

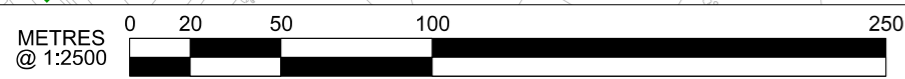
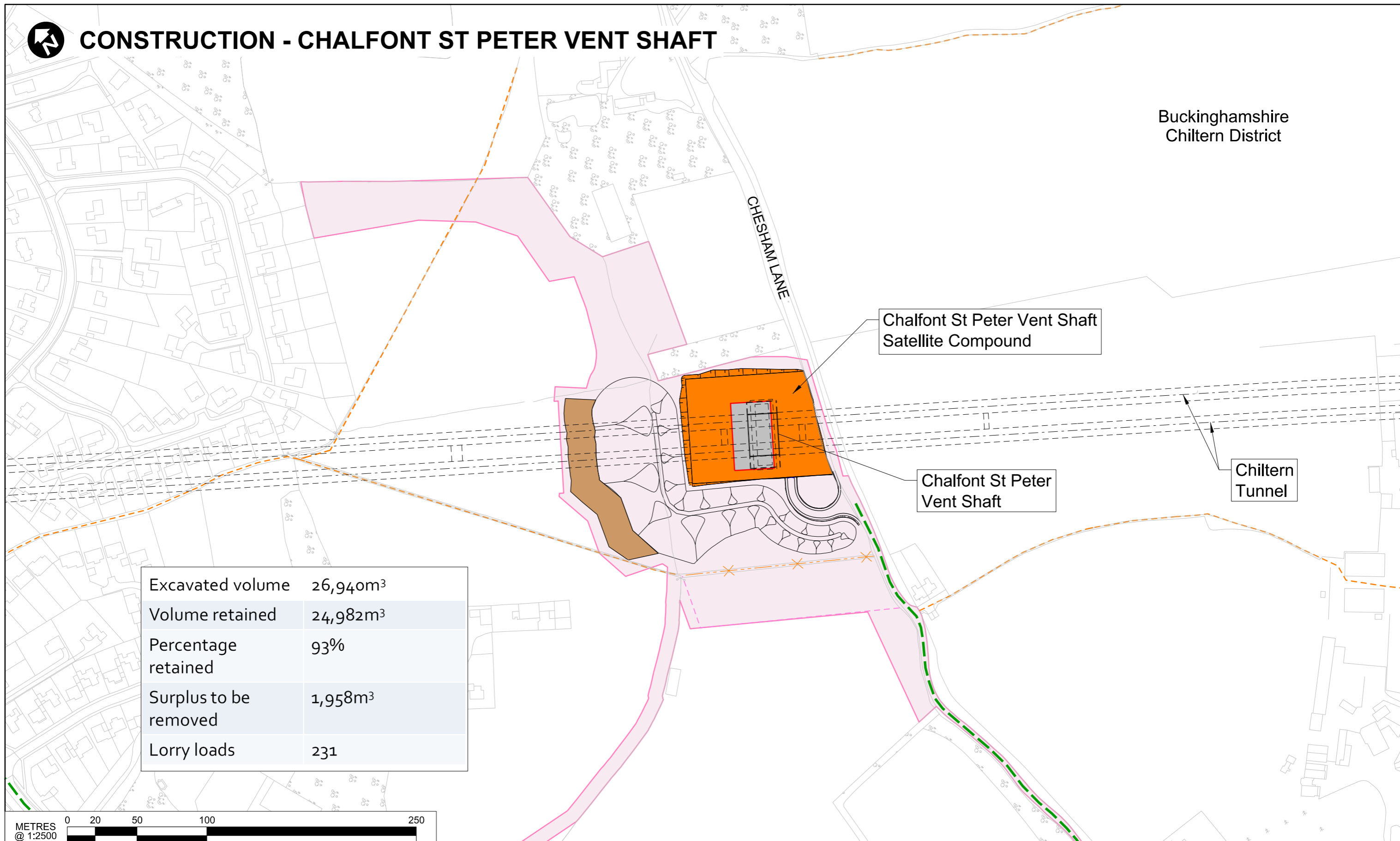
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CONSTRUCTION - CHALFONT ST PETER VENT SHAFT

Buckinghamshire
Chiltern District



P00.0	FIRST DRAWN			

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Legends/Notes: Satellite construction compound Main construction compound Tunnel portal Rail alignment formation Tunnels external extent Rail alignment Engineering earthworks Landscape earthworks Land potentially required during construction	Temporary site access route / haul route Construction traffic route Existing public right of way (PRoW) New, diverted or realigned PRoW Stopped-up PRoW Temporary PRoW Temporary material stockpile
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 Registered office:
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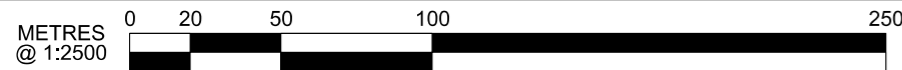
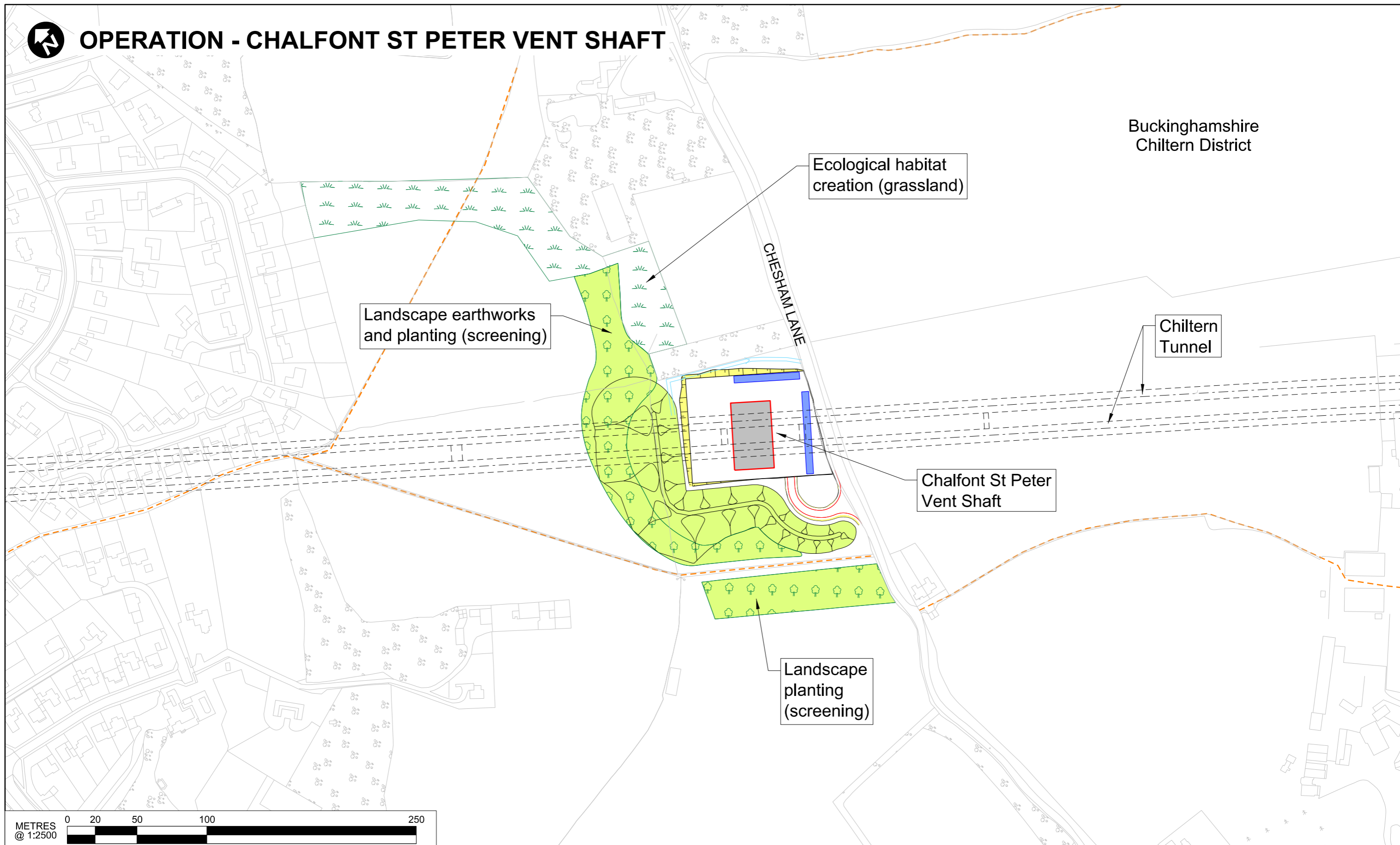
Zone	Country South
Design Stage	DESIGN-FOR-PETITION
Drawing Title	Chiltern District Council Petition 0416 - Construction Phase Chalfont St Peter Vent Shaft

Project/Contract	Country South Design		
Discipline/Function	Environmental		
Drawn	Checked	Approved	
TB			
Date	Scale	Size	
03/07/2015	AS SHOWN	A3	
Drawing No.	Rev.		
C222-ATK-EV-DPL-020-050511-PET000416	P00.0		



OPERATION - CHALFONT ST PETER VENT SHAFT

Buckinghamshire
Chiltern District



P00.1	FIRST DRAWN	-			
Description	Drawn	Checked	Con App	HS2 App	

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Legends/Notes:	
	Depot, station, headhouse or portal building
	Tunnel portal
	Balancing pond
	Land drainage area
	Replacement floodplain storage
	Landscape mitigation planting (scrub / woodland)
	Grassed areas
	Engineering earthworks
	Landscape earthworks
	Rail alignment formation
	Grassland habitat creation
	Tunnels external extent
	Rail alignment
	Ditches - new
	Hedgerow habitat creation
	HS2 Access road
	Existing public right of way (PRoW)
	New, diverted or realigned PRoW
	Stopped-up PRoW

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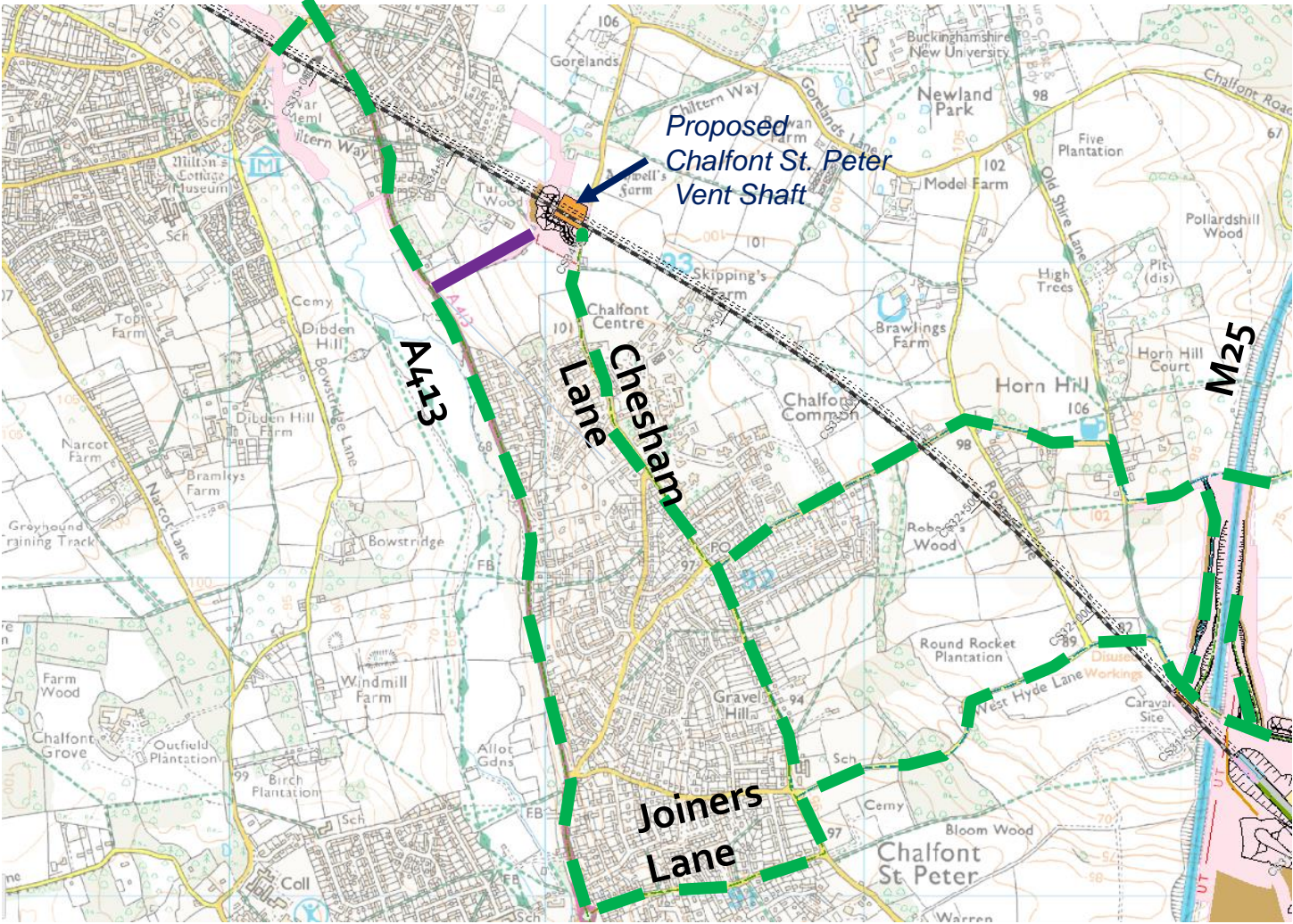
Creator/Originator
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Zone	Country South	
Design Stage	DESIGN-FOR-PETITION	
Drawing Title	Chiltern District Council Petition 0416 - Proposed Scheme Chalfont St Peter Vent Shaft	

Project/Contract			Country South Design		
Discipline/Function			Environmental		
Drawn	Checked	Approved			
TB					
Date	Scale	Size			
03/07/2015	AS SHOWN	A3			
Drawing No.					Rev.
C222-ATK-EV-DPL-020-060511-PET000416					P00.1

P7610

Vent Shaft – Chalfont St. Peter – Construction Traffic Route Proposed Scheme & Petitioner's Alternative Proposal



Proposed
HS2
construction
traffic route

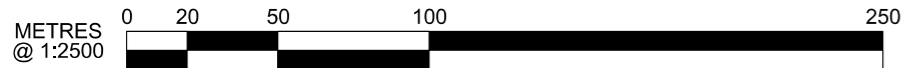
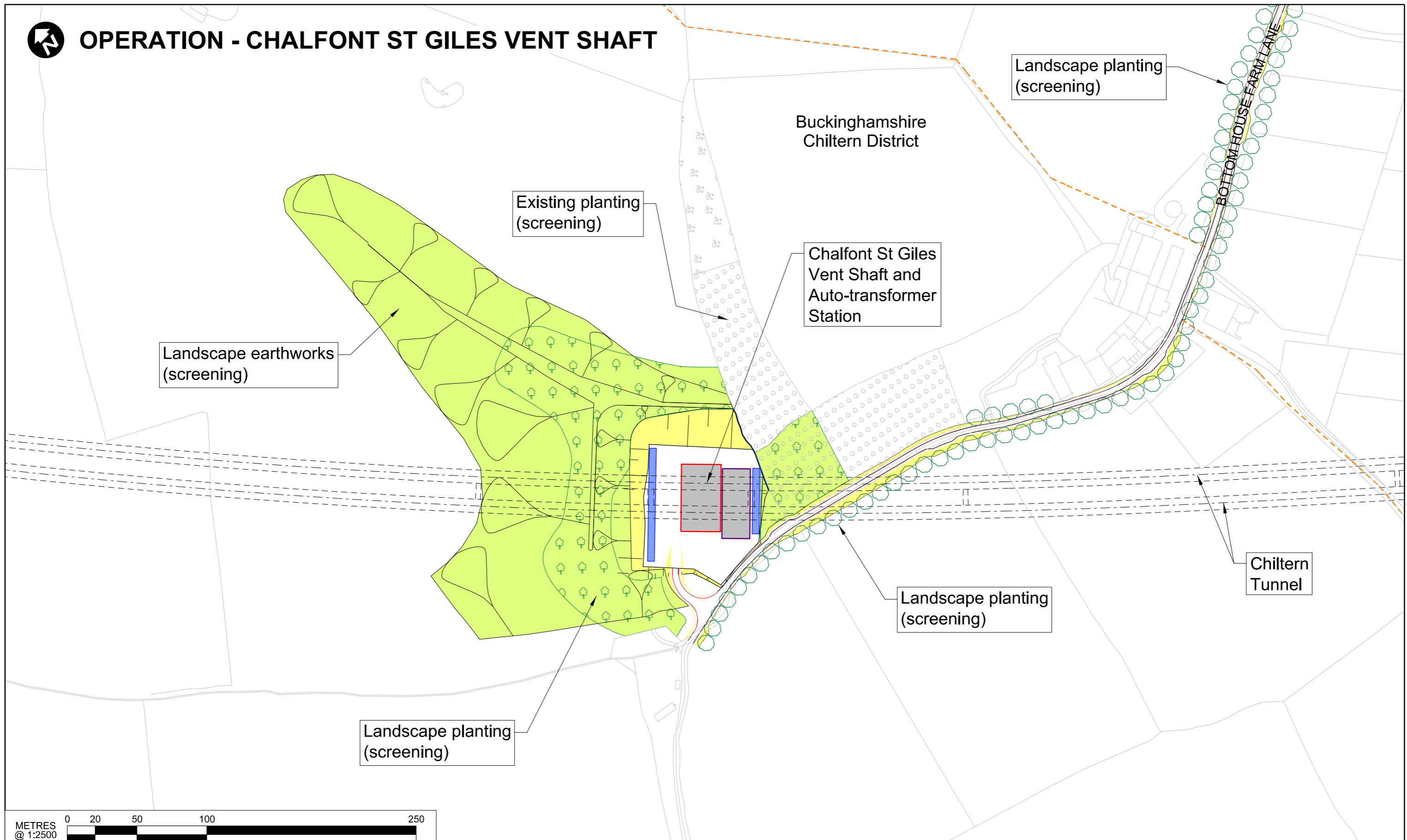
Alternative
haul road
requested
by Bucks CC

Vent Shaft – Chalfont St. Peter – Comparison Petitioner’s Alternative Proposal

	Petitioner’s Alternative Proposal - New Haul Route
Traffic	<ul style="list-style-type: none"> • Removes construction traffic through Chalfont Common / Chalfont St Peter along Chesham Lane • Removes significant increases in traffic related severance for non-motorised users movements at Chesham Lane / Denham Lane, between Joiners Lane and Chalfont St Peter Vent Shaft Satellite Compound (major adverse effect); and Joiners Lane (major adverse effect); both likely significant residual effects during construction. • Highway works would be required to facilitate right turn from A413 onto haul road (i.e. ghost island). • Access road would be steep (on 8% gradient) • The access road results in an approximately 18,000 – 20,000 m3 of excavation material. This would be stored on site to avoid between 4000-5000 additional lorry movements (2-way). • Potential dis-benefit in comparison with the Proposed Scheme with regard to junction operation and delay to general traffic and bus services on the A413, between Joiner’s Lane and the new haul/access road.
Environmental	<ul style="list-style-type: none"> • Benefits for local residents by removing construction noise and air quality from HGV’s and risk of conflict of residents with construction traffic. • Loss of further agricultural land of Grade 3a. • Introduces new infrastructure into an area characterised by farmland interspersed with villages and small towns. Likely adverse visual impacts during construction. • Likely adverse noise impacts to nearby residents during construction. • Mitigation may be required for likely construction impacts (e.g. dust generation).
Costs	<ul style="list-style-type: none"> • The road would result in construction cost of approximately £1m – this assumes that material arising from the access road is stored on site for reinstatement.



OPERATION - CHALFONT ST GILES VENT SHAFT



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 - Replacement floodplain storage
 - Landscape mitigation planting (scrub / woodland)
 - Grassed areas
 - Engineering earthworks
 - Landscape earthworks
 - Rail alignment formation
 - Grassland habitat creation
 - Tunnels external extent
 - Rail alignment
 - Ditches - new
 - Hedgerow habitat creation
 - HS2 Access road
 - Existing public right of way (PRoW)
 - New, diverted or realigned PRoW
 - Stopped-up PRoW

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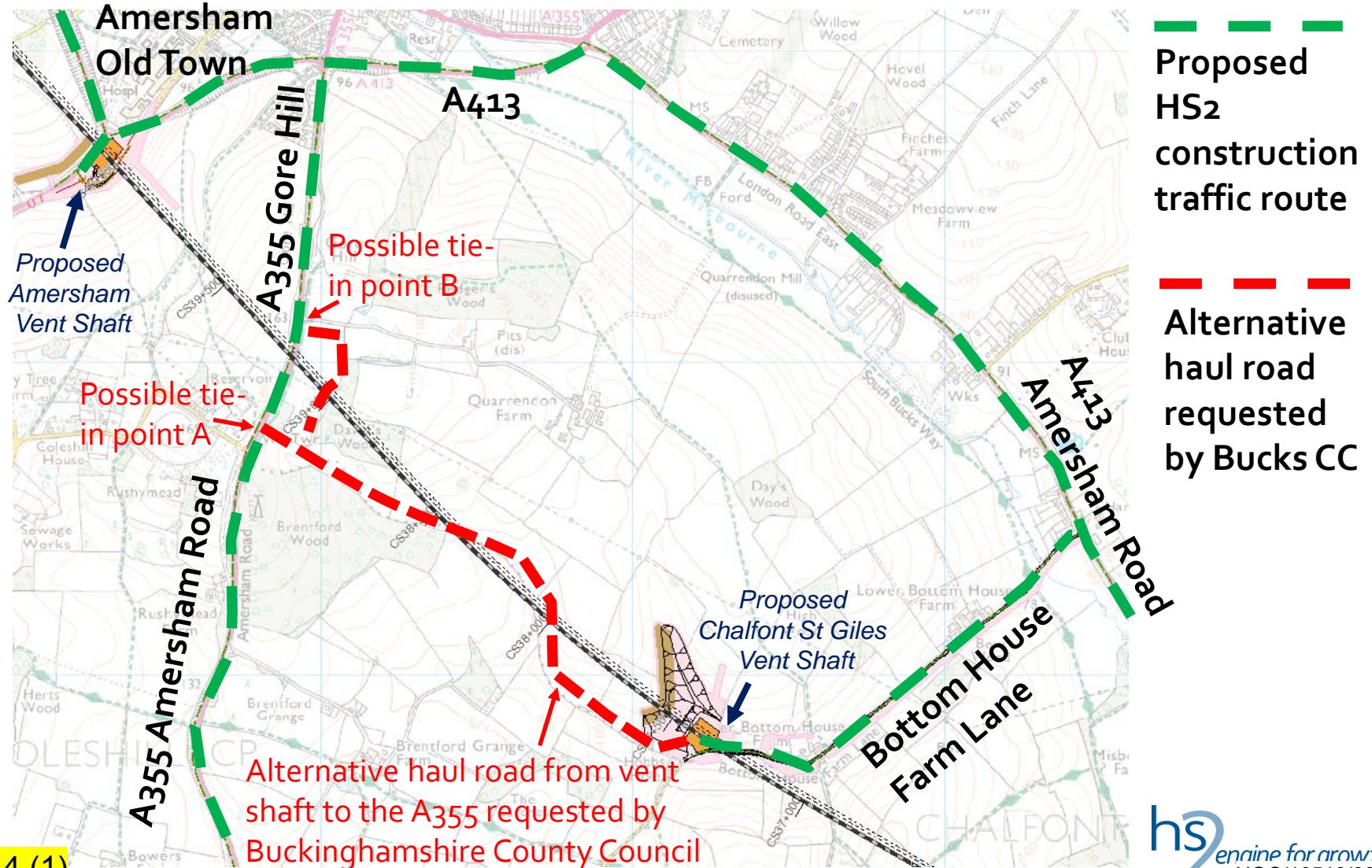
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Design Stage	DESIGN-FOR-PETITION	
Drawing Title	Chiltern District Council Petition 0416 - Proposed Scheme Chalfont St Giles Vent Shaft	

Project/Contract			Country South Design		
Discipline/Function			Environmental		
Drawn	Checked	Approved			
TB					
Date	Scale	Size			
03/07/2015	AS SHOWN	A3			
Drawing No.		Rev.			
C222-ATK-EV-DPL-020-060512-PET000416		P00.0			

P7613

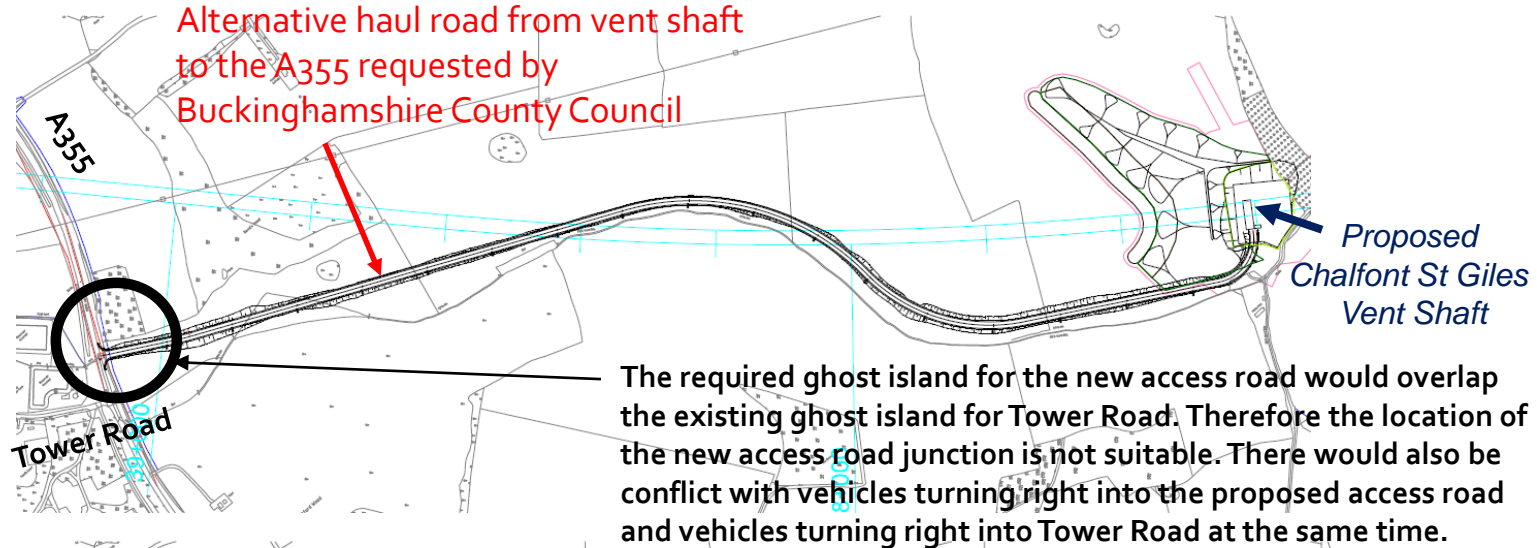
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Vent Shaft – Chalfont St. Giles – Construction Traffic Route Proposed Scheme & Petitioner's Alternative Proposal

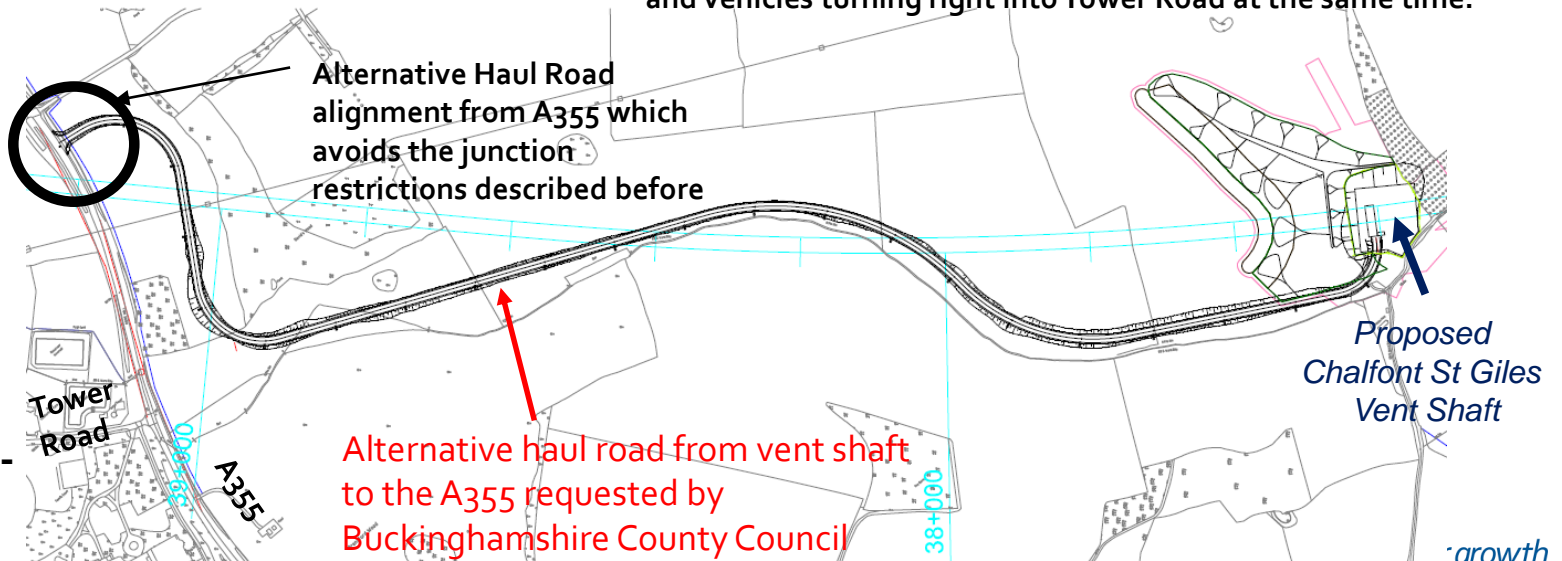


Vent Shaft – Chalfont St. Giles – Construction Traffic Route Petitioner's Alternative Proposal

Alternative haul road proposal:
Possible tie-in Point A



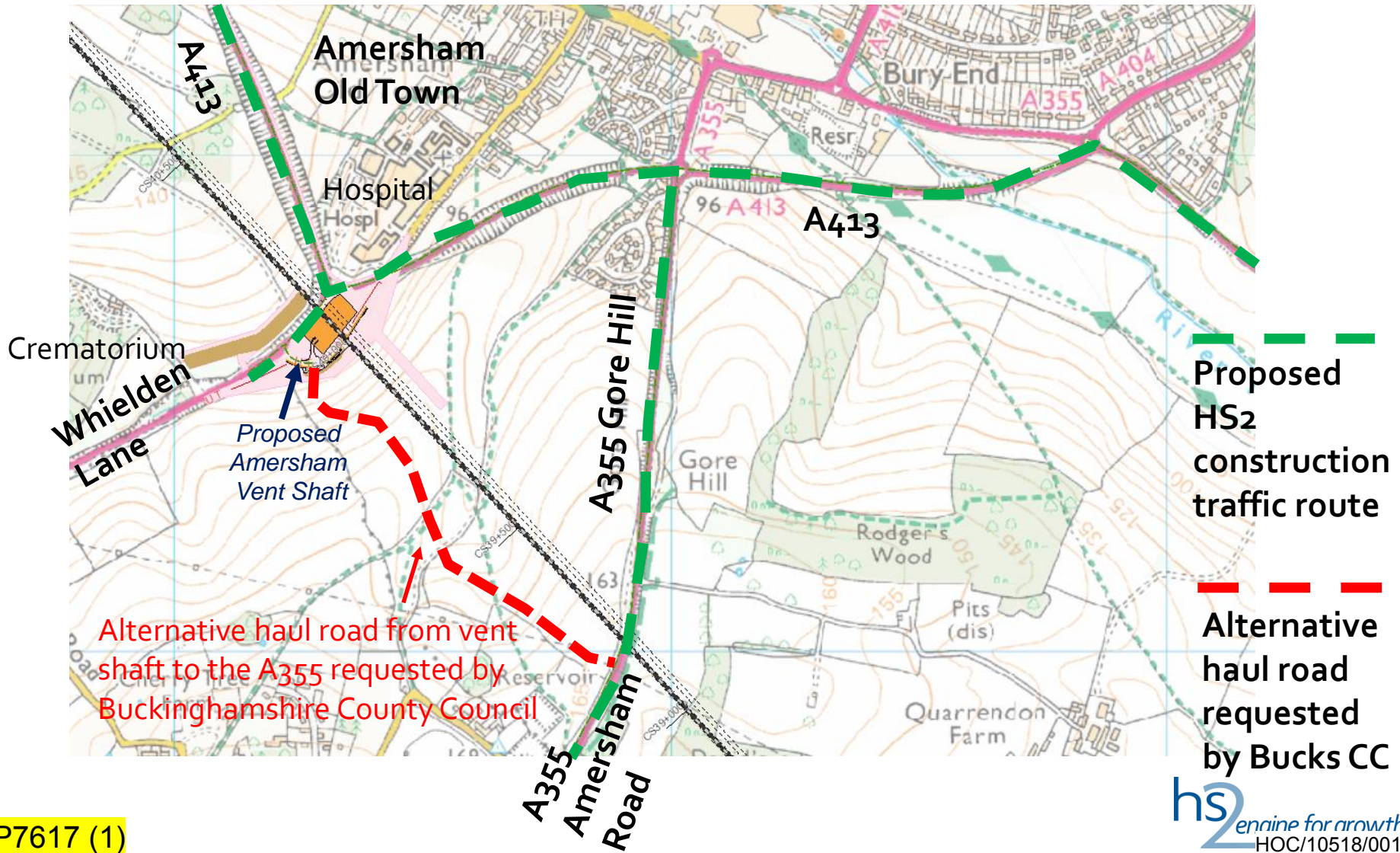
Alternative haul road proposal:
Possible tie-in Point B



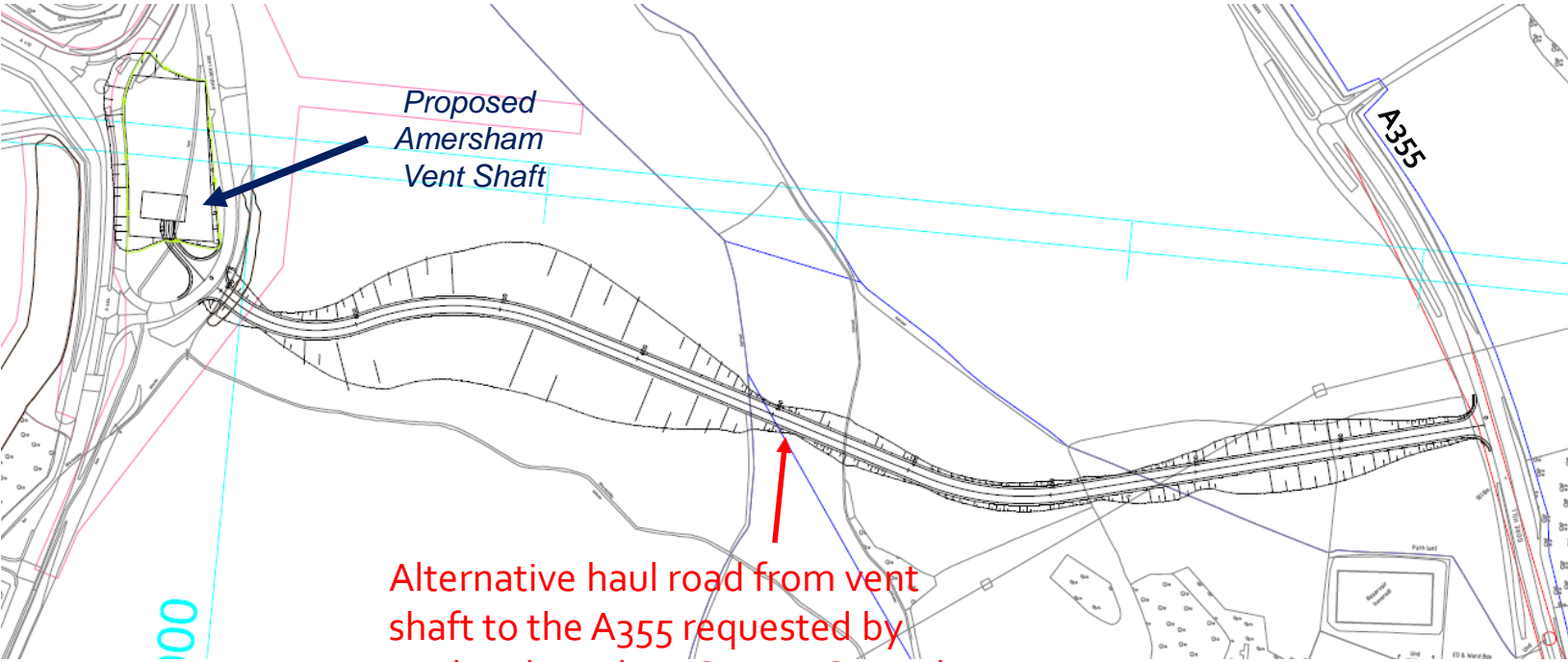
Vent Shaft – Chalfont St. Giles – Comparison Petitioner’s Alternative Proposal

	Petitioner’s Alternative Proposal – New Haul Route
Traffic	<ul style="list-style-type: none"> • Removes construction traffic from Bottom House Farm Lane. • Substandard spacing between junctions (tie in option A only) • Construction routes to the compound are restricted by ‘no right-turn’ (tie in option A only) • Potential dis-benefit in comparison with the Proposed Scheme with regard to junction operation (A413/A355 Gore Hill), and traffic related severance for pedestrians and cyclists on the A355 Gore Hill, between the A413 and the new haul/access road.
Environmental	<ul style="list-style-type: none"> • Removes loss of hedgerow along Bottom House Farm Lane, and temporary impact on listed buildings • Additional land required for road, and storage of excavated materials. • Haul route road would be closer to two ancient woodlands (Brentford and David’s woods). • Loss of Hedgerow field margins. • Increased visual impact to nearby receptors. • Increased visual impact within the AONB through the provision of the access route through existing agricultural land • Likely adverse noise impacts to nearby residents during construction. • Mitigation may be required for likely construction impacts (e.g. dust generation).
Costs	<ul style="list-style-type: none"> • Additional cost of £4.1m for tie in option A. • Additional cost of £5.0m for tie in option B

Vent Shaft – Amersham – Construction Traffic Route Proposed Scheme & Petitioner's Alternative Proposal



Vent Shaft – Amersham – Construction Traffic Route Petitioner's Alternative Proposal



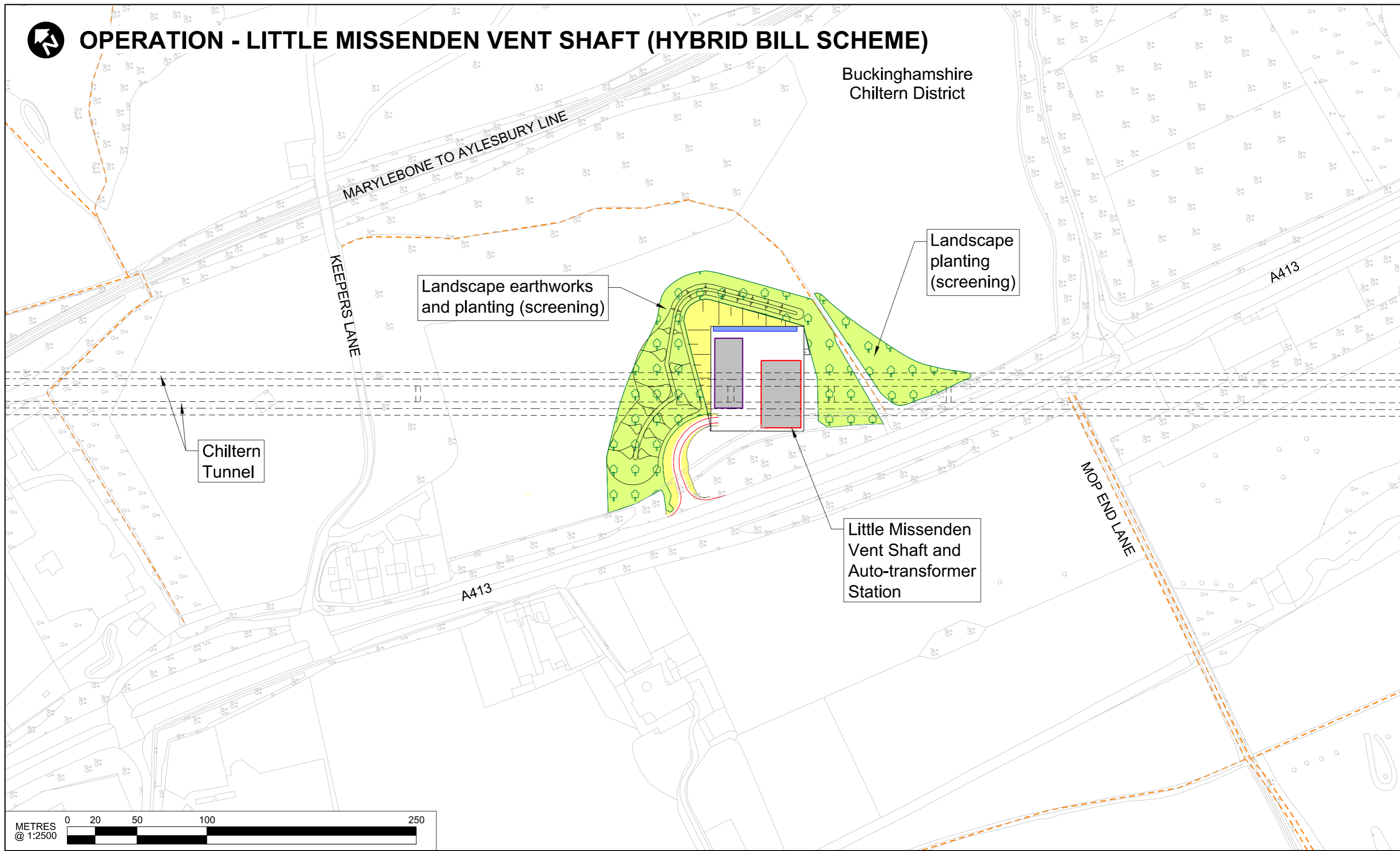
Alternative haul road from vent shaft to the A35 requested by Buckinghamshire County Council

Vent Shaft – Amersham – Comparison Petitioner’s Alternative Proposal

Petitioner’s Alternative Proposal – New Haul Route	
Traffic	<ul style="list-style-type: none"> • Potential benefit in comparison with the Proposed Scheme with regard to junction operation (A413 / A404 Whielden Lane, A404 Whielden Lane / Whielden Street, A413 Amersham Road / A355 Gore Hill). • Potential benefit in comparison with the Proposed Scheme with regards to traffic severance for pedestrians and cyclists on A404 Whielden Lane and Whielden Street, between the Amersham Vent Shaft satellite compound and A413 Amersham Road. • Removes HGV turning movements from A404 Whielden Lane. • Introduction of HGV turning movements on the A355 Amersham Road. • The access road would be steep (on up to 10% gradient) • Reduced visibility at junction, verge will need to be cleared of vegetation
Environmental	<ul style="list-style-type: none"> • Benefits for local residents by removing construction noise and air quality from HGV’s and avoiding risk of conflict of residents with construction traffic. • The access road requires a deep cutting up to 15m deep. It is assumed that material arising from the access road is stored locally to avoid additional vehicle movements. • Increased mitigation may be required for likely construction impacts (e.g. dust generation). • Major adverse impact on AONB landscape with road in deep cutting and across dry valley. • Potential for loss of Ancient Woodland near Coldharbour Farm.
Costs	<ul style="list-style-type: none"> • Cost increase of approx. £4.0m

OPERATION - LITTLE MISSENDEN VENT SHAFT (HYBRID BILL SCHEME)

Buckinghamshire
Chiltern District

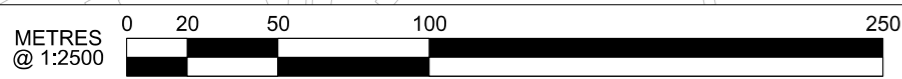


Chiltern Tunnel

Landscape earthworks and planting (screening)

Landscape planting (screening)

Little Missenden Vent Shaft and Auto-transformer Station



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Description	Drawn	Checked	Con App	HS2 App	

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 - Rail alignment
 - Ditches - new
 - Hedgerow habitat creation
 - HS2 Access road
 - Existing public right of way (PRoW)
 - New, diverted or realigned PRoW
 - Stopped-up PRoW
 - X

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Creator/Originator
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Zone	Country South		Project/Contract	Country South Design	
Design Stage	DESIGN-FOR-PETITION		Discipline/Function	Environmental	
Drawing Title	Chiltern District Council Petition 0416 Little Missenden Vent Shaft		Drawn	Checked	Approved
			TB		
			Date	Scale	Size
			03/07/2015	AS SHOWN	A3
			Drawing No.	Rev.	
			C222-ATK-EV-DPL-020-060514-PET000416	P00.1	