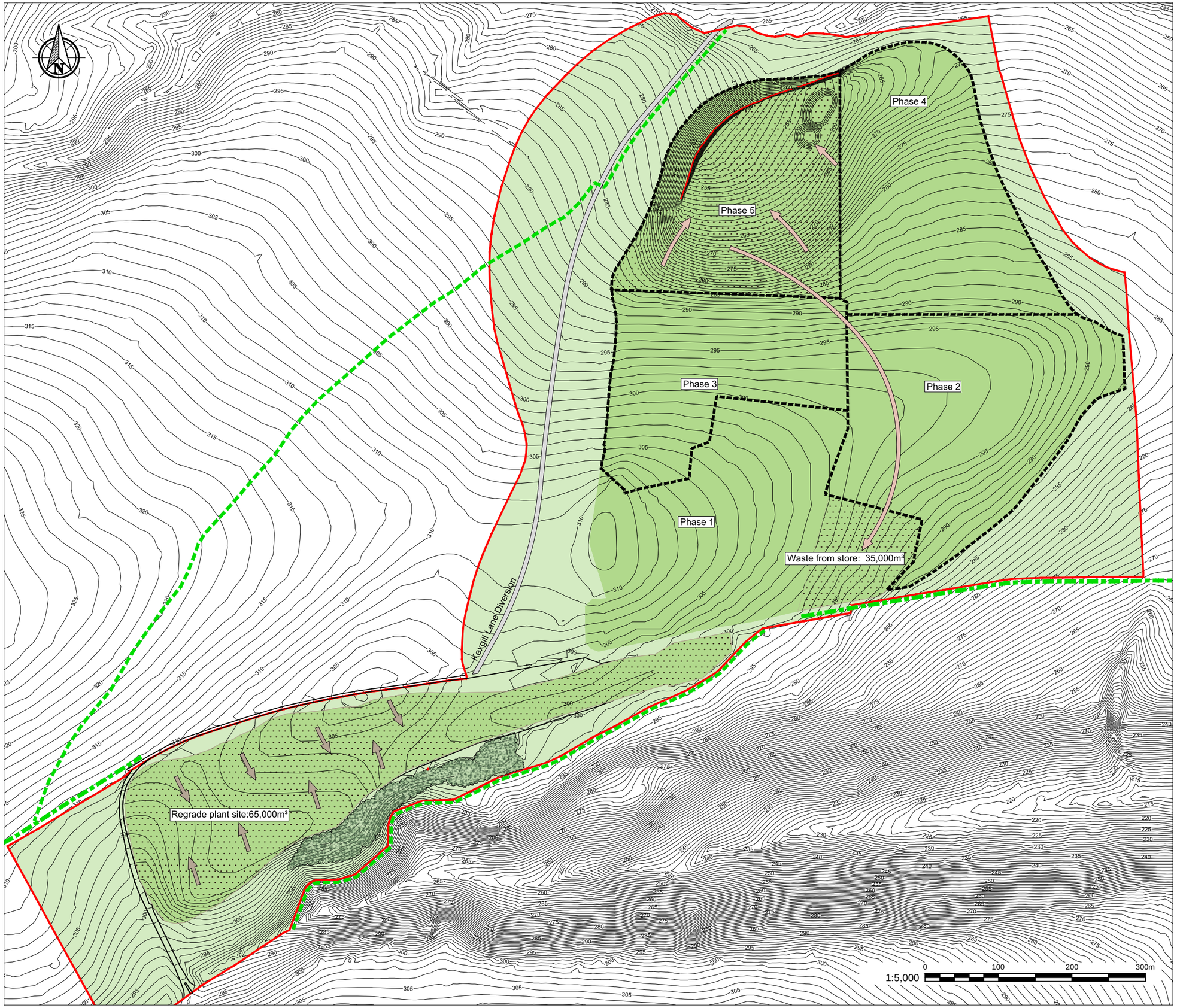
Created by	Requested by	Proj Manager	Reviewer	Date
CD	N/A	CD	NR	26.03.14

File No.	Project No.
n/a	135140234

Size	Scale	Status
A3	1:5,000	Planning

Drawing No.: **B-005** Rev: **A**

Golder Associates
Golder House
Tadcaster Enterprise Park
Station Road
Tadcaster
North Yorkshire
LS24 9JF
+44 (0)1937 837 800



LEGEND

- Limit of planning permission for site
- Proposed extraction phases
- Footpath alignment
- Bridleway alignment
- Haul road
- Area of extraction
- Existing heathland to remain undisturbed
- Land to be restored
- Land previously restored
- Areas yet to be restored
- Peat movements
- Subsoil movements
- Overburden movements
- Production waste movements
- Open water
- Contours @ 1m intervals

NOTES:
1. Restore Phase 5 and Phase 1 void using using previously stored production waste.

Rev	Description	PM	Review	Date

Client: Hanson HEIDELBERGCEMENT Group

Project: Blubberhouses

Title: Final Restoration Works

Created by	Requested by	Proj Manager	Reviewer	Date
CD	N/A	CD	NR	28.03.14

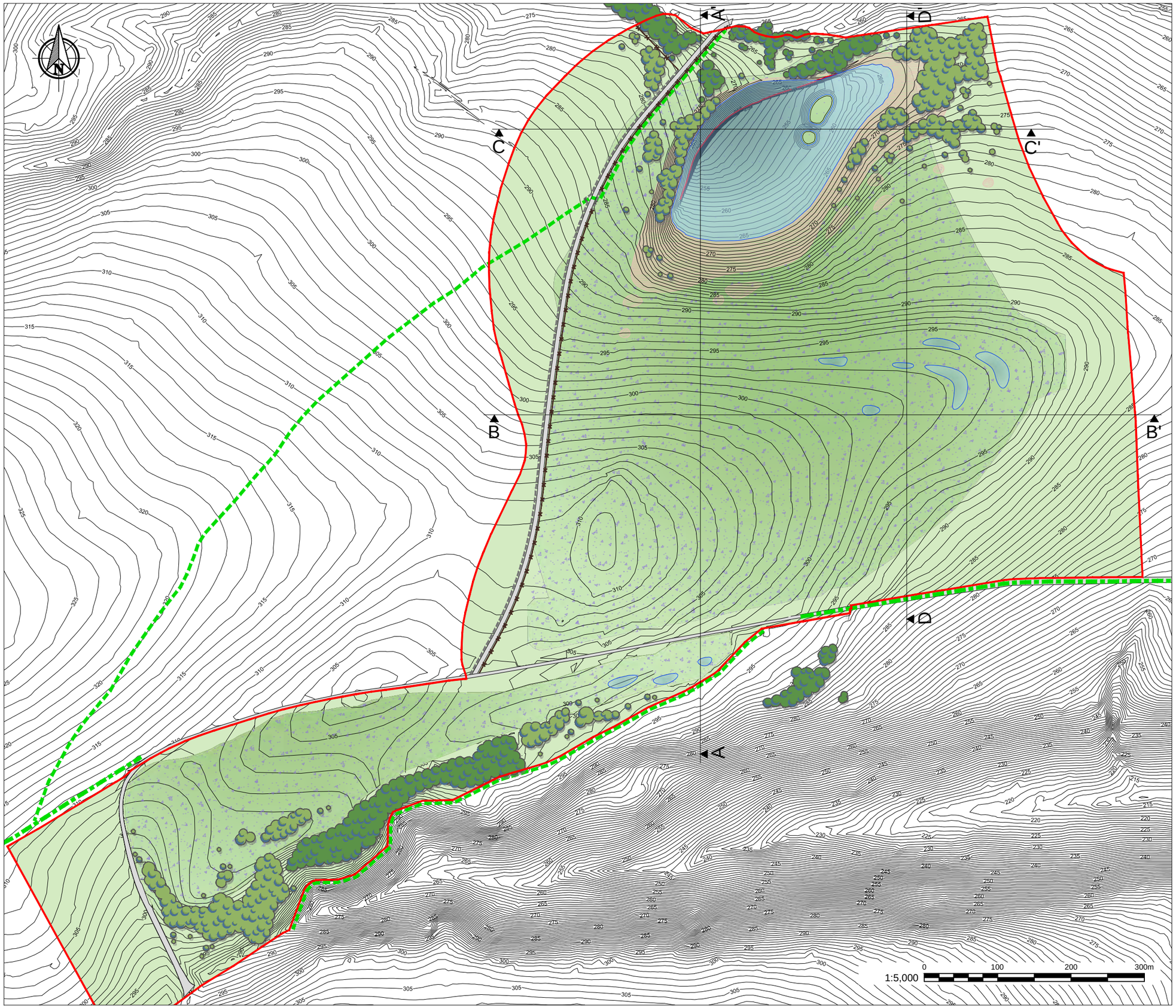
File No.	Project No.
n/a	135140234

Size	Scale	Status
A3	1:5,000	Planning

Drawing No.: **B-006**

Rev: **A**

Golder Associates
Golder House
Tadcaster Enterprise Park
Station Road
Tadcaster
North Yorkshire
LS24 9JF
+44 (0)1937 837 800



LEGEND

- Limit of planning permission for site
- Existing fence
- Footpath alignment
- Bridleway alignment
- Local road
- Dry stone wall
- Existing heathland to remain undisturbed
- Land to be restored to heath
- Bare ground for ground nesting birds
- Open water
- Shallow scrapes and wetland features
- Existing trees and gorse retained
- Proposed native woodland planting
- Contours @ 1m intervals
- Cross section (refer to plan B-008)

Rev	Description	PM	Review	Date

Client: Hanson HEIDELBERGCEMENT Group

Project: Blubberhouses

Title: Restoration Masterplan

Created by	Requested by	Proj Manager	Reviewer	Date
CD	N/A	CD	NR	07.04.14

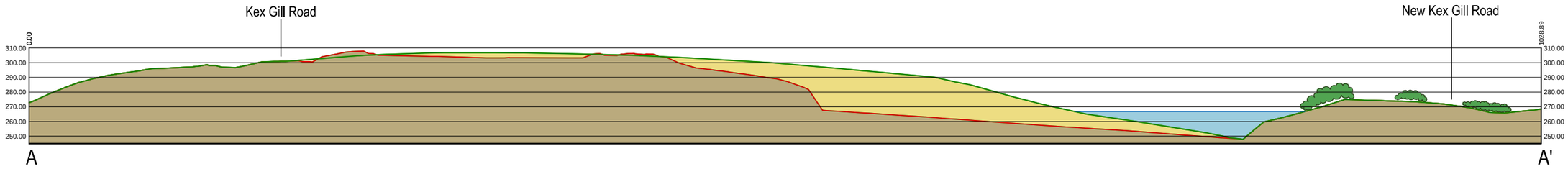
File No.	Project No.
n/a	135140234

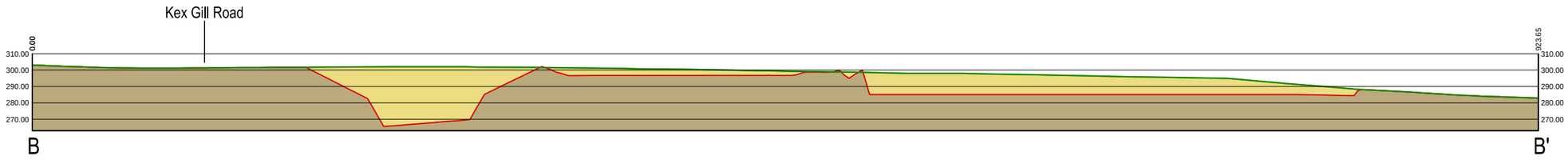
Size	Scale	Status
A3	1:5,000	Planning

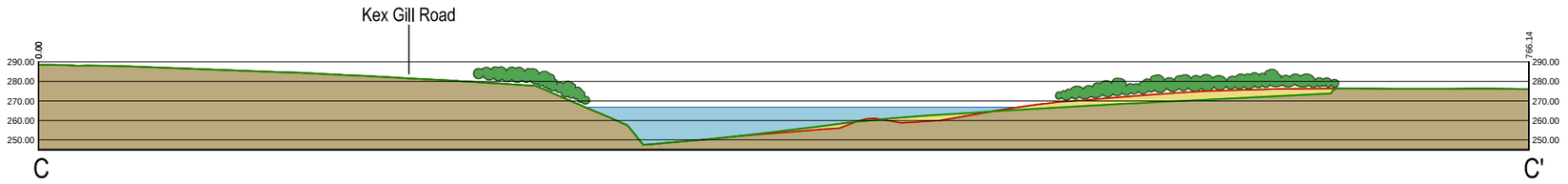
Drawing No.: **B-007**

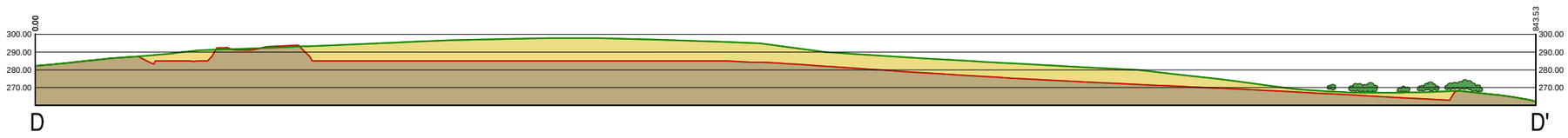
Rev:

Golder Associates
Golder House
Tadcaster Enterprise Park
Station Road
Tadcaster
North Yorkshire
LS24 9JF
+44 (0)1937 837 800









LEGEND

- Extracted profile
- Fully restored profile
- Undisturbed land
- Quarry void restoration
- Open water

Rev	Description	PM	Review	Date

Client: Hanson HEIDELBERGCEMENT Group

Project: Blubberhouses

Title: Restoration Masterplan
Sections AA to DD

Created by	Requested by	Proj Manager	Reviewer	Date
CD	N/A	CD	NR	08.04.14

File No.	Project No.
n/a	135140234

Size	Scale	Status
A3	1:3,000	Planning

Drawing No.: **B-008**

Rev:

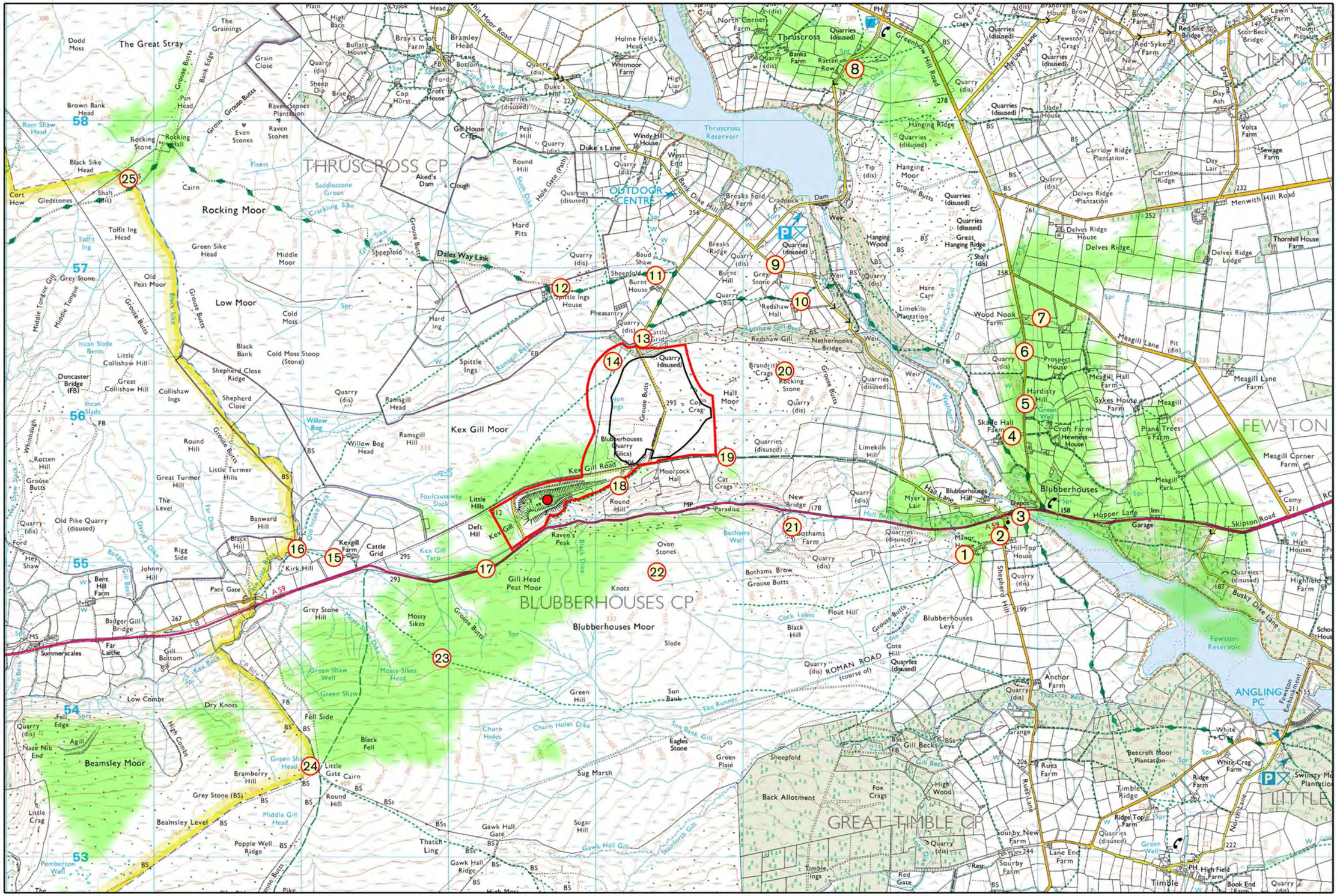
Golder Associates
Golder House
Tadcaster Enterprise Park
Station Road
Tadcaster
North Yorkshire
LS24 9JF
+44 (0)1937 837 800

Blubberhouses

Phased volumes - 18-07-2013

	A	B	C	D
Phase	Soils and overburden m^3	TOTAL MIN (including all mineral waste) m^3	Saleable MIN tonnes	Unsaleable MIN waste m^3
~~1~~	~~None~~	~~None~~	~~None~~	~~None~~
2	168,051	538,364	980,000	294,000
3	607,843	422,175	768,000	231,000
4	99,032	526,434	958,000	287,000
5	663,280	725,533	1,320,000	396,000
Total	**1,538,206**	**2,212,506**	**4,027,000**	**1,208,000**

Density tonnes/m^3	2.60
Waste %	30%

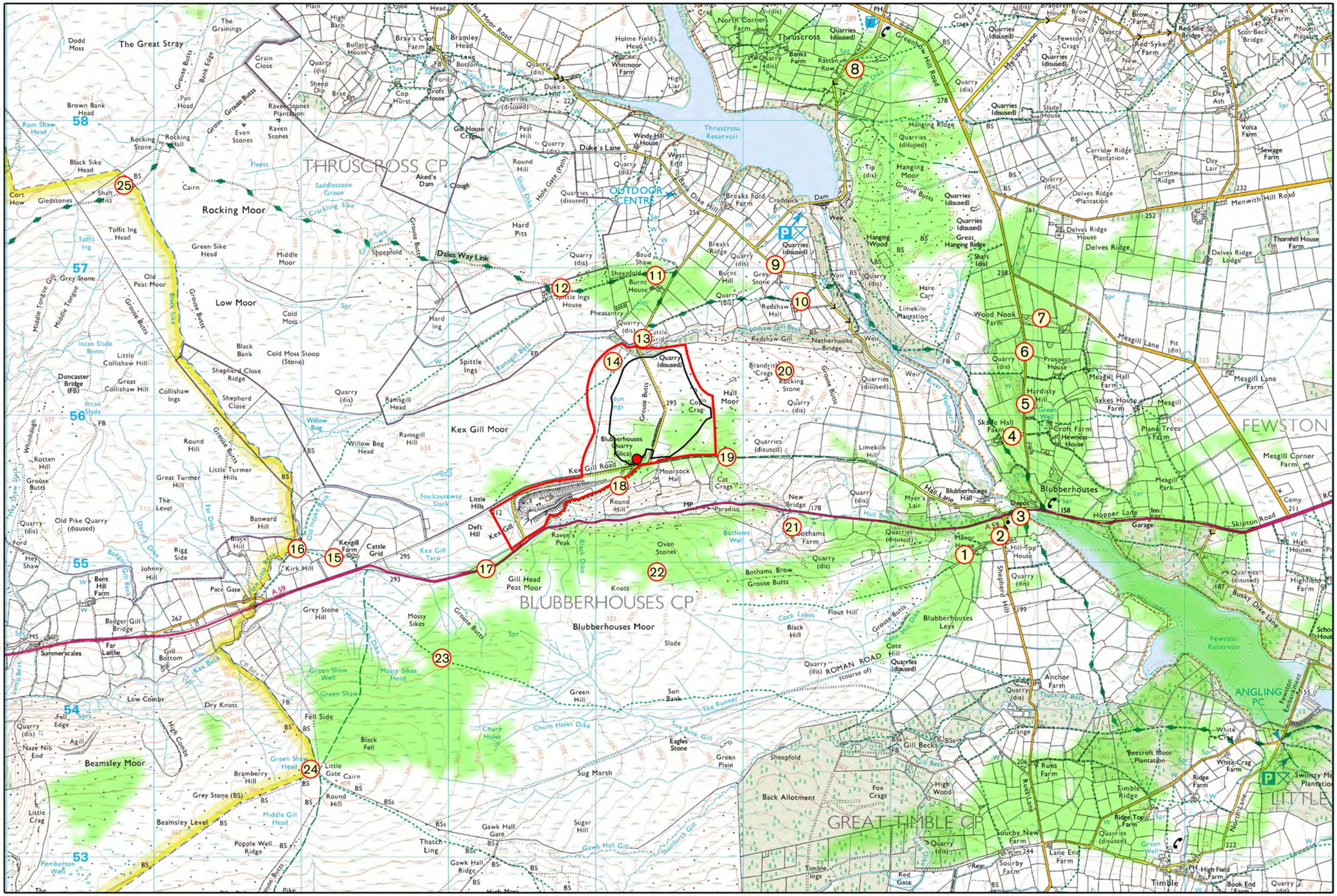


Legend

- Application boundary.
- Mineral extraction boundary.
- (23) Visual receptors.
- Target point (Processing plant) situated at 295m AOD + 23m height.
- Areas where target is fully or partially visible. (This is the worse case scenario without any further mitigation woodland planting. Please see section 4.4 of the LVIA report.)

Hanson HEIDELBERGCEMENT Group

Site	BLUBBERHOUSES		
Title	ZVI Analysis Processing Plant	Fig No.	Fig 4.3
Scale 1:25,000	Paper Size A3	Drawn by AG	Drawing No. B126/21
Date OCT 2014		Check by GW	Revision A

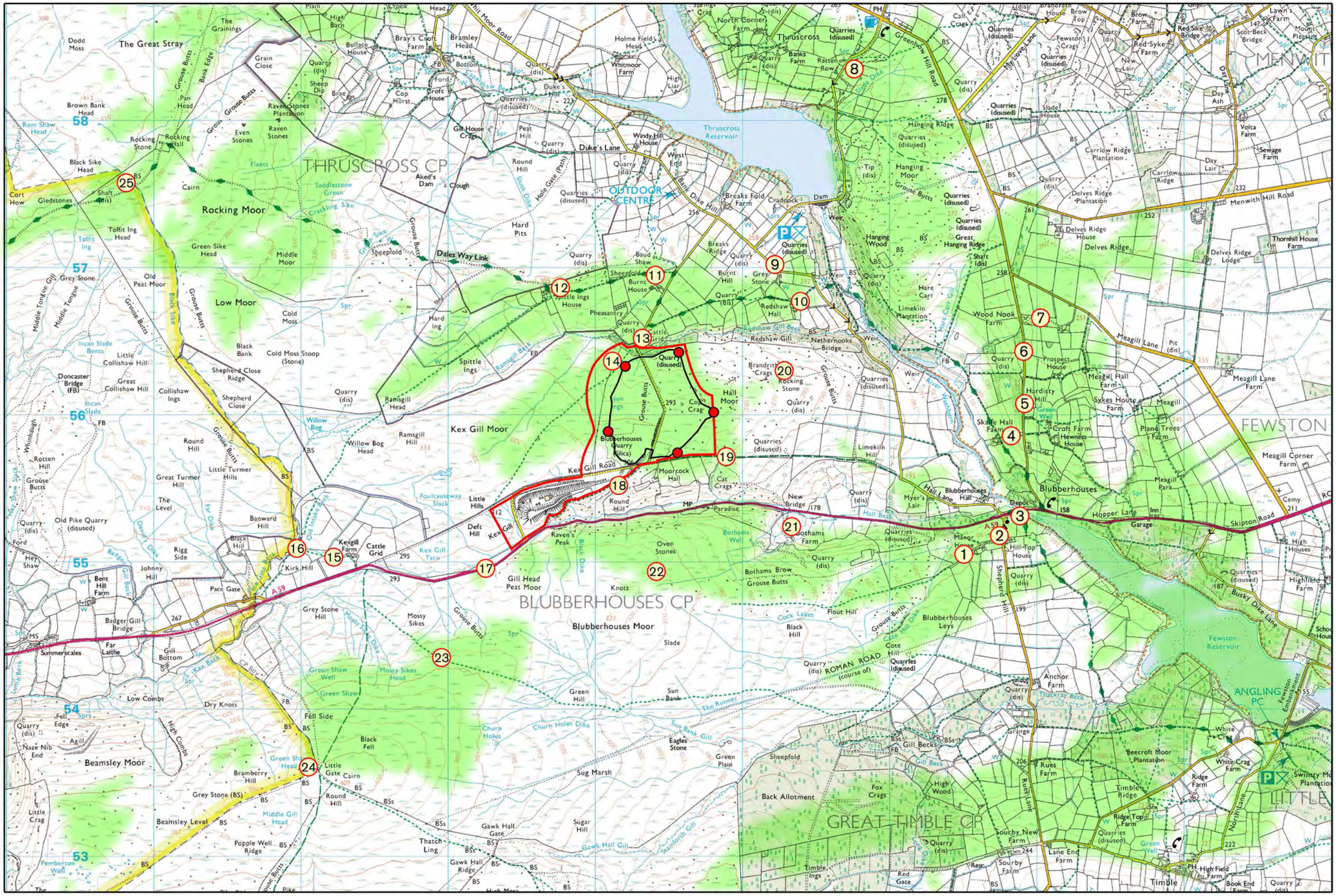


Legend

- Application boundary.
- Mineral extraction boundary.
- (23) Visual receptors.
- Target point (Crushing plant) Situated at 297m AOD + 7m high.
- Areas where target is fully or partially visible (1-2m of upper section of plant only. This is the worse case scenario without any further mitigation screen bunding. Please see section 4.4 of the LVIA report).

Hanson HEIDELBERGCEMENT Group

Site	BLUBBERHOUSES				
Title	ZVI Analysis Phase 1 Crusher Location			Fig No.	Fig 4.2
Scale	1:25,000	Paper Size A3	Drawn by AG	Drawing No.	Revision
Date	OCT 2014		Check by GW	B126/22	A



Legend

Application boundary.

Mineral extraction boundary.

24 Visual receptors.

5 Target points (each 3 meters above ground level) situated on the edge of the proposed limit of working.

Areas where target is fully or partially visible. (The 3m high target point was chosen to reflect the height of earthmoving machinery e.g. excavators and dump trucks, during soil stripping operations standing on the existing ground level. This is the worse case scenario before any further mitigation screen bunding is constructed. Please see section 4.4 of the LVIA report.)

Hanson HEIDELBERGCEMENT Group

Site	BLUBBERHOUSES				
Title	ZVI Analysis Extraction Limit			Fig No.	Fig 4.4
Scale	1:25,000	Paper Size	A3	Drawn by	AG
Date	OCT 2014			Check by	GW
Drawing No.	B126/23			Revision	A

Viewpoint 25 – Existing view from public footpath on Rockingham Moor within the Yorkshire Dales National Park boundary

Hanson
HEIDELBERGCEMENT Group

Site	BLUBBERHOUSES				
Title	Photo Sheet 6.			Fig No.	Fig 4.11
Scale		Paper Size A3	Drawn by AG	Drawing No. B126/34	Revision
Date	OCT 2014		Check by BA		

BLUBBERHOUSES QUARRY: INITIAL MANAGEMENT PLAN

Report

March 2015

47069568

Prepared for:

Hanson Aggregates

REVISION SCHEDULE					
Rev	**Date**	**Details**	**Prepared by**	**Reviewed by**	**Approved by**
1	March 2015	Draft for comment	Paul Benyon		

This Report has been prepared and provided in accordance with the Code of Professional Conduct of the Chartered Institute of Ecology and Environmental Management. We confirm that the opinions expressed are our professional bona fide opinions.

AECOM Infrastructure and Environment UK Ltd

AECOM Infrastructure & Environment UK Limited ("AECOM") is a wholly owned subsidiary through which AECOM operates in the UK.

Limitations

AECOM Infrastructure & Environment UK Limited ("AECOM") has prepared this Report for the sole use of Hanson Aggregates in accordance with the Agreement under which our services were performed. No other warranty, expressed or implied, is made as to the professional advice included in this Report or any other services provided by AECOM. This Report is confidential and may not be disclosed by the Client nor relied upon by any other party without the prior and express written agreement of AECOM.

The conclusions and recommendations contained in this Report are based upon information provided by others and upon the assumption that all relevant information has been provided by those parties from whom it has been requested and that such information is accurate. Information obtained by AECOM has not been independently verified by AECOM, unless otherwise stated in the Report.

The methodology adopted and the sources of information used by AECOM in providing its services are outlined in this Report. The work described in this Report was undertaken between February 2015 and March 2015 and is based on the conditions encountered and the information available during the said period of time. The scope of this Report and the services are accordingly factually limited by these circumstances.

Where assessments of works or costs identified in this Report are made, such assessments are based upon the information available at the time and where appropriate are subject to further investigations or information which may become available.

AECOM disclaim any undertaking or obligation to advise any person of any change in any matter affecting the Report, which may come or be brought to AECOMs' attention after the date of the Report.

Certain statements made in the Report that are not historical facts may constitute estimates, projections or other forward-looking statements and even though they are based on reasonable assumptions as of the date of the Report, such forward-looking statements by their nature involve risks and uncertainties that could cause actual results to differ materially from the results predicted. AECOM specifically does not guarantee or warrant any estimate or projections contained in this Report.

Where field investigations are carried out, these have been restricted to a level of detail required to meet the stated objectives of the services. The results of any measurements taken may vary spatially or with time and further confirmatory measurements should be made after any significant delay in issuing this Report.

Copyright

Contents

1. INTRODUCTION 5
2. LOCATION AND OWNERSHIP 5
3. Management committee 6
4. CURRENT LAND-USE AND MANAGEMENT 6
4.1. Habitats and Vegetation 6
4.1.1. Land East of the Kex Gill Road 7
4.1.2. Land West of the Kex Gill Road 7
4.1.3. The Plant Site 8
4.2. Value of Area for Species 9
4.3. Current Management 9
5. QUARRY PHASING, RESTORATION & RE-ESTABLISHMENT 10
5.1. Quarry Phasing 10
5.2. Restoration Concept and Objectives 11
5.3. Peat Management 11
5.4. Restoration 11
5.4.1. Soils 11
5.4.2. Drainage 12
5.5. Heathland Re-establishment 12
5.5.1. Introduction 12
5.5.2. Proposed Re-establishment Phase 12
5.6. Scrapes and Pools 13
5.7. Lake and Surrounds 14

BLUBBERHOUSES: INITIAL MANAGEMENT PLAN

1. INTRODUCTION

Blubberhouses quarry (the Site) is situated just north of the A59 between Harrogate and Skipton in North Yorkshire. The current permission C6/105/6A/PA granted in January 1986 expired on December 31st 2011 and approval is being sought for a further 25 years from North Yorkshire County Council.

The planning permission boundary extends to approximately 84ha, 38.66ha being the extraction area. The permitted area comprises a plant site area situated between the A59 and the Kex Gill Road, a small area opposite the site entrance, previously quarried and storage areas on either side of the Kex Gill/Upper Moor Road and a large area of land as yet unworked (Figure 1). Part of the permission includes the relocation of the Kex Gill/ Upper Moor Road.

As part of the scheme, this initial management plan will run from the date of the completion of a S106 agreement until the date 10 years after the expiry of the final 5-year statutory aftercare period relating to the quarry development. This includes the period up to the recommencement of mineral extraction at the quarry.

This initial management plan is to include proposals for monitoring and details of the environmental stewardship agreements already entered into by the landowner with Natural England across part of the quarry. The Plan will link back to and run alongside the development and restoration proposals as set out in the documents approved as part of the grant of planning permission.

Until recommencement of quarrying and for the duration of the extraction, restoration, aftercare and long term management period, an annual report will be submitted to North Yorkshire Council which will detail the work undertaken during the previous and next 12 months, and set out the results of monitoring and the development of habitats.

Whilst this initial management plan sets out the objectives and management operations to maintain and/or achieve them, there will be five year plans that will provide more detail for the operations and management being undertaken at the time. There is to be a management advisory committee and annual reports will be submitted to them for discussion and approval. They will also oversee and debate the 5-year plans and changes that may be required to react to circumstances during working and restoration so any opportunities are not missed.

2. LOCATION AND OWNERSHIP

The centre point of the Site is at approximately Ordnance Survey point SE 141560 and it is located within Nidderdale Area of Outstanding Natural Beauty and is part of and on the eastern edge of the large expanse of heather moorland that extends across the Pennine area. To the east of the Kex Gill Road, the Site is part of Hall Moor and to the west of the road, Kex Gill Moor. Both Moors are owned by Blubberhouses Moor Ltd and there has been a long tradition of grouse moor management and sheep grazing.

Whilst the Site is not itself within any designated site, it is bounded immediately to the west by the North Pennine Moors Special Area for Conservation (SAC), the North Pennine Moors Special Protection Area (SPA) for birds and The West Nidderdale, Barden and Blubberhouses Site of Special Scientific Interest (SSSI). These sites, particularly the SAC and SPA are extensive (over 100,000ha in size) and in the case of the SAC designated for the presence of European dry heath, blanket bog and old sessile oak woods; the SPA because the area supports populations of European importance of golden plover, hen harrier, merlin and peregrine falcon during the breeding season and also high numbers of breeding curlew and dunlin during the breeding season; the SSSI is designated for similar reasons.

The habitats within the Site are contiguous with those in the adjacent SAC/SSSI and attract and support some species noted for the SPA and a range of other species for which the SSSI is designated.

3. MANAGEMENT COMMITTEE

As part of the S106 agreement, a Management Advisory Committee (MAC) will be established and oversee the detailed long-term management plan for the site. The meetings of the committee will start with annual meetings within 3 months of the grant of planning permission but may be increased once quarrying and restoration commences.

The MAC will be made up of the following organisations:

Hanson (the developer), the Landowner, North Yorkshire County Council (NYCC), Harrogate Borough Council, Natural England, RSPB , the Parish Council and groups with an interest in the wildlife of the site such as the Wharfedale Naturalists Society. Other persons with appropriate knowledge or experience may attend by invitation from time to time with the agreement of the MAC.

The MAC will guide the implementation of the Initial Management Plan and subsequent 5 year Management Plans for the duration of the management period.

Prior to the recommencement of working and for the duration of the extraction, restoration, aftercare and long term management period an annual report will be submitted to NYCC, which will detail the physical works undertaken during the previous and next 12 months, and set out the results of monitoring and the development of habitats.

4. CURRENT LAND-USE AND MANAGEMENT

4.1. Habitats and Vegetation

The following habitat types are described and are illustrated on Figure 1. For ease of description the site is divided into; Land east of the Kex Gill/Upper Moor Road; land west of the road; the Plant Site.

4.1.1. Land East of the Kex Gill Road

The land within the Site on the east side of the road is managed grouse moor and comprises largely blocks of heather (*Calluna vulgaris*) dominated vegetation at various stages of development from mature heather to recently burned, largely bare peat areas. At the southern end upslope from the farm track that forms the southern boundary, there is a rather mixed area with heather, bracken (*Pteridium aquilinum*) and acid grassland with mat grass (*Nardus stricta*), sheep's fescue (*Festuca ovina*) and sheep's sorrel (*Rumex acetosella*). This area grades towards the top of the slope into the managed moor and from here across a generally flat area and then downslope to the northern boundary are variously aged blocks of heather. Small watercourses flow northwards to the boundary and these have generally cut through the peat to the underlying sandy sub-soil. There are patches of bracken along the eastern side and, within the heather blocks, patches of common cotton grass (*Eriophorum angustifolium*) and/or hare's tail cotton grass (*Eriophorum vaginatum*) sometimes with *Sphagnum* in the wettest hollows. Overall however *Sphagnum* is rare on the managed part of the moor because of the regular burning. Towards the road along the western side, there are patches of soft rush (*Juncus effusus*). Scattered throughout are shoots and small stands of bilberry (*Vaccinium myrtillus*). In places were the peat has eroded or is very shallow, there are outcrops of underlying sandstone. In the small valley at the northern end there is a small watercourse (Redshaw Gill Beck) flowing west to east and trees were planted here back in the late 1980's to form a screening belt. The watercourse is narrow (approximately 0.7m wide) with fast flowing peaty water over rock and stone. The banks are shallow (approximately 0.3m - 0.5m) and grass covered with rushes and stinging nettle on the land in the valley and acid grassland/heath and plantation on the slopes. There is no aquatic or emergent vegetation. The Beck flows into the River Washburn approximately 1km downstream from the Site.

In the south west next to the road, there is an area of previous quarrying with two water filled voids, surrounded by rocky outcrops, sparsely vegetated bare ground and developing heather.

4.1.2. Land West of the Kex Gill Road

The southern third of the area west of the road is occupied by a flooded quarry void, a silt lagoon and various vegetated screen bunds and mounds. The flooded void has steep rocky sides and heather has colonised. The water for the most part is deep from the edge and there is little in the way of aquatic, emergent and marginal vegetation but patches of the alien species, New Zealand stonecrop (*Crassula helmsii*) were present along the north western edge. Next to the flooded quarry is a large silt lagoon that has a large draw-down zone with water only retained at the northern end during dry periods and the rest bare/dry silt. This is flanked to the west and south west by a screening mound covered in soft rush and heather and along the west and north, there is undisturbed but un-grazed heath and marshy grassland. There is a smaller pond off to the north west of the large pool. This is surrounded by soft rush.

The land north of the fenced quarry area slopes down into a central valley to the Ramsgill Beck at the northern end. A number of small drains/grips draining the heath/acid grassland are cut to join small watercourses that flow into the valley through the heath and coalesce northwards to the northern boundary where a single watercourse is culverted under the road

to join the Redshaw Gill Beck. The valley through which the watercourses flow are dominated by marshy grassland with abundant soft rush.

The heather, as with the land to the east of the road is in blocks but does not appear to have been managed as intensively in the recent past. The heather whilst forming dense patches has more acid grassland and soft rush dominated vegetation throughout and forms mosaics with these.

There is planted woodland alongside the Ramsgill Beck that forms the northern boundary. The Beck is the same one flowing east along the boundary of the land to the east but the name changes where it crosses the road. The Beck along here is narrow than downstream (approximately 0.3m - 0.5m) again with grassy margins and shallow banks. Water is fast flowing stone and clay and there are no aquatic plant species but small amounts of brooklime (*Veronica beccabunga*) occur. The steep slope south from the Beck is planted with trees, which are generally small and stunted and the ground vegetation is acid grassland and heather.

4.1.3. The Plant Site

The plant site is set within a valley, which appears to have been widened to accommodate the processing plant and other buildings and is flanked to the north and south by steep banks variously vegetated with heather, tree planting, acid grassland and tall ruderal species. The plant site area is generally bare ground with concrete slabs and a roadway leading to the site entrance on the Kex Gill Road just off the A59 and also a roadway eastwards to a crossing point on the Kex Gill Road to go into the quarried area. There is also a concrete lined tunnel under the road that was used for a conveyor belt, which carried the crushed rock from the quarry to the processing plant. There is semi-mature plantation woodland along part of the south flank of the plant site but for the most part the banks are a mosaic of heather dominated vegetation with acid grassland. Beyond the telecommunication masts, south to the A59 there is an area of heather dominated vegetation at the top of the slope but which rapidly becomes bracken dominated down to the small watercourse (Hall Beck) adjacent to the A59.

On the other side of the Kex Gill road from the quarry entrance is a small area within the quarry boundary. Here there is an old tip that has now vegetated over and has heather and acid grassland. Downslope the natural vegetation is wet acid grassland which grades into rush dominated marshy grassland as the land flattens to the A59.

The heath dominated vegetation on both sides of the road is typical of managed grouse moor that probably derives from M19 *Calluna vulgaris - Eriophorum vaginatum* blanket bog but which because of the burning maintains the heather overwhelmingly dominant. The stands of heath with cotton grasses on the east side of the road are more typical of the M19 community.

The acid grassland present on the Site is two variants of the U5 *Nardus stricta – Galium saxatile*. The drier type is found on the higher ground between the stands of heather dominated vegetation west of the road, whilst the wetter type was found between the taller stands of soft rush that dominate along the watercourses that run into the valley that runs towards the north end where the Kex Gill/Upper Moor road crosses the Becks.

4.2. Value of Area for Species

The value of the site for species is ostensibly its use by a range of wintering and breeding bird species, including a number of species for which the adjacent SPAS and SSSI is designated. Small numbers of golden plover and curlew have been recorded breeding on the site and a single pair of merlin, close to the site. The other species for which the SPA is designated have only been recorded flying over; peregrine falcon, hen harrier and dunlin.

A number of the species for which the SSSI is designated have been recorded including snipe, short-eared owl, redshank, teal, common sandpiper, lapwing, whinchat, ring ouzel, wheatear and buzzard but again most were recorded flying over or breeding outside of the site or using the silt lagoon for loafing. Little ring plover bred on the edge of the silt lagoon. No other fauna are particularly notable and using the site.

4.3. Current Management

The land within the Site is included in the management of the wider area of Kex Gill Moor and Hall Moor. The management is subject to an Environmental Stewardship Agreement with Natural England (AG00328776). The agreement commenced in 2009 and is in place until May 2019. The agreement includes land entered under The Upland Entry Level Scheme (UELS) and Higher Level Scheme (HLS).

Kex Gill Moor including the land within the Site is covered by HL10 - restoration of moorland; HL12 - management of heather, gorse and grass; EL6 - moorland and rough grazing, ML land only; UX3 - moorland and A13 - non payment option, permanent grassland for Article 13.

Hall Moor including the land within the Site is covered by HL10 - restoration of moorland; HL12 - management of heather, gorse and grass; EL6 - moorland and rough grazing, ML land only; UX3 - moorland and A13 - non payment option, permanent grassland for Article 13.

The aims of the management for both land parcels are to achieve and maintain the features of the SAC/SPA/SSSI in favourable condition with land outside but contiguous with the SAC/SPA/SSSI to be treated in the same way; land within the Site west of Kex Gill Road and Hall Moor, which includes the land within the Site, east of Kex Gill Road. Particular practices include restoring areas of degraded notified habitat including wet heath and blanket bog; improve the condition and cover of grazing-suppressed dwarf shrubs on the same habitats; maintain and restore the hydrological integrity of the peatland systems.

The management plan provided with the Agreement details all the practices to be followed: -

- stock management
- burning; land within the burning rotation
- land outside of the burning rotation/sensitive habitats
- other management prescriptions; drainage, moorland restoration, bracken and rush control, vehicles, tracks, fertilisers, pesticide use, pest control, shooting and sporting, trees/banks/bushes/walls and fences

The plan also provides the indicators of success for each of the habitats; blanket bog, upland dry heath, upland valley mires/spring/flushes, wet heath.

The Yorkshire Peat Partnership has produced a Peatland Restoration Plan for Blubberhouses Moor, which is also owned by Blubberhouses Moor Ltd. The moor lies to the south of the A59. The restoration plan comprises essentially measures to block grips to restore the hydrological conditions necessary for maintenance and restoration of moorland vegetation and to restore areas of eroded and bare peat using heather brash. As part of the Stewardship Agreement, such measures could be extended to the land north of the A59, which includes the Site.

The management of the land under the Stewardship Agreement, which includes the Site, extends until May 2019, at which point the land may be entered into whatever Scheme, if any, is available at that time. However, there is a now a legal obligation to manage land designated for nature conservation appropriate to maintain the reasons for designation and as such, it is not envisaged that the management of the land would change drastically from that current.

5. QUARRY PHASING, RESTORATION & RE-ESTABLISHMENT

5.1. Quarry Phasing

It is envisaged that the management of the land within the Site will continue as current until re-commencement of quarrying.

Once quarrying commences, parts of the Site will be taken out of management in phases as they are required for extraction, soil/overburden storage or siltation lagoons. Similarly restoration will be undertaken in phases, as land becomes available following working. As far as is practical land will continue to be managed until it is required for quarrying or related activities.

In summary, the proposals are to work the Site in 5 phases (Figures D-002 - D-006).

- The first operation will be to construct the road diversion towards the western boundary of the Site.
- Phase 1 was worked largely prior to mothballing of the quarry and so four phases remain, each phase programmed to take around four years.
- Phase 2 will be worked south to north and then west to the extraction boundary. Peat, sub-soil and overburden from Phase 2 will be used to restore Phase1, west of the old alignment of Kex Gill Road; the small extraction area to the east of the old alignment will remain. There will be a requirement for temporary storage of materials stripped from Phase 2; these will be stored on land that will become Phase 3.
- Phase 3 will be worked from west to east and then south during this period Phase 2 will be restored using material stripped from Phase 3. There will be a requirement for temporary storage of materials stripped from Phase 3; these will be stored on part of the restored Phase 1.

- Phase 4 will be worked from south to north and then westwards. During this time Phase3 will be restored using materials stripped from Phase 4. Land within Phase 5 will be used to temporarily store this material

- Phase 5 will be worked westwards and during this time Phase 3 will be used to temporarily store material from Phase 5 before being used to restore Phase 4.

- Final restoration will be Phase 5 and probably the small area of quarry in Phase1 that lies to the east of the original alignment of the Kex Gill Road. It is also at this time that the Plant Site will be restored. The current restoration is for an approximate 2ha lake to be created at the northern end of Phase 5 with the rest of the Site restored to upland heath with bare areas left above the lake; some tree planting around the lake and the Plant Site area and scrapes and ponds created within the Plant Site area and on the lower/slacker slopes at the eastern end of the restoration. It is envisaged that a large proportion of the restored land will be managed as grouse moor.

5.2. Restoration Concept and Objectives

The proposed restoration of the quarry is shown on Figure D-007. In general terms restoration will be back to heather moorland that can be managed for game, as it is currently. It is however proposed however to create localised features such as peat pools and scrapes and drainage features that will provide the water supply to the pools and the larger waterbody proposed at the northern end following restoration.

5.3. Peat Management

A peat management plan has been produced, which summarises the depth and nature of the peat to be stripped, stored and re-laid; how it is to be stored and re-used; measures to be taken to provide suitable conditions for storage and re-use. The plan is provided as Appendix 1.

5.4. Restoration

5.4.1. Soils

General soil handling operations would follow the guidelines published in the 'Good Practice Guide for Soil Handling' (MAFF, 2000).

Prior to areas of peat and soil being stripped, grips will be required to be cut to isolate and drain the area so that the peat and sub-soil are not saturated when placed into store.

Areas to be restored would be brought up to level with overburden material and then sub-soil placed over this and finally the peat topsoil. Because the materials are to be placed into temporary storage for the most part, the peat will be stripped, stored and re-laid as two layers; an upper 15cm, which will contain most of the seed bank and vegetative propagules and the rest of the peat profile. This is so on re-laying the upper seed and propagule rich peat is not diluted and buried by the rest of the peat.

Where the restoration contours are steep, consideration will be given to reducing the depth of peat or not spreading at all to reduce the potential for wash-off. Geojute may also be used to stabilise the surface with vegetation established on the geojute.

5.4.2. Drainage

For the duration of quarrying water management will be through use of lagoons and drainage channels. Care will have to be taken that newly restored areas have catch drains to reduce the amount of fine material washed out of the peat being lost. The drains are likely to be constructed to have shallow gradients by running around the restored slopes with dams to slow and hold the water so that most of the fine peat/silt material drops out before entering any attenuation lagoons. This can also be assisted though construction of a series of peat pools that will collect the peat and silt and slowly fill. These will ultimately form very wet peat hollows within which bog vegetation can be established. Once the vegetation has established and the peat has stabilised, consideration can be given to blocking the ditches to hold back the water in the peat profile

5.5. Heathland Re-establishment

5.5.1. Introduction

There is a large body of evidence available on the restoration of heather moorland both following extensive damaging fires (e.g. North York Moors 1976) and following quarrying (e.g. quarries in Dorset and silica sand in Scotland), mining (e.g. opencast in Staffordshire and South Wales) and installation of utilities (e.g. gas and oil pipelines). Many of these have been very successful with wet and dry heath and mire communities all being re-established. At Blubberhouses quarry itself, there were trials in the 1990s established as part of the original planning permission. These were monitored for a number of years and a visit to the Site in 2011 showed that stands of heather had successfully established either solely from the seed bank of soil spread over bunds or following applications of heather brash cut from adjoining moorland.

5.5.2. Proposed Re-establishment Phase

5.5.2.1. Establishment

Where peat is to be stripped and re-laid from areas that are heather dominated; prior to stripping, the vegetation will be cut short if required. The peat will then be removed as two layers; an upper 10cm - 15cm and the remaining peat to depth. The peat will be re-laid with the upper 10cm - 15cm placed on top of the lower layer of peat. The re-laid peat may then be rolled with a ribbed roller to firm the surface. The upper layer is where most of the seed bank, particularly heather in this case and vegetative fragments (rhizomes etc) are located and this provides the best opportunity for natural re-growth. The richness of the seed bank is evident at Blubberhouses, as following burning of the heather within 2 or 3 years heather seedlings form a carpet over the peat.

Heather re-establishment can be slow and sporadic and to aid in stabilising the peat once re-laid, it is likely that a simple bent /fescue grass mix will be used to assist in binding the surface to prevent erosion. Where the gradient is steep, consideration will need to be given to affixing geojute, as an added measure to prevent erosion. The grass seed can be sown onto the geojute and heather brash added as a source of heather seed. The heather brash would be sourced locally from other parts of the estate or areas within the site that are heather dominated and where, provided the timescales allow it, they could be managed to produce a heather crop for brash.

Where there is poor establishment from the seed bank, heather brash cut from heather stands would be used to introduce seed onto the restored surface.

Areas of acid grassland can be re-established similarly. Pools and very wet areas can be seeded with Sphagnum from areas yet to be lost to quarrying. Similarly, common cotton grass can be cut as turves and placed into pre-dug hollows along the edges of pools and scrapes from rhizomes can spread out from the turves over and into the adjacent peat areas.

Hare's tail cotton grass will be re-introduced by taking clumps from areas yet to be quarried and planting into the establishing heathland matrix.

5.5.2.2. Management and Monitoring

Following restoration the initial 5-year establishment phase would be monitored for development of the target vegetation and to determine management and remediation measures that may be required such as weed control; oversowing of poor vegetation establishment and issues of erosion.

Monitoring would comprise a bi-annual walkover of the restored area; mid spring and late summer. Each walkover would record the general vegetation cover and species present; requirement for erosion control; oversowing and weed control. This would then inform what if any intervention management is required.

Weed control - the most likely species that could become a problem is rushes. These are present, particularly on the land west of the road and could be a problem early during establishment. Weed wiping either using a knapsack and wiper or a small quad bike with a roller on the back would be used. These have been used successfully elsewhere at Pateley Bridge quarry where large areas of rush infestation have been eradicated through a programme of topping the vegetation and then weed wiping the stands of young rush shoots that develop quicker than the surrounding vegetation and which are more susceptible to herbicide than the stands of older growth.

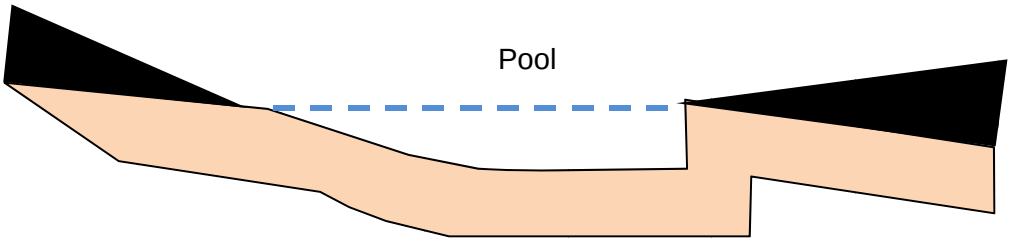
Oversowing - where grass or heather establishment is slow or patchy, areas will be oversown as necessary.

Erosion control - this is expected to be a potential issue until a stabilising vegetation cover can be achieved.

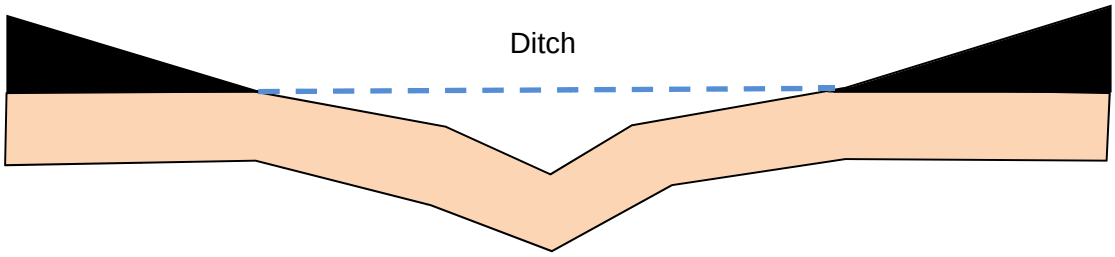
5.6. Scrapes and Pools

There has been a re-design of the restoration (Figure D-007) so that now included are opportunities for creation of a more diverse moorland landscape through incorporation of features that are restricted currently to the areas that have been worked but not restored e.g. shallow water areas with bare scrapes and draw down margins and features that are currently limited in extent e.g. bog pools with *Sphagnum* and common cotton grass and scrubby woodland along valley features.

Pools will be created by digging into the clay subsoil on the shallow slopes with a shallow slope to the base of the pool and a vertical clay face on the down-slope side.



The scrapes and ditches will be constructed by forming a base with the clay sub-soil and steep incised banks will be avoided with shallow exposed clay edges; the peat will be graded from the top of the bank to avoid collapse of the peat into the ditch.



5.7. Lake and Surrounds

The lake to be created at the northern end of the site will be bounded to the south and north by bare and sparsely vegetated ground. This is to replicate the bare silt area alongside the existing silt lagoon, which attracts numbers of the wading species in particular from the SPA/SSSI and to provide suitable nesting habitat for little ringed plover. The land here steepens and peat will not be laid to minimise the risk of wash-off into the lake.

Tree planting at the north east part of the site will complement that along the riparian corridor of the brook. Details of the species to be planted will be agreed with the management committee towards the end of the quarrying period.

FIGURES

Key:

- Site Boundary
- Tree
- Running Water
- Fence
- Plantation Coniferous Woodland
- Dense Scrub
- Acid Grassland
- Marshy Grassland
- Bracken
- Dry Dwarf Shrub Heath
- Dry Heath / Acid Grassland Mosaic
- Dry Modified Bog
- Standing Water
- Hardstanding
- Q Q Quarry
- 1-8 Pond Numbers

0 75 150 225 300
Metres

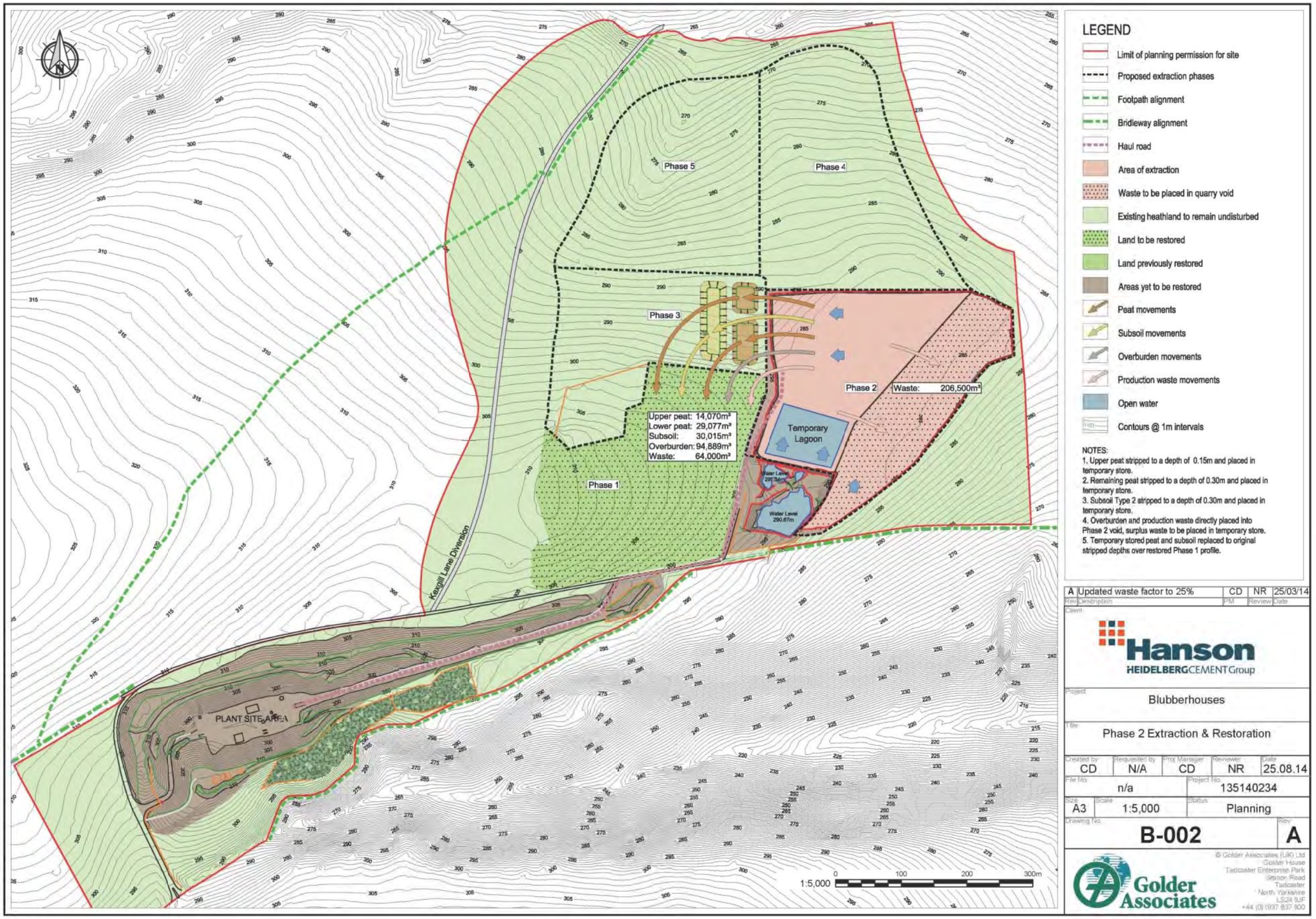
Title: Phase 1 Habitat Plan

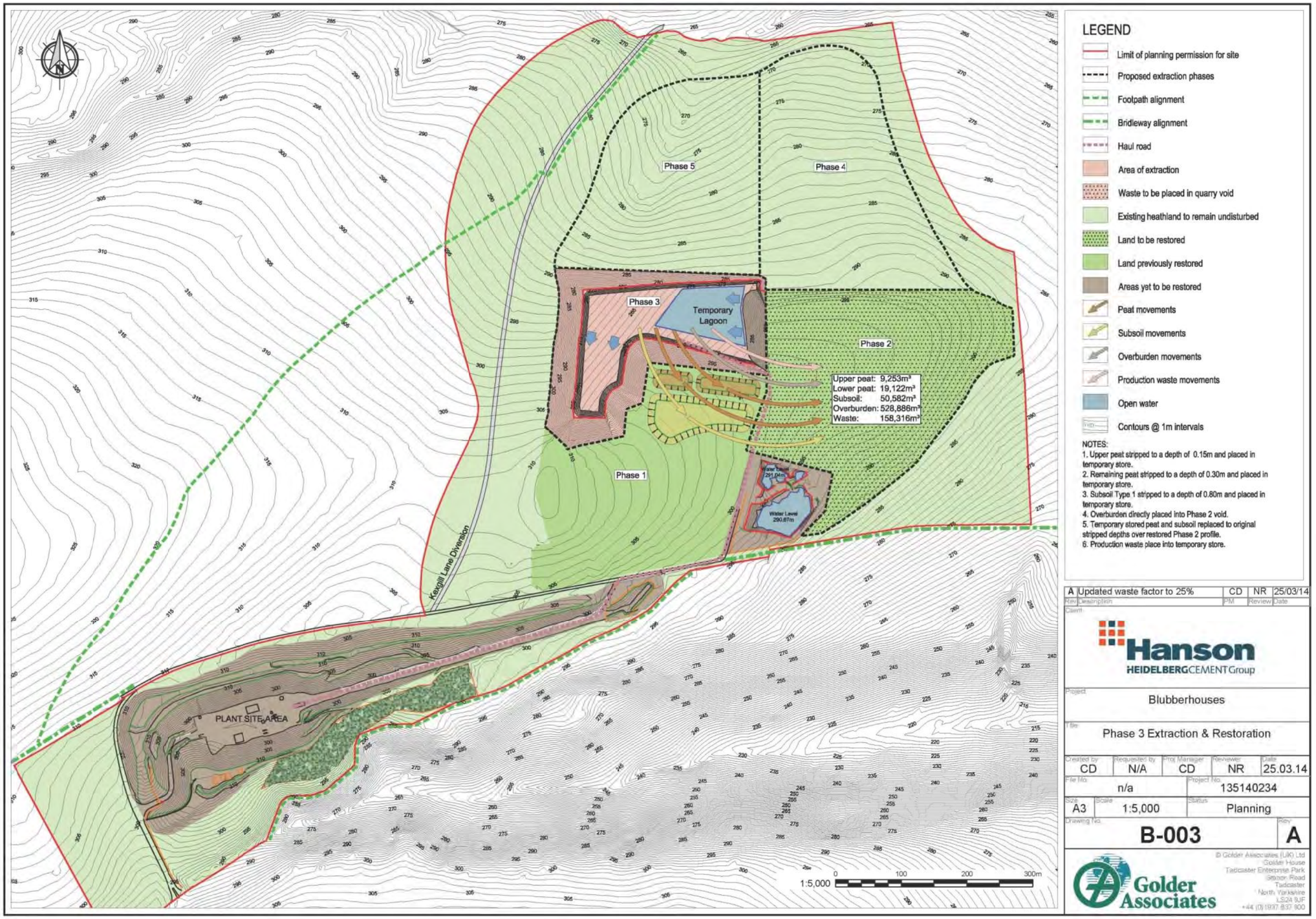
Project: Blubberhouses

Client: Hanson Aggregates

URS Scott Wilson

App'd:	Drawn:	Ch'kd:	Drg Size: A3
Version: X		Ref: 01/KC/LON	
Scale: 1:7,500		Job No: 49343426	
Date: 16/11/2011		FIGURE 5.2	


Phase 5
Phase 4
Phase 3
Phase 2
Waste: 206,500m³
Phase 1
Upper peat: 14,070m³
Lower peat: 29,077m³
Subsoil: 30,015m³
Overburden: 94,889m³
Waste: 64,000m³
Temporary Lagoon
Water Level 291.34m
Water Level 290.67m
Kexgill Lane Diversion
PLANT SITE AREA
1:5,000
0
100
200
300m
LEGEND
Limit of planning permission for site
Proposed extraction phases
Footpath alignment
Bridleway alignment
Haul road
Area of extraction
Waste to be placed in quarry void
Existing heathland to remain undisturbed
Land to be restored
Land previously restored
Areas yet to be restored
Peat movements
Subsoil movements
Overburden movements
Production waste movements
Open water
Contours @ 1m intervals
NOTES:
1. Upper peat stripped to a depth of 0.15m and placed in temporary store.
2. Remaining peat stripped to a depth of 0.30m and placed in temporary store.
3. Subsoil Type 2 stripped to a depth of 0.30m and placed in temporary store.
4. Overburden and production waste directly placed into Phase 2 void, surplus waste to be placed in temporary store.
5. Temporary stored peat and subsoil replaced to original stripped depths over restored Phase 1 profile.
A Updated waste factor to 25% CD NR 25/03/14
Rev Description PM Review Date
Client
Hanson HEIDELBERGCEMENT Group
Project
Blubberhouses
Title
Phase 2 Extraction & Restoration
Created by CD
Requested by N/A
Proj Manager CD
Reviewer NR
Date 25.08.14
File No. n/a
Project No. 135140234
Size A3
Scale 1:5,000
Status Planning
Drawing No. B-002
Rev A
Golder Associates
© Golder Associates (UK) Ltd
Golder House
Tadcaster Enterprise Park
Station Road
Tadcaster
North Yorkshire
LS24 9JF
+44 (0) 1937 837 900



LEGEND

- Limit of planning permission for site
- Proposed extraction phases
- Footpath alignment
- Bridleway alignment
- Haul road
- Area of extraction
- Waste to be placed in quarry void
- Existing heathland to remain undisturbed
- Land to be restored
- Land previously restored
- Areas yet to be restored
- Peat movements
- Subsoil movements
- Overburden movements
- Production waste movements
- Open water
- Contours @ 1m intervals

NOTES:
1. Upper peat stripped to a depth of 0.15m and placed in temporary store.
2. Remaining peat stripped to a depth of 0.30m and placed in temporary store.
3. Subsoil Type 1 stripped to a depth of 0.80m and placed in temporary store.
4. Overburden directly placed into Phase 2 void.
5. Temporary stored peat and subsoil replaced to original stripped depths over restored Phase 2 profile.
6. Production waste place into temporary store.

Rev	Description	PM	Review	Date
A	Updated waste factor to 25%	CD	NR	25/03/14

Client: Hanson HEIDELBERGCEMENT Group

Project: Blubberhouses

Title: Phase 3 Extraction & Restoration

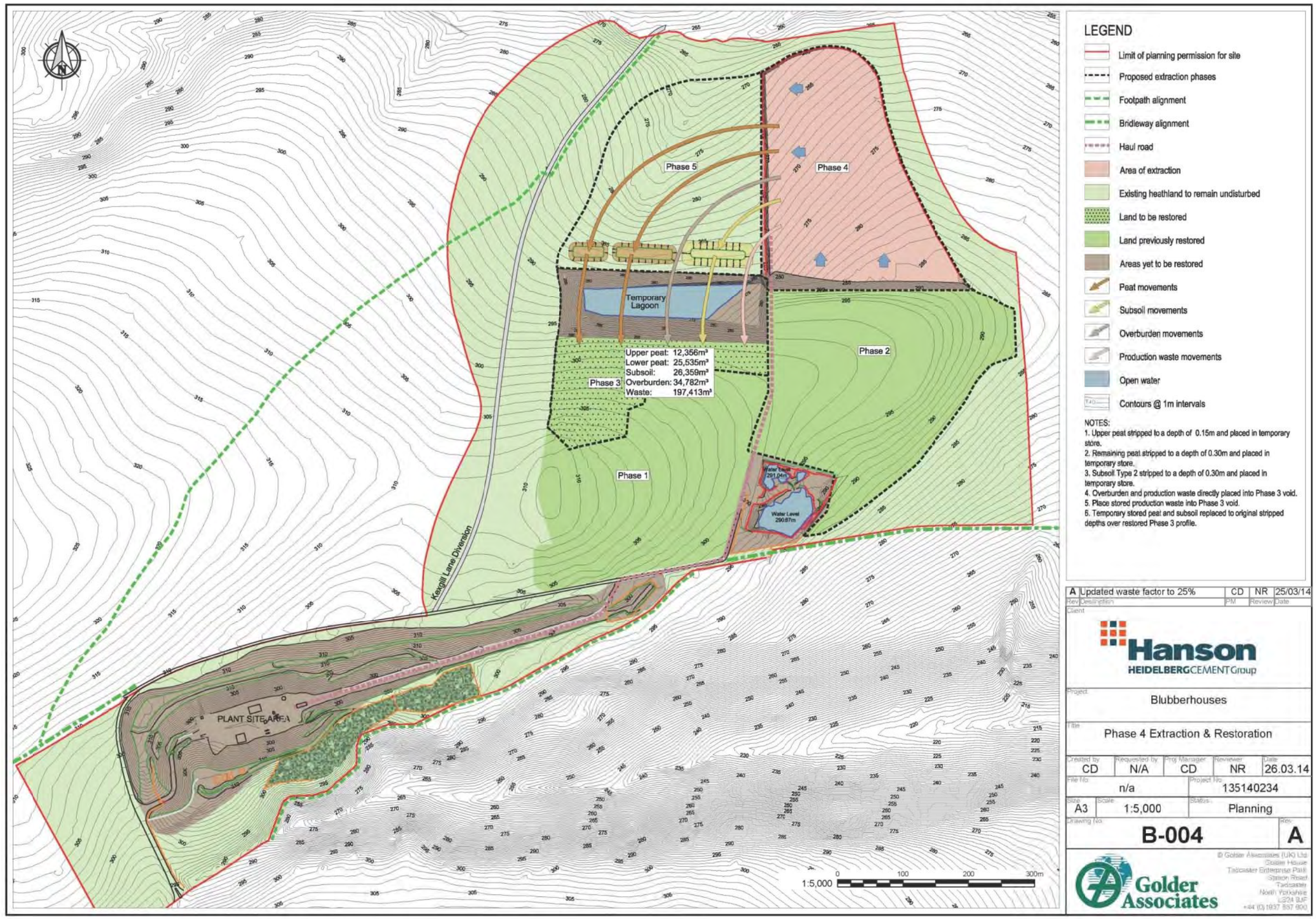
Created by	Requested by	Proj Manager	Reviewer	Date
CD	N/A	CD	NR	25.03.14

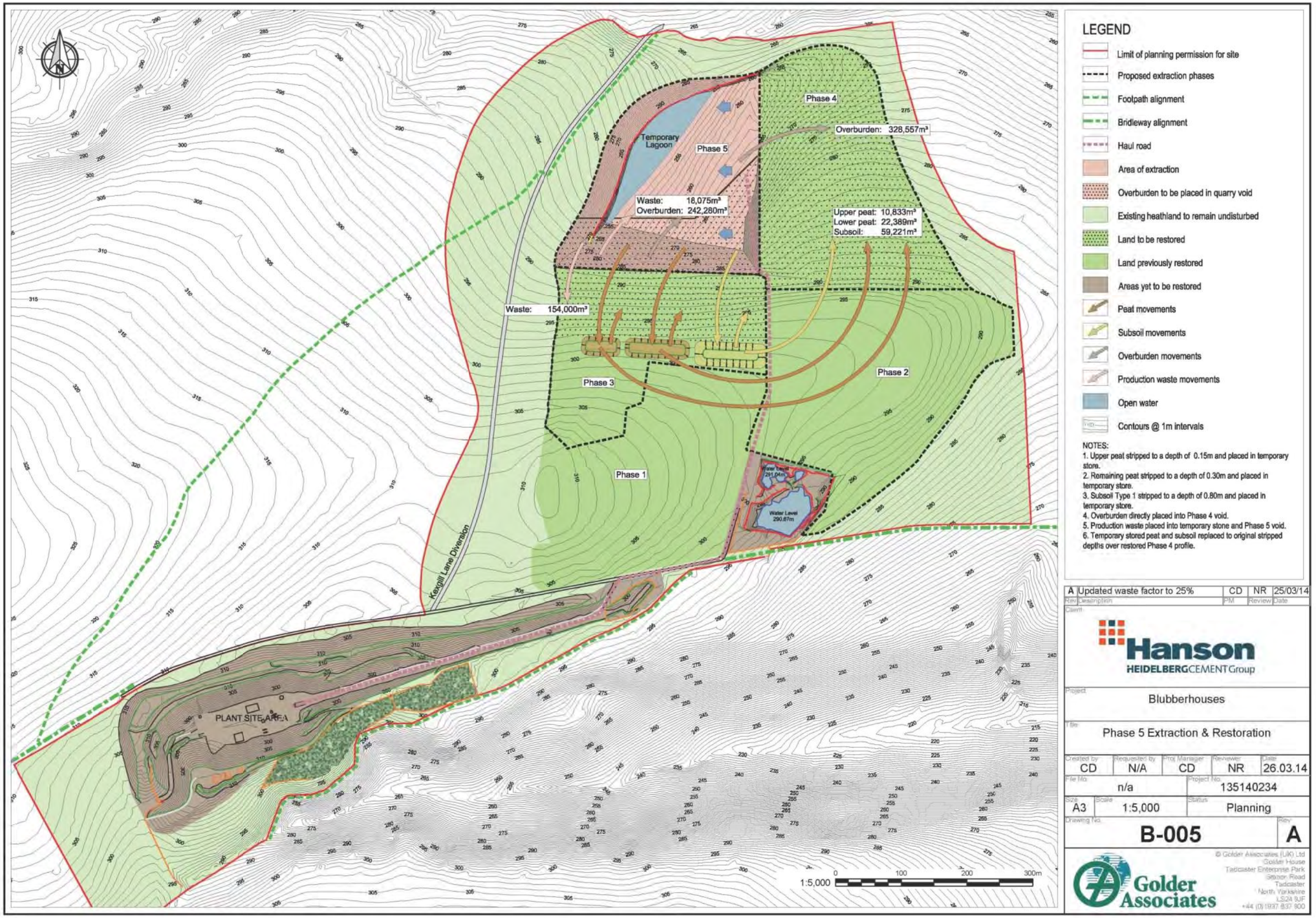
File No.	Project No.
n/a	135140234

Size	Scale	Status
A3	1:5,000	Planning

Drawing No.: B-003 Rev: A

Golder Associates
Golder House
Tadcaster Enterprise Park
Station Road
Tadcaster
North Yorkshire
LS24 9JF
+44 (0) 1937 837 900


Phase 5
Phase 4
Phase 2
Phase 3
Phase 1
Temporary Lagoon
Upper peat: 12,356m³
Lower peat: 25,535m³
Subsoil: 26,359m³
Overburden: 34,782m³
Waste: 197,413m³
Water tank 291.04m
Water Level 290.87m
Kexgill Lane Diversion
PLANT SITE AREA
1:5,000
0
100
200
300m
LEGEND
Limit of planning permission for site
Proposed extraction phases
Footpath alignment
Bridleway alignment
Haul road
Area of extraction
Existing heathland to remain undisturbed
Land to be restored
Land previously restored
Areas yet to be restored
Peat movements
Subsoil movements
Overburden movements
Production waste movements
Open water
Contours @ 1m intervals
NOTES:
1. Upper peat stripped to a depth of 0.15m and placed in temporary store.
2. Remaining peat stripped to a depth of 0.30m and placed in temporary store.
3. Subsoil Type 2 stripped to a depth of 0.30m and placed in temporary store.
4. Overburden and production waste directly placed into Phase 3 void.
5. Place stored production waste into Phase 3 void.
6. Temporary stored peat and subsoil replaced to original stripped depths over restored Phase 3 profile.
A Updated waste factor to 25% CD NR 25/03/14
Rev Description PM Review Date
Client
Hanson HEIDELBERGCEMENT Group
Project
Blubberhouses
Title
Phase 4 Extraction & Restoration
Created by CD
Requested by N/A
Proj Manager CD
Reviewer NR
Date 26.03.14
File No. n/a
Project No. 135140234
Size A3
Scale 1:5,000
Status Planning
Drawing No. B-004
Rev. A
Golder Associates
© Golder Associates (UK) Ltd
Golder House
Tadcaster Enterprise Park
Station Road
Tadcaster
North Yorkshire
LS24 9JF
+44 (0) 1937 557 900



LEGEND

- Limit of planning permission for site
- Proposed extraction phases
- Footpath alignment
- Bridleway alignment
- Haul road
- Area of extraction
- Overburden to be placed in quarry void
- Existing heathland to remain undisturbed
- Land to be restored
- Land previously restored
- Areas yet to be restored
- Peat movements
- Subsoil movements
- Overburden movements
- Production waste movements
- Open water
- Contours @ 1m intervals

NOTES:
1. Upper peat stripped to a depth of 0.15m and placed in temporary store.
2. Remaining peat stripped to a depth of 0.30m and placed in temporary store.
3. Subsoil Type 1 stripped to a depth of 0.80m and placed in temporary store.
4. Overburden directly placed into Phase 4 void.
5. Production waste placed into temporary stone and Phase 5 void.
6. Temporary stored peat and subsoil replaced to original stripped depths over restored Phase 4 profile.

Rev	Description	By	Review	Date
A	Updated waste factor to 25%	CD	NR	25/03/14

Client: Hanson HEIDELBERGCEMENT Group

Project: Blubberhouses

Title: Phase 5 Extraction & Restoration

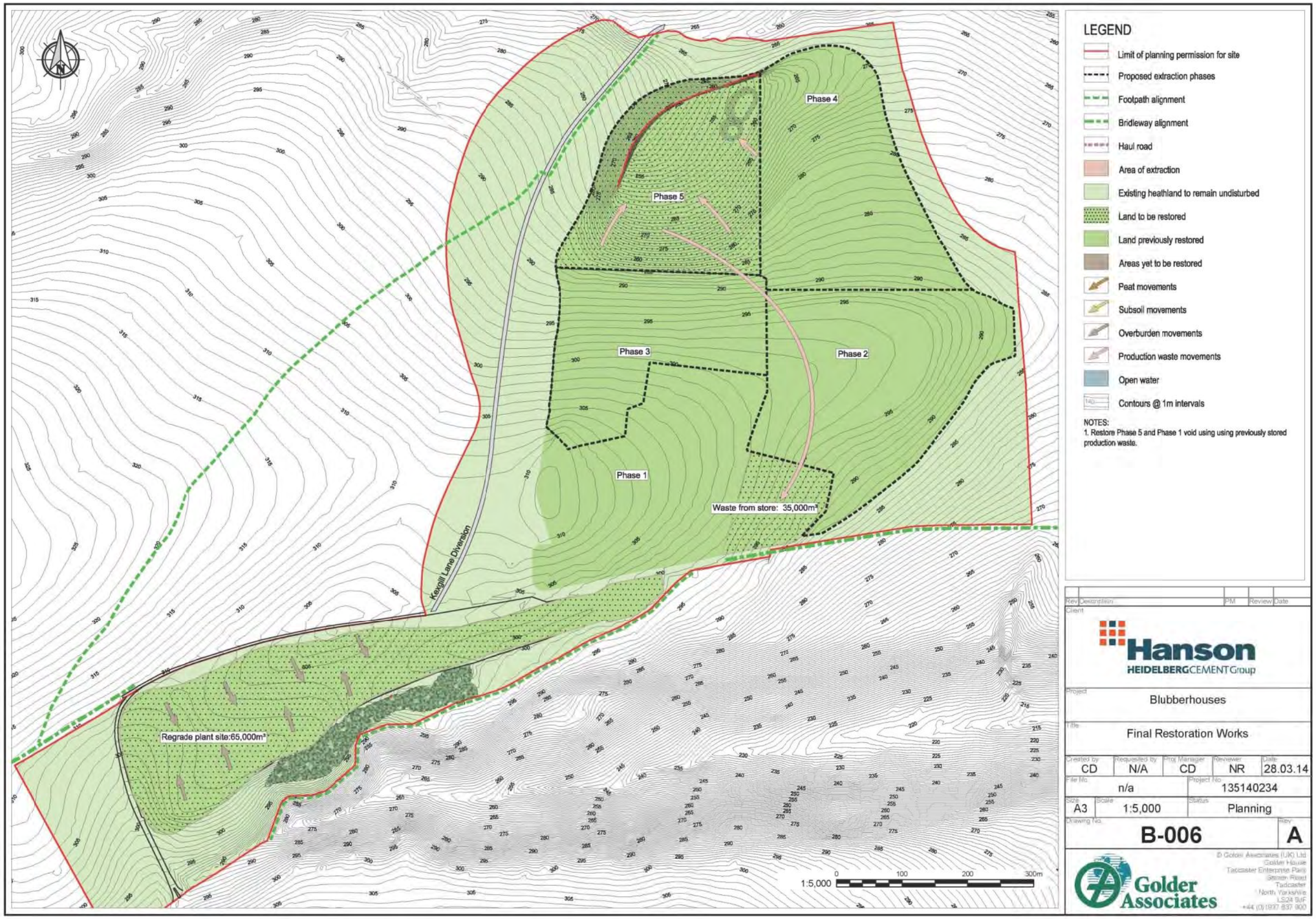
Created by	Requested by	Proj Manager	Reviewer	Date
CD	N/A	CD	NR	26.03.14

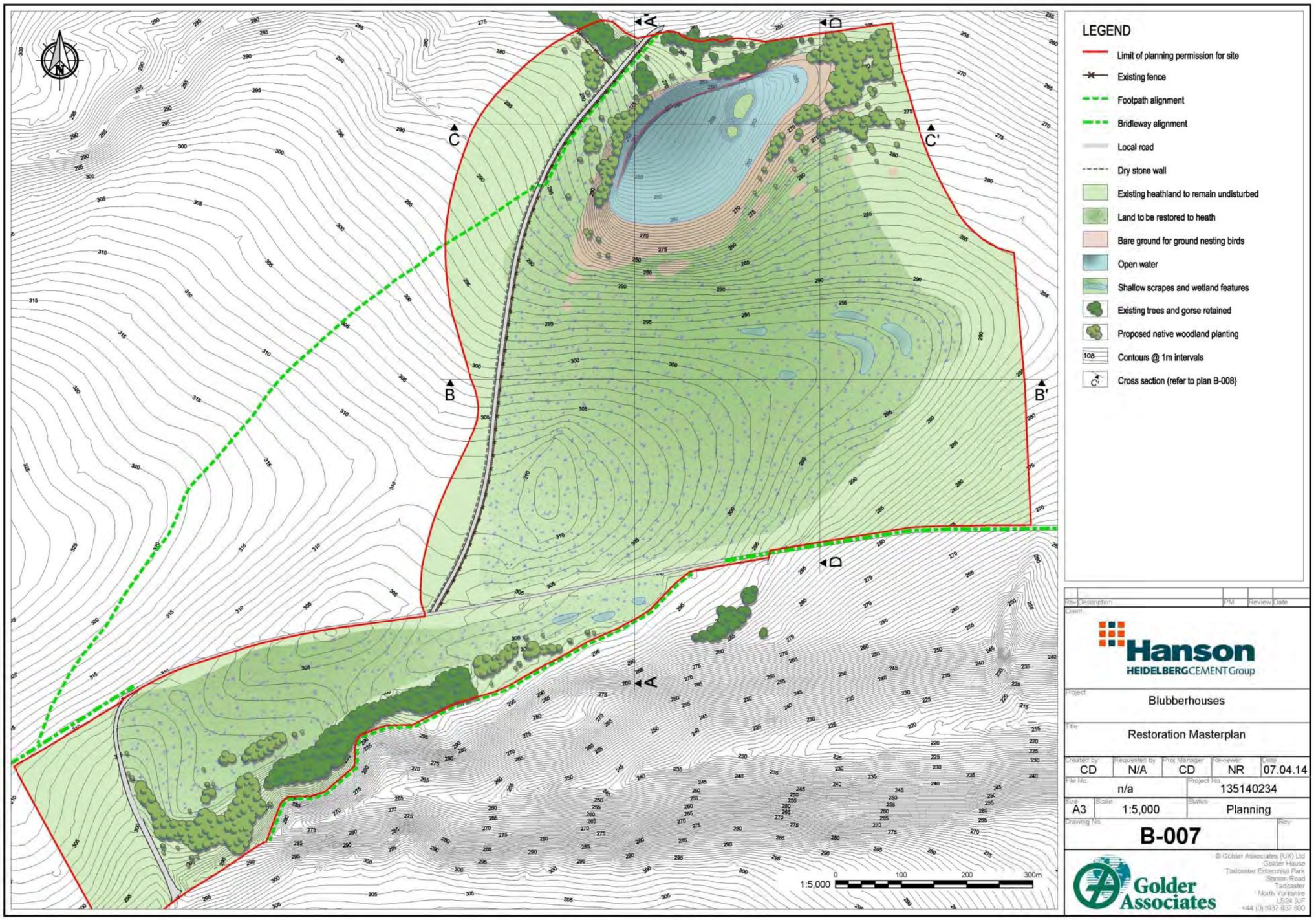
File No.	Project No.
n/a	135140234

Size	Scale	Status
A3	1:5,000	Planning

Drawing No.: B-005 Rev: A

Golder Associates
Golder House
Tadcaster Enterprise Park
Station Road
Tadcaster
North Yorkshire
LS24 9JF
+44 (0) 1937 837 900


Phase 4
Phase 5
Phase 3
Phase 2
Phase 1
Waste from store: 35,000m³
Regrade plant site:65,000m³
Kexgill Lane Diversion
1:5,000
0
100
200
300m
LEGEND
Limit of planning permission for site
Proposed extraction phases
Footpath alignment
Bridleway alignment
Haul road
Area of extraction
Existing heathland to remain undisturbed
Land to be restored
Land previously restored
Areas yet to be restored
Peat movements
Subsoil movements
Overburden movements
Production waste movements
Open water
Contours @ 1m intervals
NOTES:
1. Restore Phase 5 and Phase 1 void using using previously stored production waste.
Rev Description PM Review Date
Client
Hanson
HEIDELBERGCEMENT Group
Project
Blubberhouses
Title
Final Restoration Works
Created by CD
Requested by N/A
Proj Manager CD
Reviewer NR
Date 28.03.14
File No. n/a
Project No. 135140234
Size A3
Scale 1:5,000
Status Planning
Drawing No. B-006
Rev A
© Golder Associates (UK) Ltd
Golder House
Tadcaster Enterprise Park
Skinner Road
Tadcaster
North Yorkshire
LS24 9JF
+44 (0) 1937 837 900
Golder Associates


A
A'
B
B'
C
C'
D
D'
N
LEGEND
Limit of planning permission for site
Existing fence
Footpath alignment
Bridleway alignment
Local road
Dry stone wall
Existing heathland to remain undisturbed
Land to be restored to heath
Bare ground for ground nesting birds
Open water
Shallow scrapes and wetland features
Existing trees and gorse retained
Proposed native woodland planting
108 Contours @ 1m intervals
Cross section (refer to plan B-008)
1:5,000
0 100 200 300m
Rev Description PM Review Date
Client
Hanson HEIDELBERGCEMENT Group
Project
Blubberhouses
Title
Restoration Masterplan
Created by CD
Requested by N/A
Proj Manager CD
Reviewer NR
Date 07.04.14
File No. n/a
Project No. 135140234
Size A3
Scale 1:5,000
Status Planning
Drawing No. B-007
Rev
© Golder Associates (UK) Ltd
Golder House
Tadcaster Enterprise Park
Station Road
Tadcaster
North Yorkshire
LS24 9JF
+44 (0)1937 837 800
Golder Associates

APPENDIX 1 - PEAT MANAGEMENT PLAN

<table>
<tr><td>Subject</td><td>Stripping and Storage and re-laying of Peat</td></tr>
<tr><td>Peat Conditions</td><td>Two soil types within the quarry:

Soil Type 1 - comprises a peat layer which overlies a brown, very prominently mottled, clay textured upper subsoil which in turn overlies a further prominently mottled brown/yellowish brown clay textured lower subsoil. Physical characteristics as follows:

<table>
<tr><th colspan="2">Peat</th></tr>
<tr><td>Texture</td><td>Peat (Usually Von Post Scale H9)</td></tr>
<tr><td>Colour</td><td>Variable but generally 7.5YR3/2, dark brown or 7.5YR3/1, very dark brown</td></tr>
<tr><td>Stones</td><td>Stoneless</td></tr>
<tr><td>Roots</td><td>Very many fine to medium</td></tr>
<tr><td>Calcium carbonate</td><td>Non-calcareous</td></tr>
<tr><td>Manganese</td><td>None</td></tr>
<tr><td>Boundary</td><td>Abrupt, smooth</td></tr>
<tr><td>Depth</td><td>28 cm (Median thickness 28 cm, range 10 to 120 cm)</td></tr>
</table>

Soil Type 2 - similar peat layer to that of Soil Type 1 but this layer usually overlies loamy coarse sand textured subsoil but occasionally a coarse sandy clay loam textured material is evident.
Physical characteristics as follows:

<table>
<tr><td>Texture</td><td>Peat (Usually Von Post Scale H9)</td></tr>
<tr><td>Colour</td><td>Variable but generally 7.5YR3/2, dark brown or 7.5YR3/1, very dark brown</td></tr>
<tr><td>Stones</td><td>Stoneless</td></tr>
<tr><td>Roots</td><td>Very many fine to medium</td></tr>
<tr><td>Calcium carbonate</td><td>Non-calcareous</td></tr>
<tr><td>Manganese</td><td>None</td></tr>
<tr><td>Boundary</td><td>Abrupt, smooth</td></tr>
<tr><td>Depth</td><td>46 cm (Median thickness 46 cm, range 18 to 120 cm)</td></tr>
</table>
</td></tr>
<tr><td>Excavation and re-use volume estimates and reuse requirements</td><td>See Figures B002 - B007
Restoration requirements are to provide medium for re-establishment of heath land.</td></tr>
<tr><td>Classification of excavated material</td><td>The peat to be stripped and re-used is largely classified as Von Post H9; generally amorphous black peat with little or no visible plant remains</td></tr>
<tr><td>Use of peat in restoration</td><td>The peat will be used as the final layer for restoration over most of the worked quarry. It is anticipated that it will be re-laid at around 30cm depth overall with deeper pockets in localised areas to create peat hollows that will be formed within clay lined basins

The peat is suitable for restoration purpose being generally the upper layer currently with little use of deep peat. Most the peat is considered to be Von Post H9.

The habitats to be created on restoration include large areas of heather</td></tr>
</table>

	dominated vegetation with pockets of wet heath an cotton grass dominated vegetation
Handling excavated materials	Peat will be stripped and re-laid using DEFRA best practice for soil handling i.e. shovel and truck, no running over peat or sub-soil; peat for storage will go into mounds of no more 1.5m height and will be sown with a simple bent fescue mix to provide a stable surface Once restoration is possible, some turves will be recovered and used to provide sources of seed and vegetative material for colonisation onto the restored peat surface
Temporary storage	Stripping of areas to be quarried will generate peat that will require temporary storage The peat is to be stripped and stored as two layers; Upper 15cm to be stripped and stored Rest of profile to be stripped and stored All storage will be short-term whilst the area for restoration is brought up to level by infilling with material from ext phase of quarrying

Viewpoint 11: Existing view looking south from Dales Way Link footpath near Burnt House and Brandrith Barn.

Viewpoint 12:Existing view looking southeast from Dales Way Link footpath adjacent to Spittle Ings farmhouse.

Extent of mineral extract

Proposed realignment Kex Gill Road

Hanson HEIDELBERGCEMENT Group

Golder Associates

Client	Hanson
Project	Blubberhouses Quarry
Title	Photomontage Views Viewpoint 11&12

Created by	Requested by	Proj Manager	Reviewer	Date
JW	CD	CD	NR	28/03/12

File No.	Project No.
n/a	12514540031

Size	Scale	Status
A3	N/A	For Comment

Figure No.	Rev
B-001	-

Viewpoint 13: Existing view looking south from Kex Gill road.

Viewpoint 13: Proposed view during Phase 5 extraction.

Hanson HEIDELBERGCEMENT Group

Golder Associates

Client	Hanson UK
Project	Blubberhouses Quarry
Title	Photomontage Views Viewpoint 13

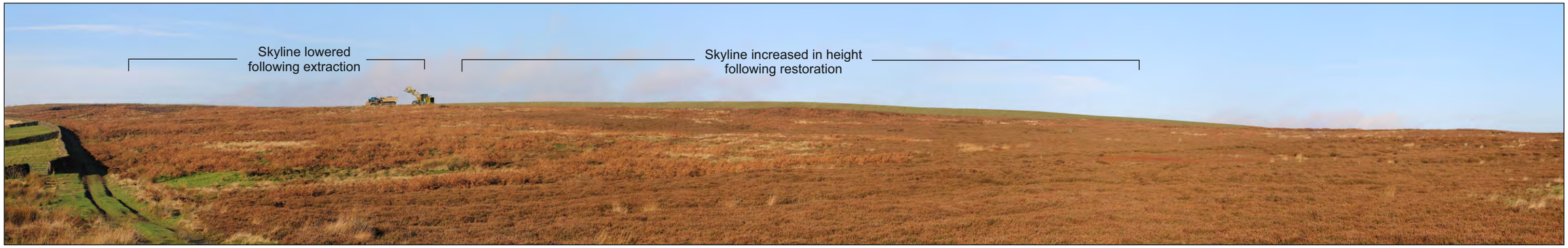
Created by	Requested by	Proj Manager	Reviewer	Date
JW	CD	CD	NR	03/07/13

File No.	Project No.
n/a	13514540234

Size	Scale	Status
A3	N/A	For Comment

Figure No.	Rev
B-002	A

Viewpoint 19: Existing view from bridleway looking northwest.



Viewpoint 19: Proposed view during Phase 5 extraction.

Hanson HEIDELBERGCEMENT Group

Golder Associates

Client	Hanson UK
Project	Blubberhouses Quarry
Title	Photomontage Views Viewpoint 19

Created by	Requested by	Proj Manager	Reviewer	Date
JW	CD	CD	NR	03/06/13

File No.	Project No.
n/a	13514540234

Size	Scale	Status
A3	N/A	For Comment

Figure No.	Rev
B-003	A