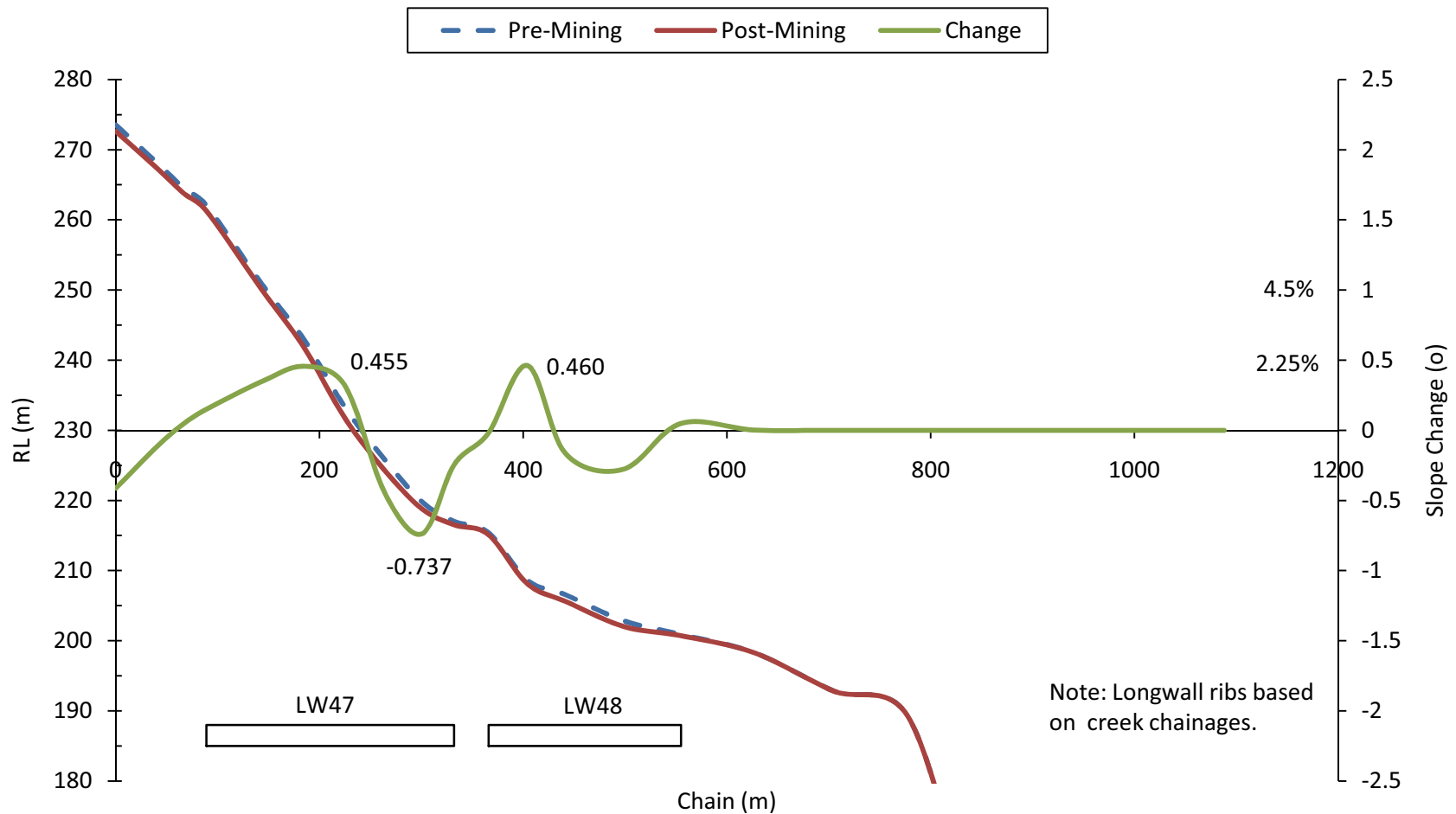
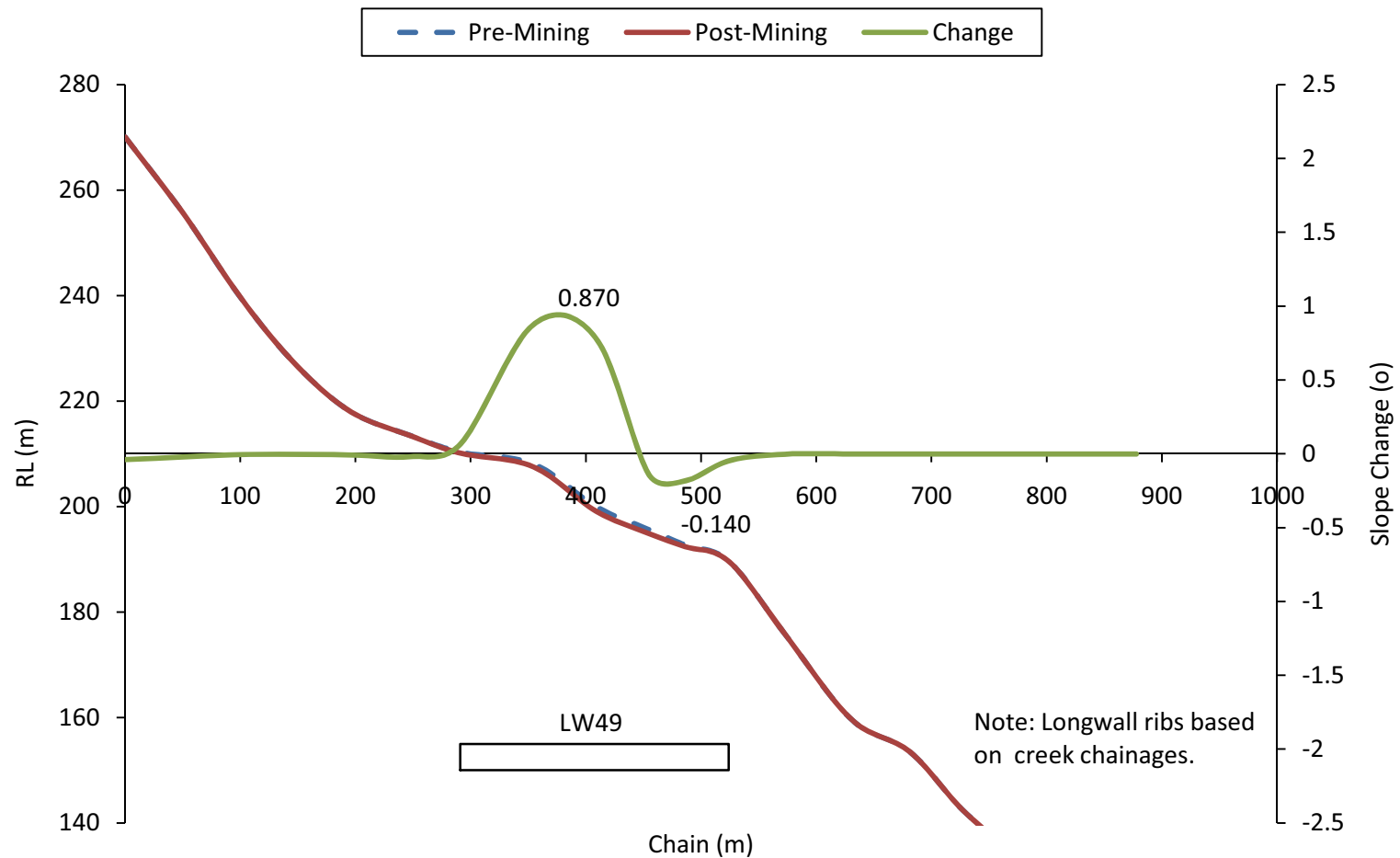




	Engineer:	S.Ditton	Client:	West Wallsend Colliery			
	Drawn:	S.Ditton		WWD-012/1			
	Date:	30.06.09	Title:	Pre-mining and Predicted Post-Mining Surface Profiles Along Bangalow Creek Northern Tributary Above LWs 47 to 48 due to Worst-case Mine Subsidence			
	Ditton Geotechnical Services Pty Ltd			Scale:	NTS		Figure No:



DgS



Engineer: S.Ditton

Drawn: S.Ditton

Date: 30.06.09

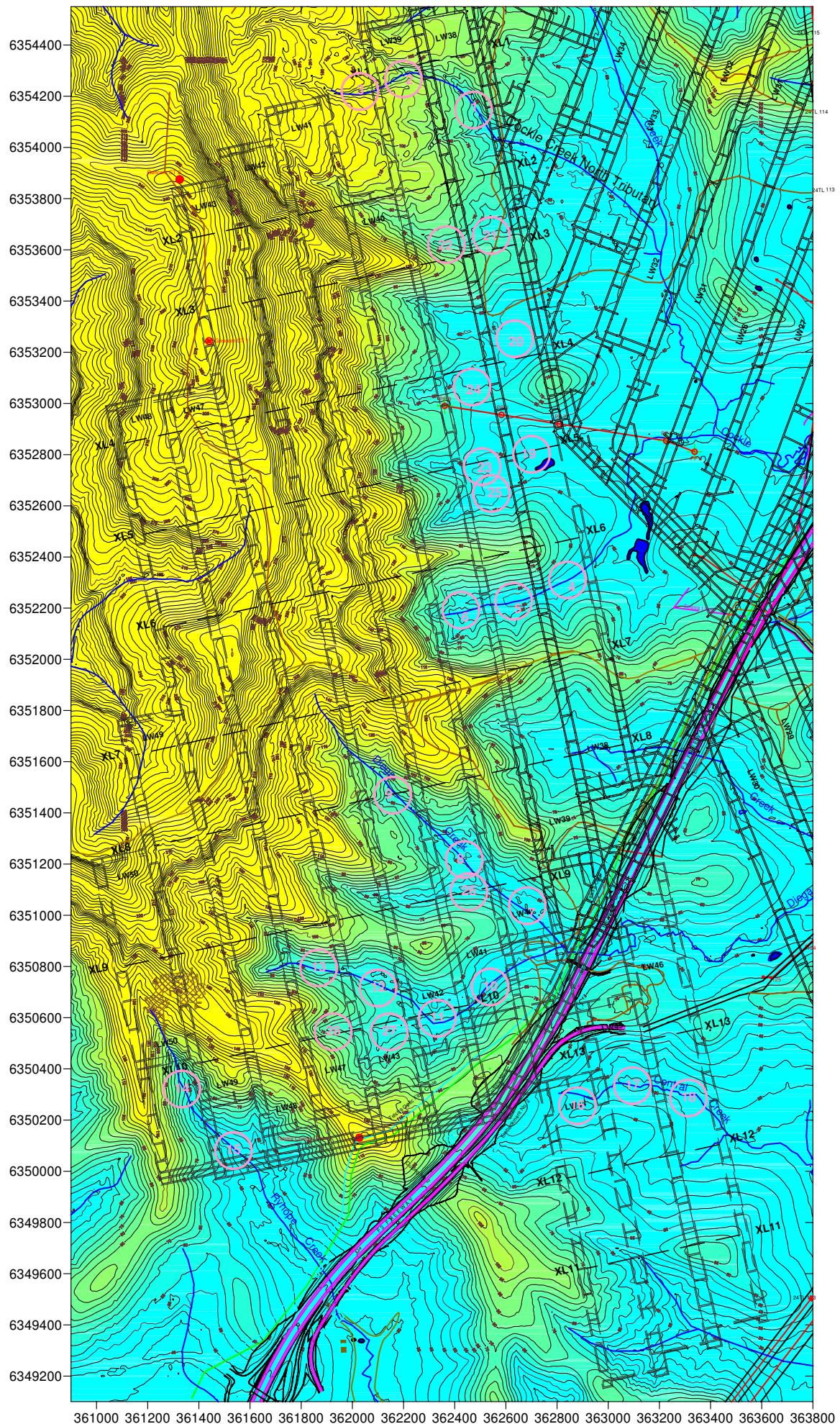
Ditton Geotechnical
Services Pty Ltd

Client: West Wallsend Colliery
WWD-012/1

Title: Pre-mining and Predicted Post-Mining Surface Profiles Along Bangalow Creek Southern
Tributary Above LWs 47 to 48 due to Worst-case Mine Subsidence

Scale: NTS

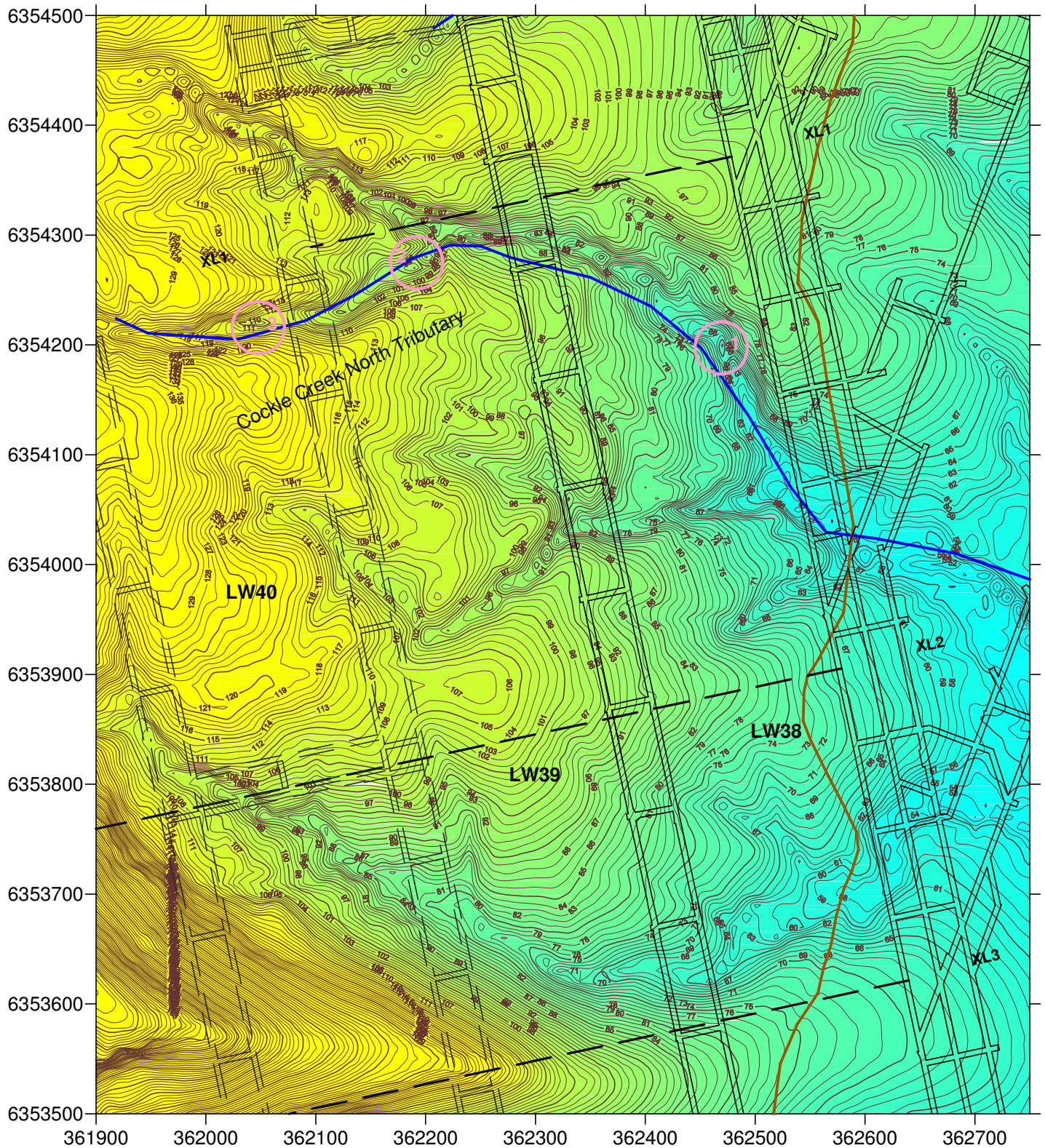
Figure No: 53h



Key:

- ① Potential Ponding Assessment Location No. (see Table 20a)

	Engineer:	S.Ditton	Client:	West Wallsend Colliery		
	Drawn:	S.Ditton		WWD-012/1		
	Date:	20.09.09	Title:	Post-Mining Ponding Assessment Locations Assessed For Western and Southern Domains		
	Ditton Geotechnical Services Pty Ltd		Scale:	1:2,000		Figure No:



Key:

①

Potential Ponding Area No. (see Table 20a)

DgS



Engineer: S.Ditton
 Drawn: S.Ditton
 Date: 02.10.08

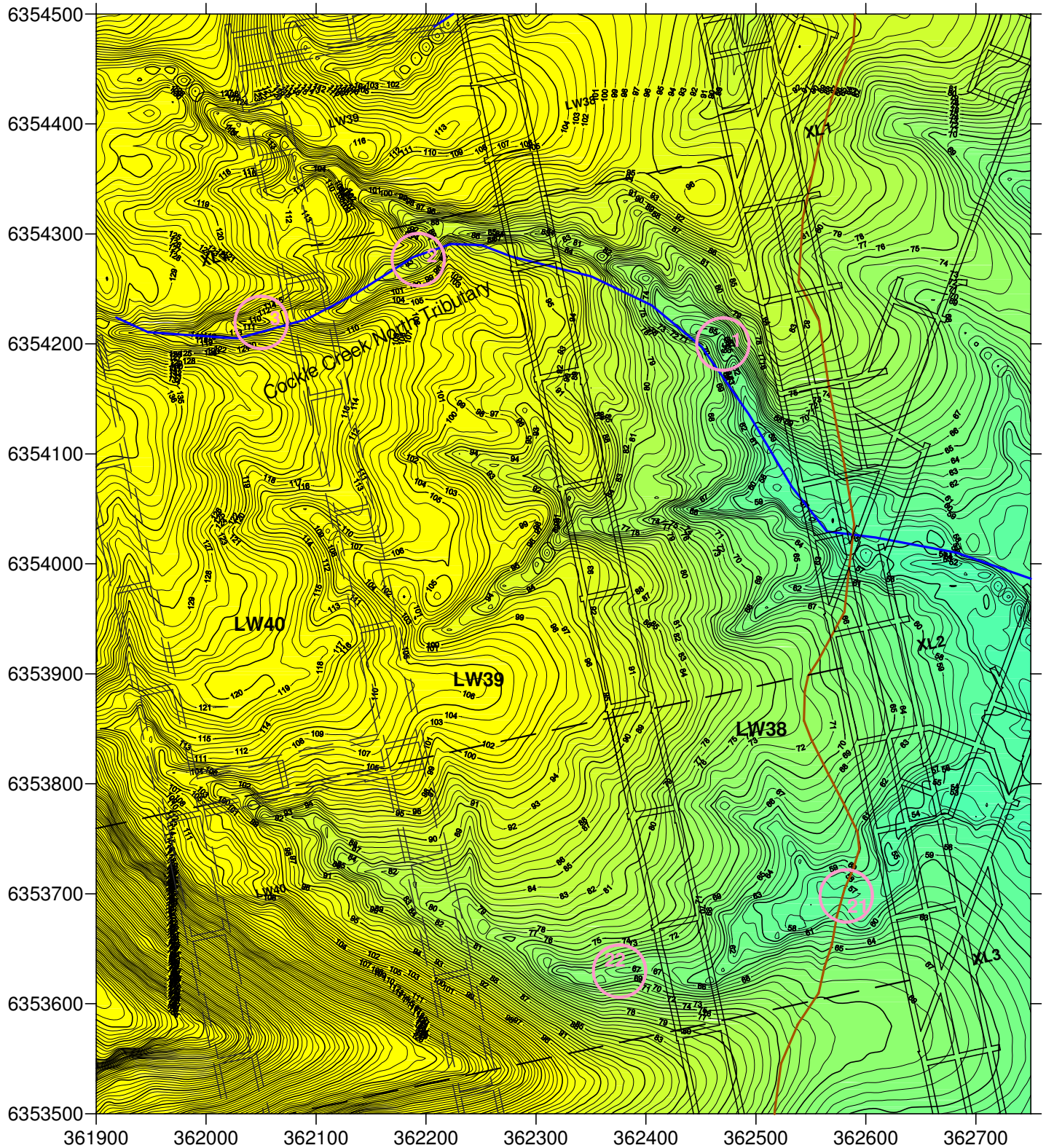
Ditton Geotechnical
 Services Pty Ltd

Client: West Wallsend Colliery
 WWD-012/1

Title: Pre-Mining Topography (1m Contours) for Ponding Assessment
 Along Cockle Creek North Tributary

Scale: 1:5,000

Figure No: 54.1a



Key:

①

Potential Ponding Area No. (see Table 20a)

DgS



Engineer: S.Ditton

Drawn: S.Ditton

Date: 30.06.09

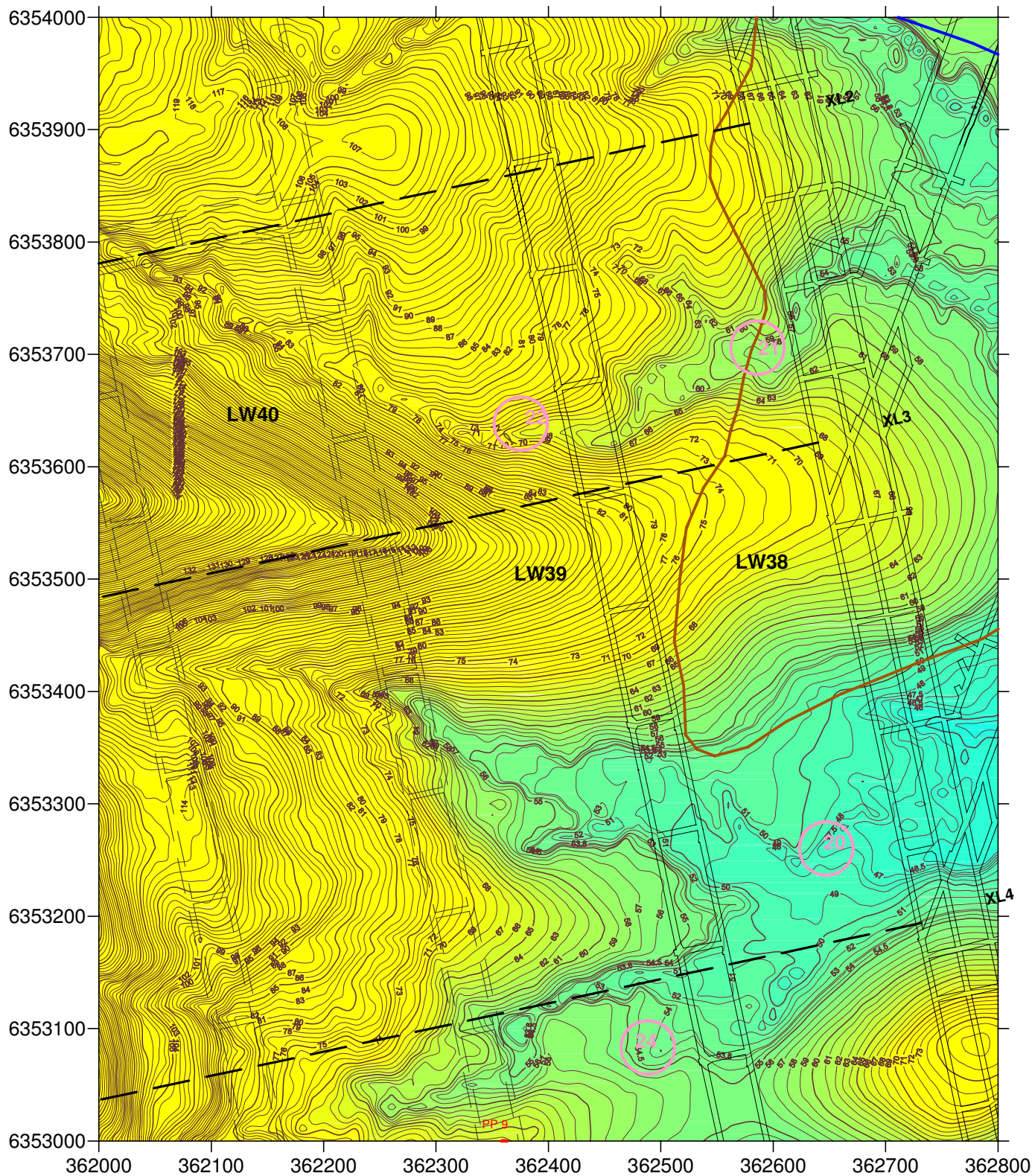
Ditton Geotechnical
Services Pty Ltd

Client: West Wallsend Colliery
WWD-012/1

Title: Post-Mining Topography (1m Contours) for Ponding Assessment
Along Cockle Creek North Tributary

Scale: 1:5,000

Figure No: 54a



Key:

①

Potential Ponding Area No. (see Table 20a or 20c)

DgS



Engineer: S.Ditton

Drawn: S.Ditton

Date: 30.06.09

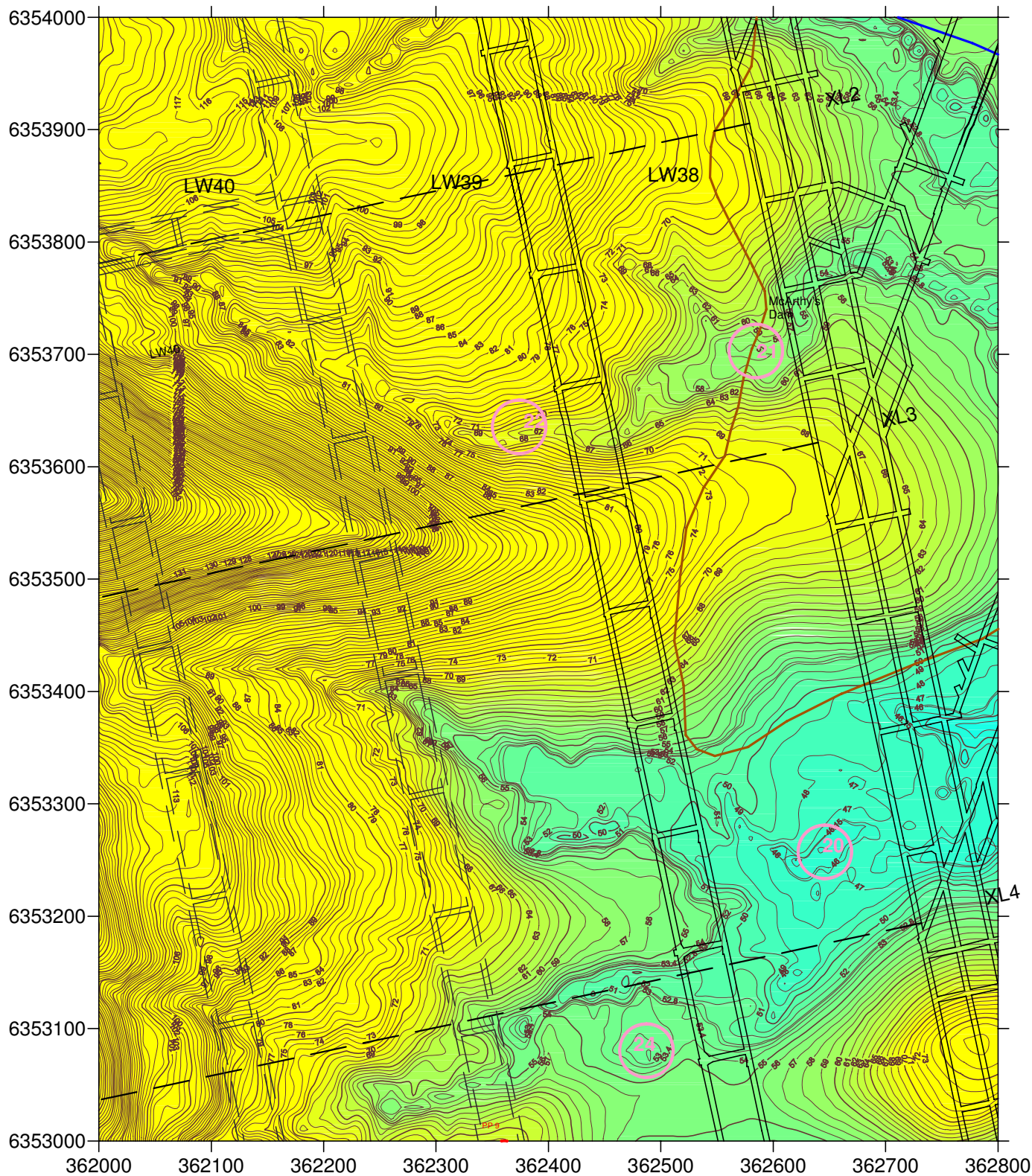
Ditton Geotechnical
Services Pty Ltd

Client: West Wallsend Colliery
WWD-012/1

Title: Pre-Mining Topography (1m Contours) for Ponding Assessment
Along Un-Named Tributaries near XL 4

Scale: 1:5,000

Figure No: 54.1ab



Key:

①

Potential Ponding Area No. (see Table 20a or 20c)

DgS

Engineer: S.Ditton

Drawn: S.Ditton

Date: 30.06.09

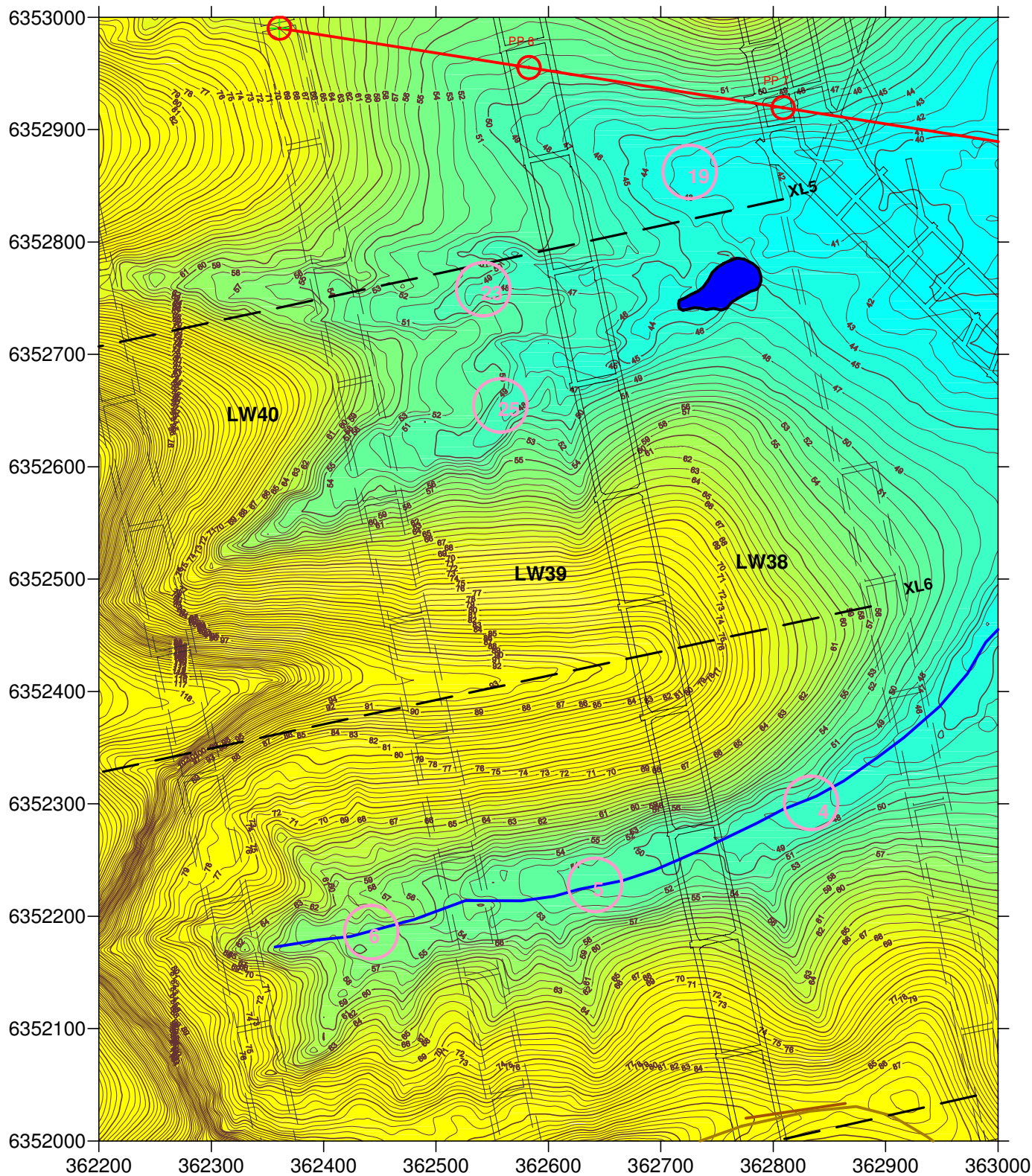
Ditton Geotechnical
Services Pty Ltd

Client: West Wallsend Colliery
WWD-012/1

Title: Post-Mining Topography (1m Contours) for Ponding Assessment
Along Cockle Creek South Tributary

Scale: 1:5,000

Figure No: 54ab



Key:

①

Potential Ponding Area No. (see Table 20a or 20c)

DgS

Engineer: S.Ditton

Drawn: S.Ditton

Date: 30.06.09

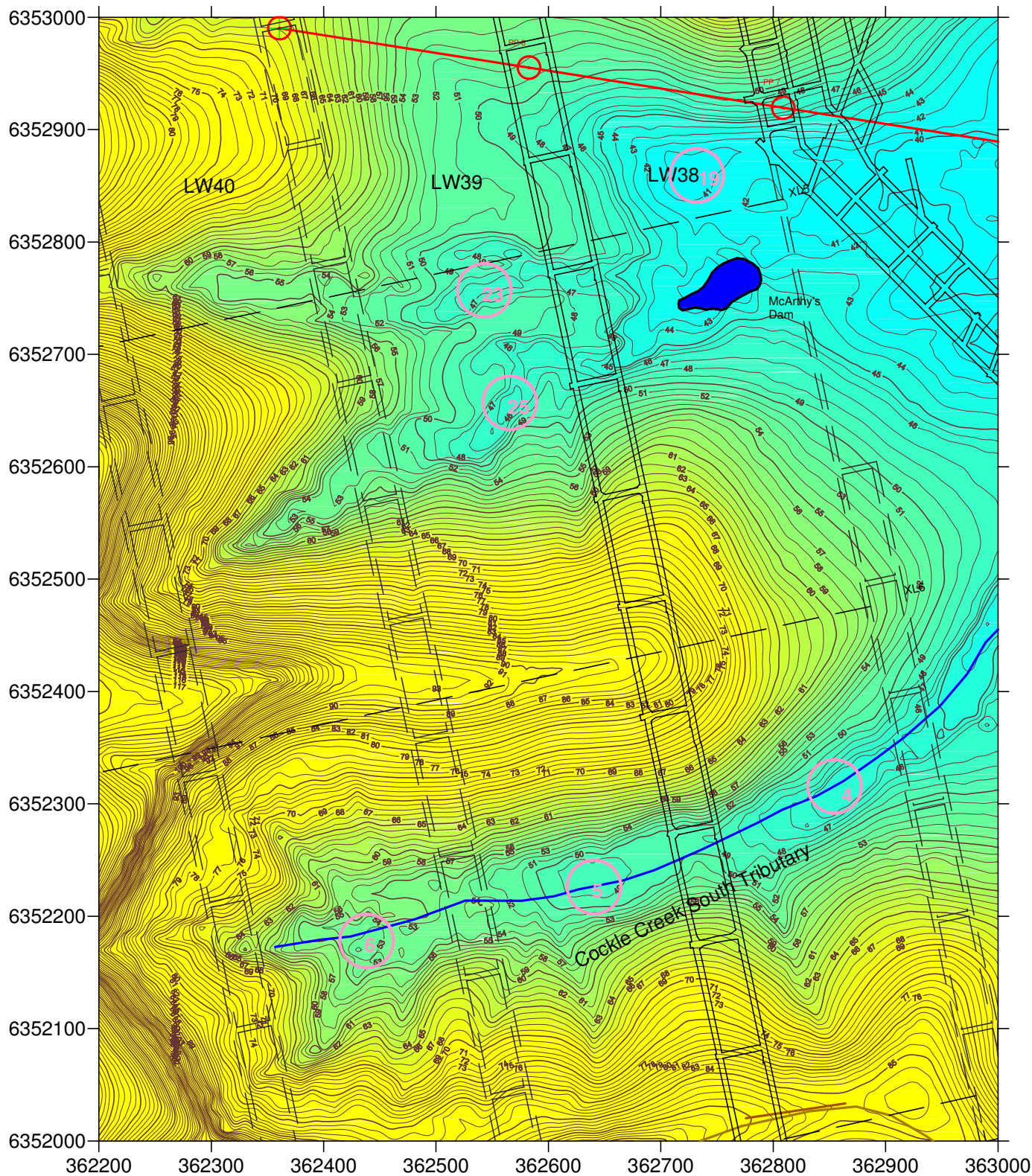
Ditton Geotechnical
Services Pty Ltd

Client: West Wallsend Colliery
WWD-012/1

Title: Pre-Mining Topography (1m Contours) for Ponding Assessment
Along Cockle Creek South Tributary

Scale: 1:5,000

Figure No: 54.1b



Key:



Potential Ponding Area No. (see Table 20a or 20c)

DgS



Engineer: S.Ditton

Drawn: S.Ditton

Date: 30.06.09

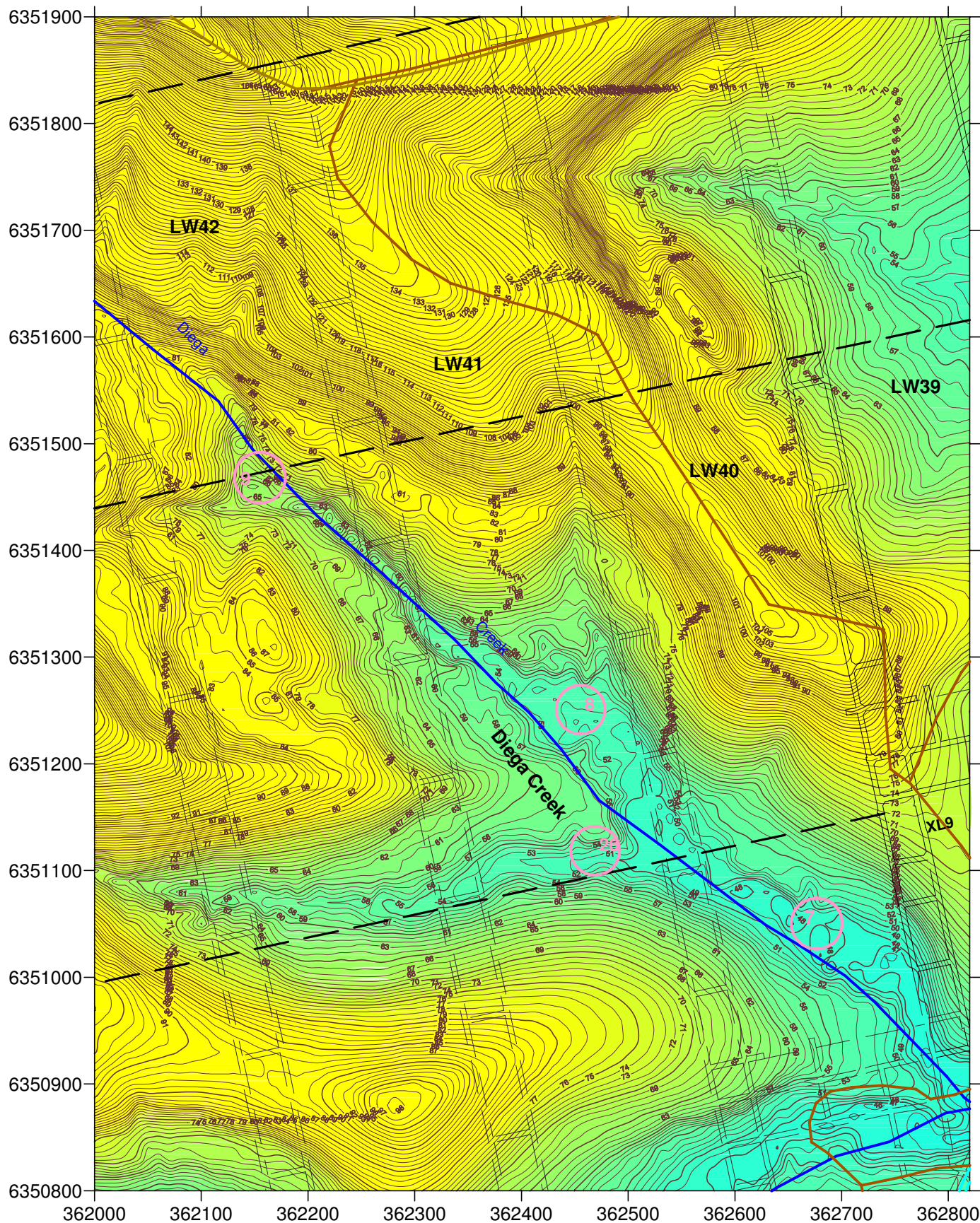
Ditton Geotechnical
Services Pty Ltd

Client: West Wallsend Colliery
WWD-012/1

Title: Post-Mining Topography (1m Contours) for Ponding Assessment
Along Cockle Creek South Tributary

Scale: 1:5,000

Figure No: 54b



Key:



Potential Ponding Area No. (see Table 20a)

DgS

Engineer: S.Ditton
 Drawn: S.Ditton
 Date: 30.06.09

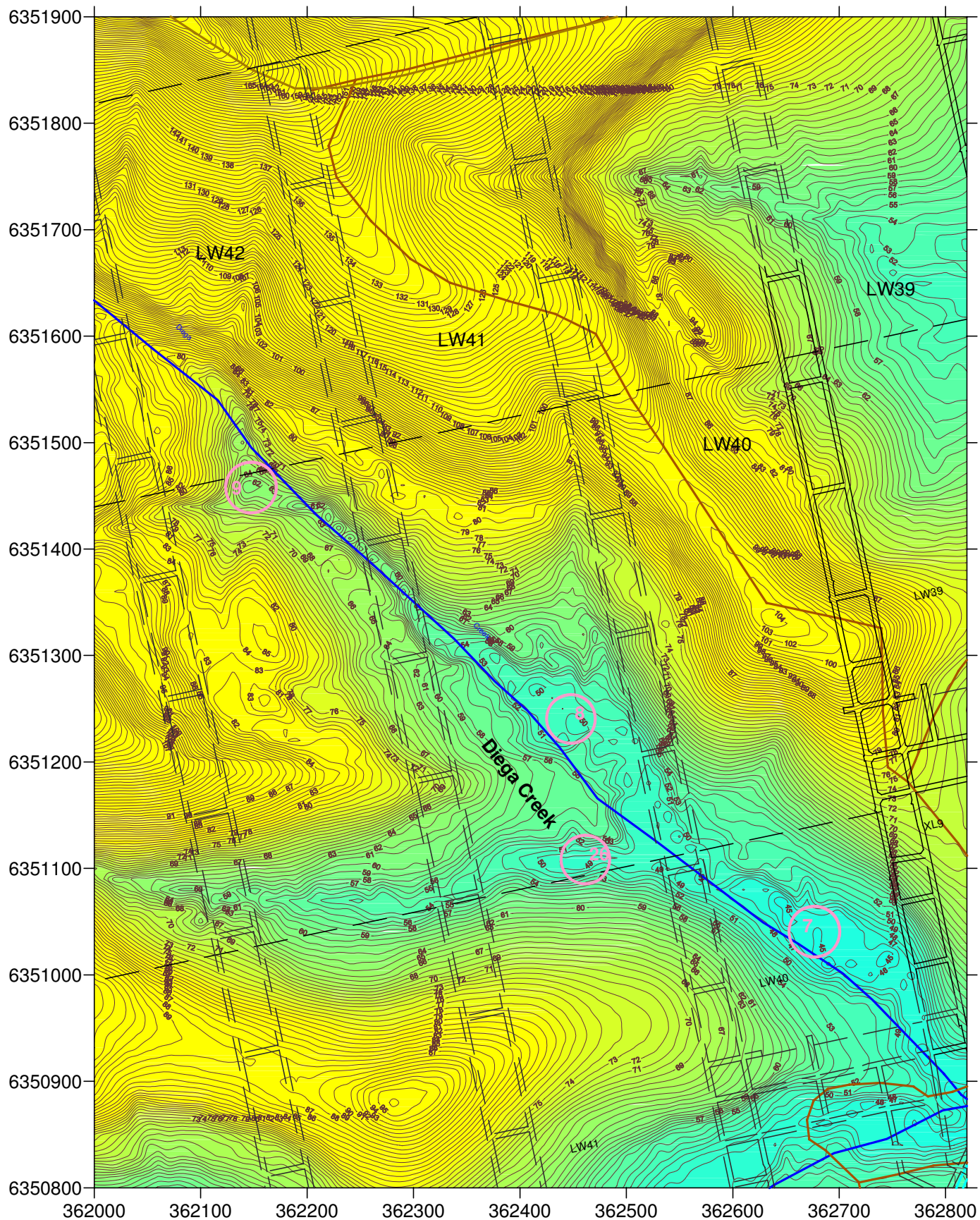
Ditton Geotechnical
 Services Pty Ltd

Client: West Wallsend Colliery
 WWD-012/1

Title: Pre-Mining Topography (1m Contours) for Ponding Assessment
 Along Diega Creek

Scale: 1:5,000

Figure No: 54.1c



Key:



Potential Ponding Area No. (see Table 20a)

DgS

Engineer: S.Ditton
 Drawn: S.Ditton
 Date: 30.06.09

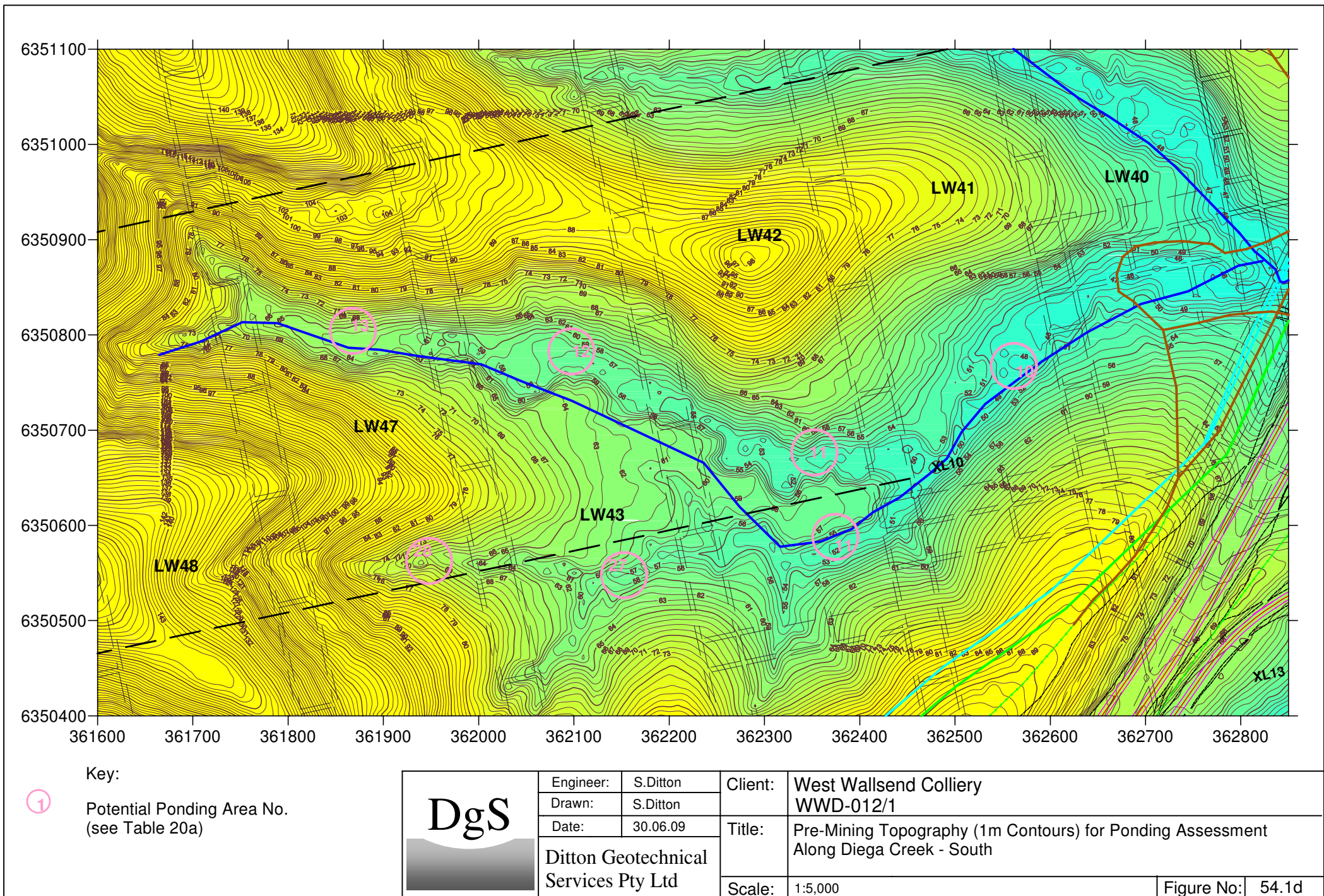
Ditton Geotechnical
 Services Pty Ltd

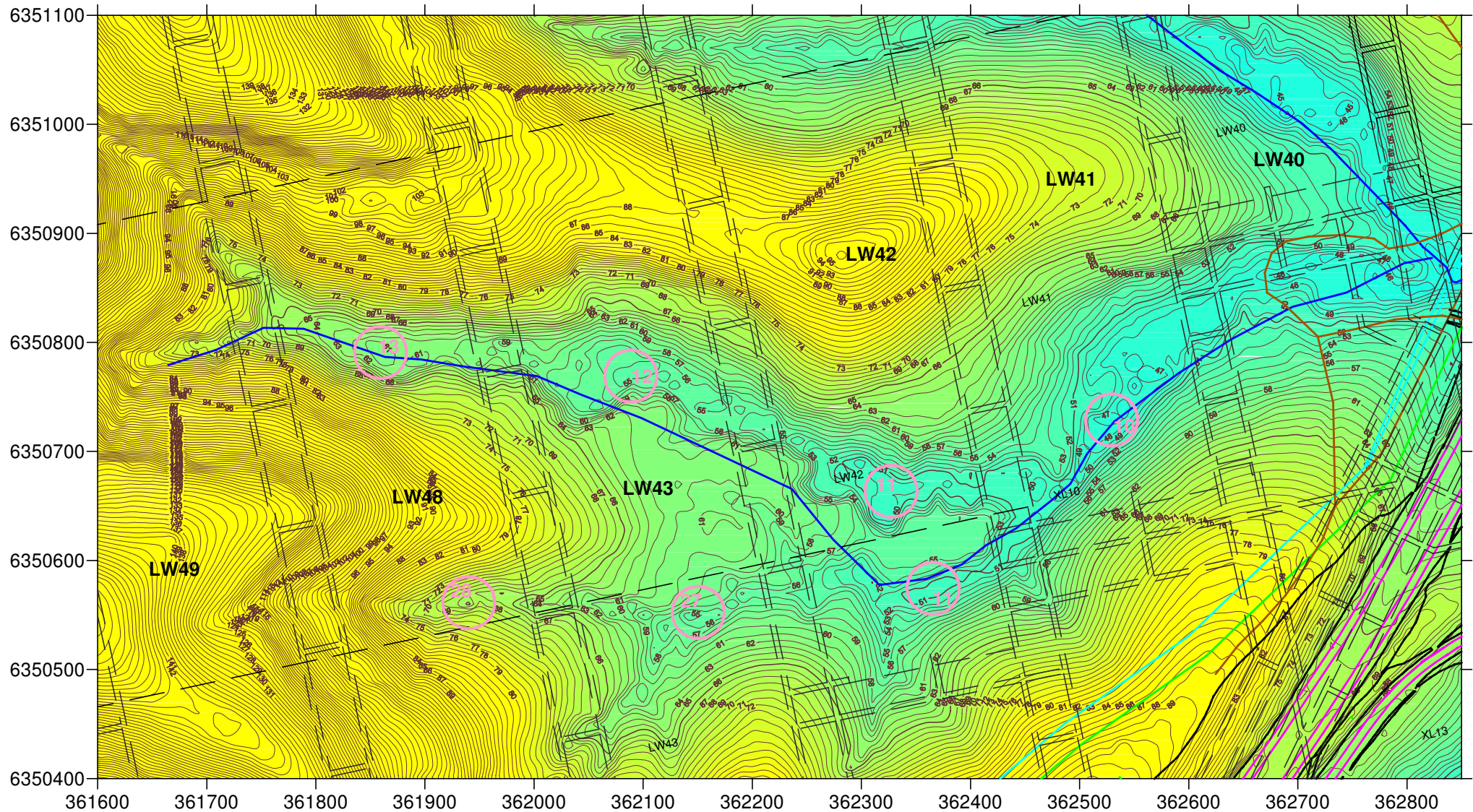
Client: West Wallsend Colliery
 WWD-012/1

Title: Post-Mining Topography (1m Contours) for Ponding Assessment
 Along Diega Creek

Scale: 1:5,000

Figure No: 54c





Key:

①

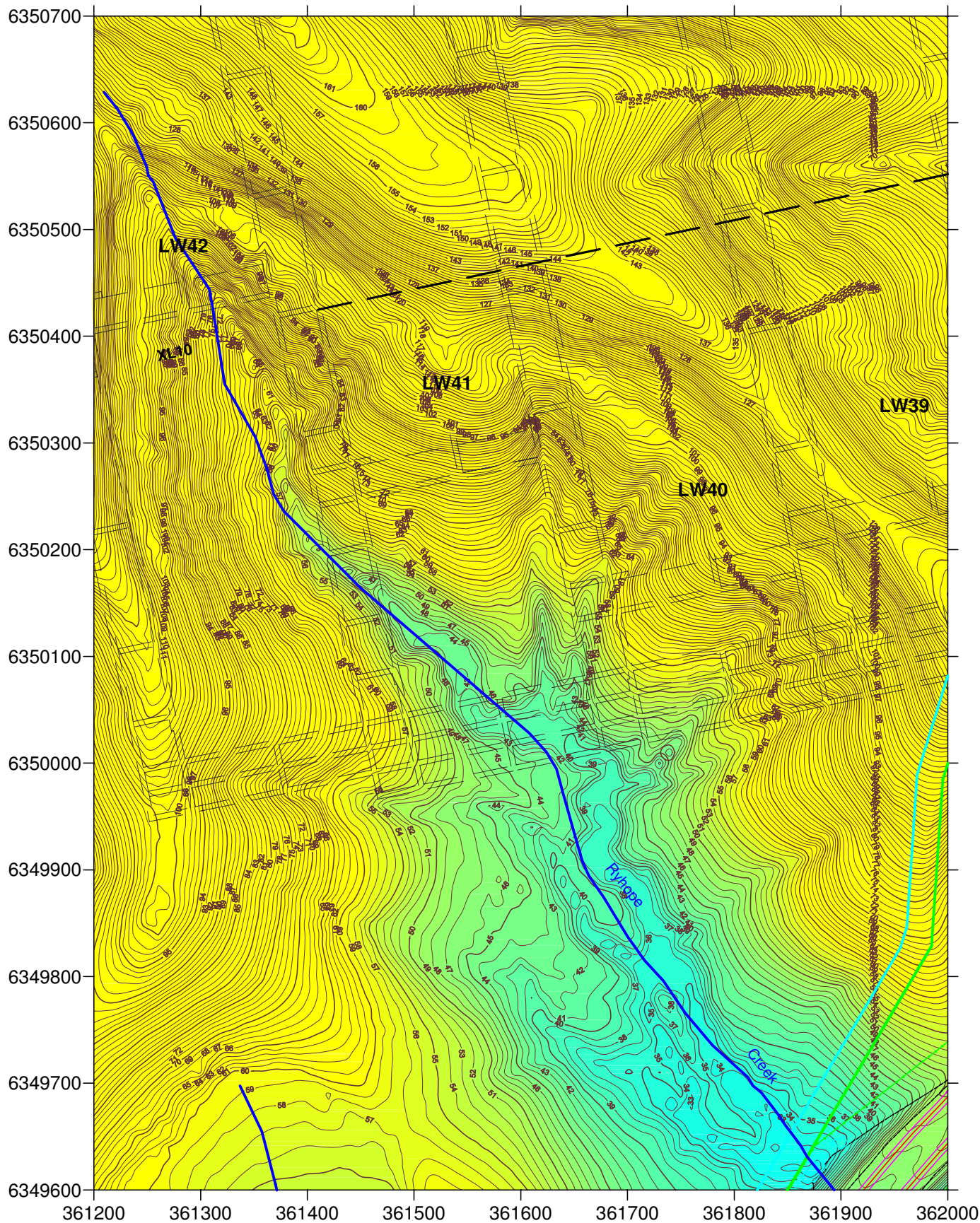
Potential Ponding Area No.
(see Table 20a or 20c)

DgS



Engineer:	S.Ditton
Drawn:	S.Ditton
Date:	30.06.09
Ditton Geotechnical Services Pty Ltd	

Client:	West Wallsend Colliery WWD-012/1		
Title:	Post-Mining Topography (1m Contours) for Ponding Assessment Along Diega Creek - South		
Scale:	1:5,000		Figure No: 54d



Key:

①

Potential Ponding Area No.
(see Table 20a or 20c)

DgS

Engineer: S.Ditton

Drawn: S.Ditton

Date: 30.06.09

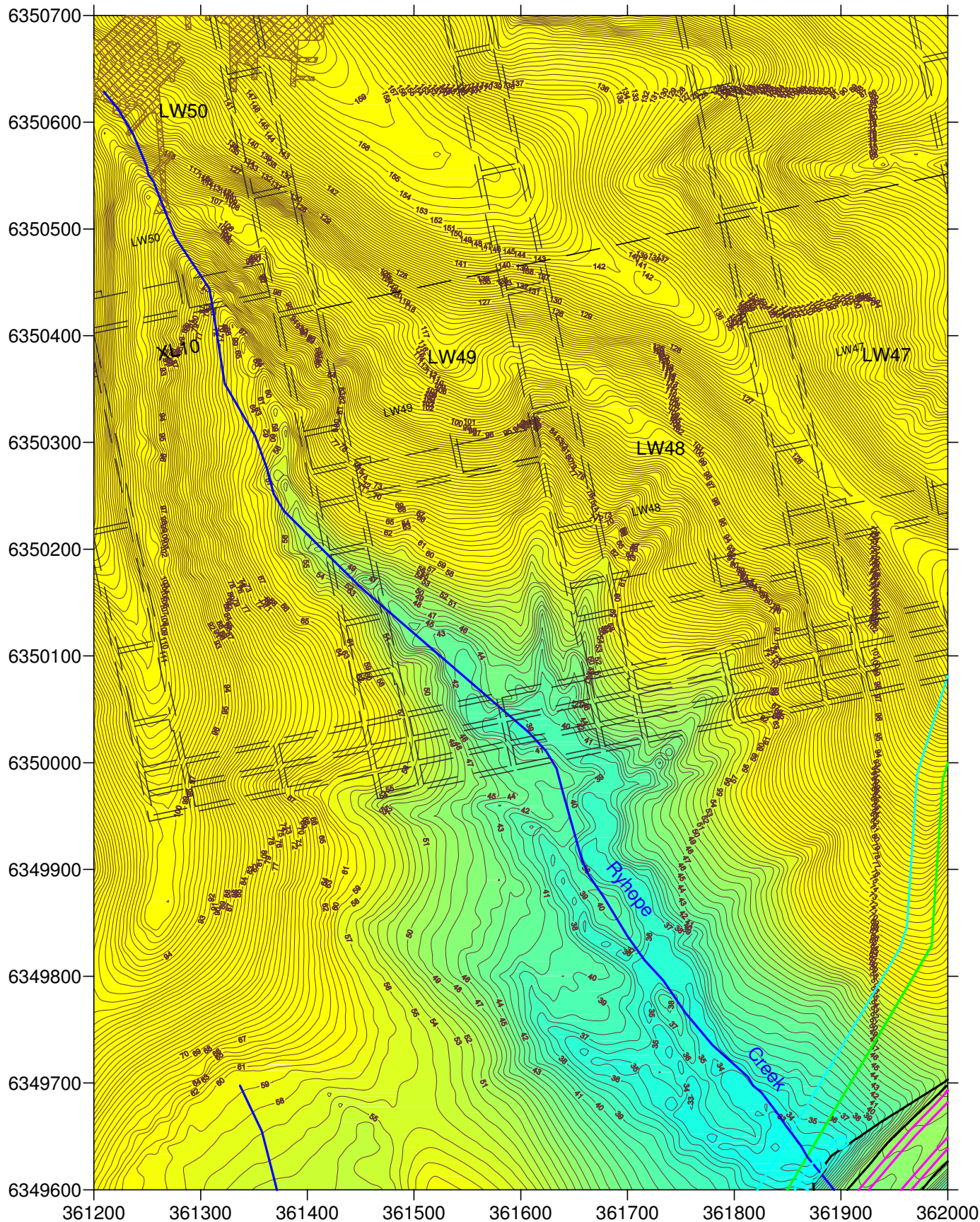
Ditton Geotechnical
Services Pty Ltd

Client: West Wallsend Colliery
WWD-012/1

Title: Pre-Mining Topography (1m Contours) for Ponding Assessment
Along Ryhope Creek

Scale: 1:5,000

Figure No: 54.1e



Key:

①

Potential Ponding Area No.
(see Table 20a or 20c)

DgS



Engineer: S.Ditton
Drawn: S.Ditton
Date: 30.06.09

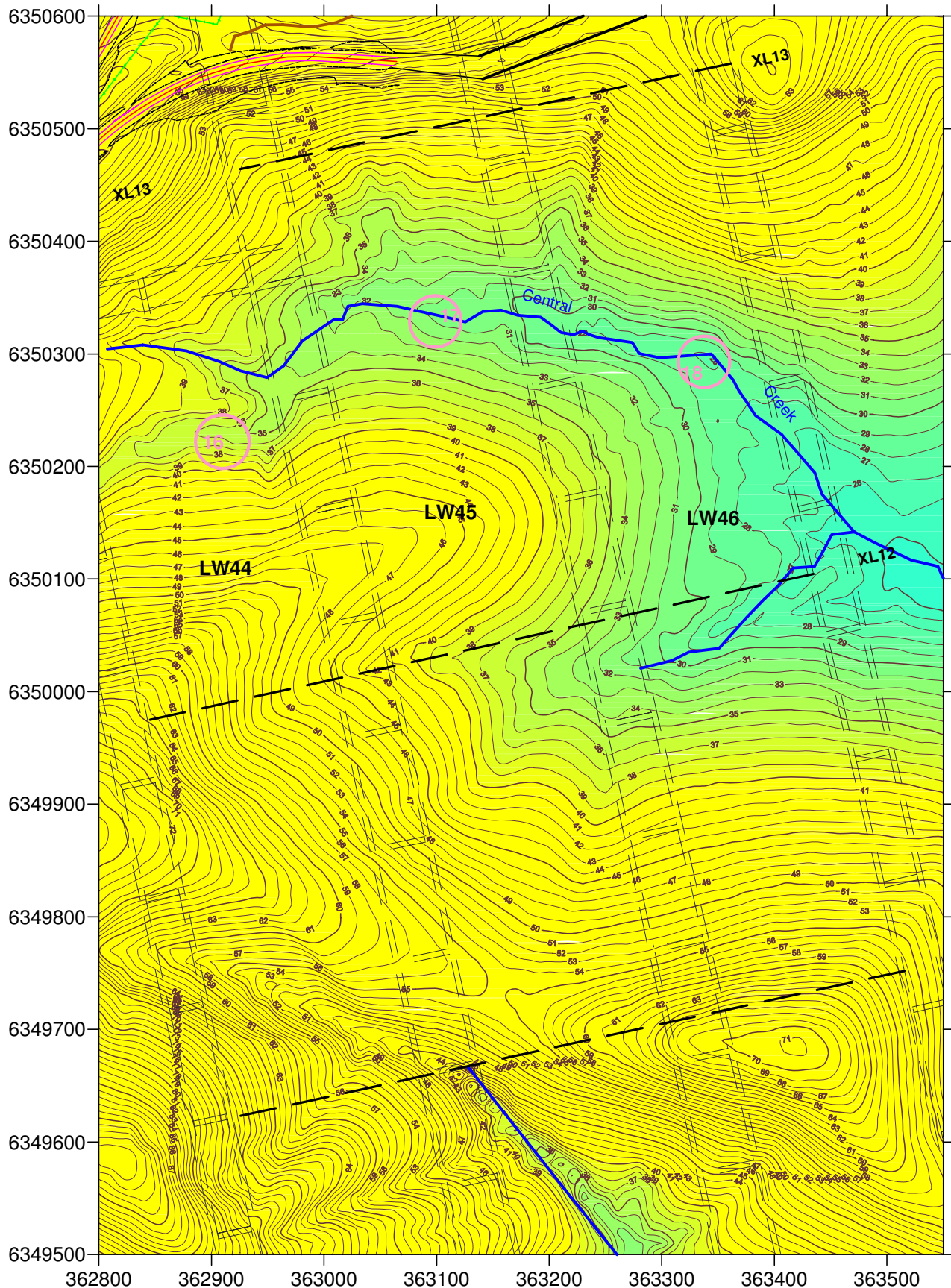
Ditton Geotechnical
Services Pty Ltd

Client: West Wallsend Colliery
WWD-012/1

Title: Post-Mining Topography (1m Contours) for Ponding Assessment
Along Ryhope Creek

Scale: 1:5,000

Figure No: 54e



Key:



Potential Ponding Area No. (see Table 20b)

DgS



Engineer: S.Ditton

Drawn: S.Ditton

Date: 30.06.09

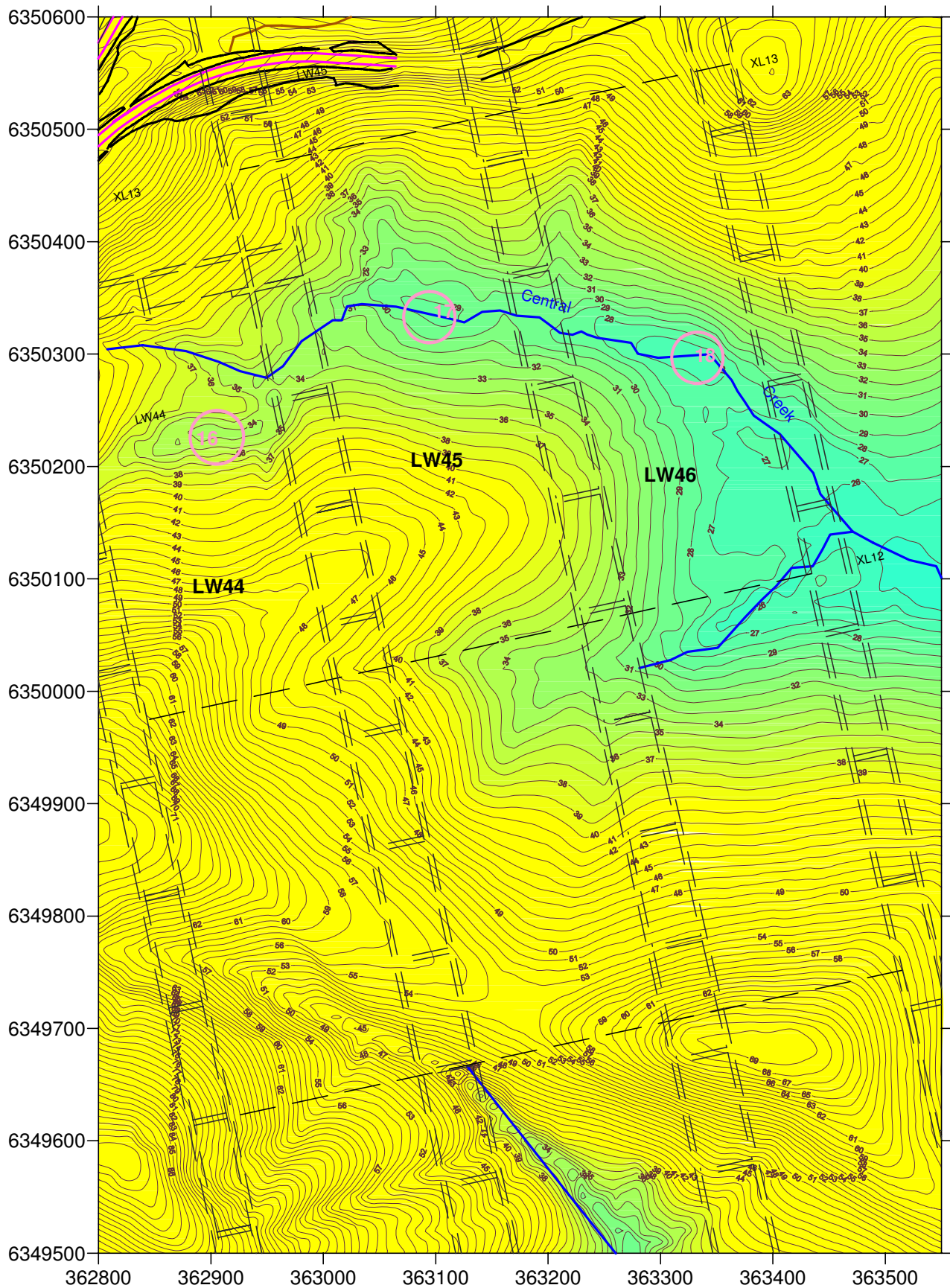
**Ditton Geotechnical
Services Pty Ltd**

Client: **West Wallsend Colliery
WWD-012/1**

Title: **Pre-Mining Topography (1m Contours) for Ponding Assessment
Along Central Creek**

Scale: 1:5,000

Figure No: 54.1f



Key:

① Potential Ponding Area No. (see Table 20b)

DgS

Engineer: S.Ditton

Drawn: S.Ditton

Date: 30.06.09

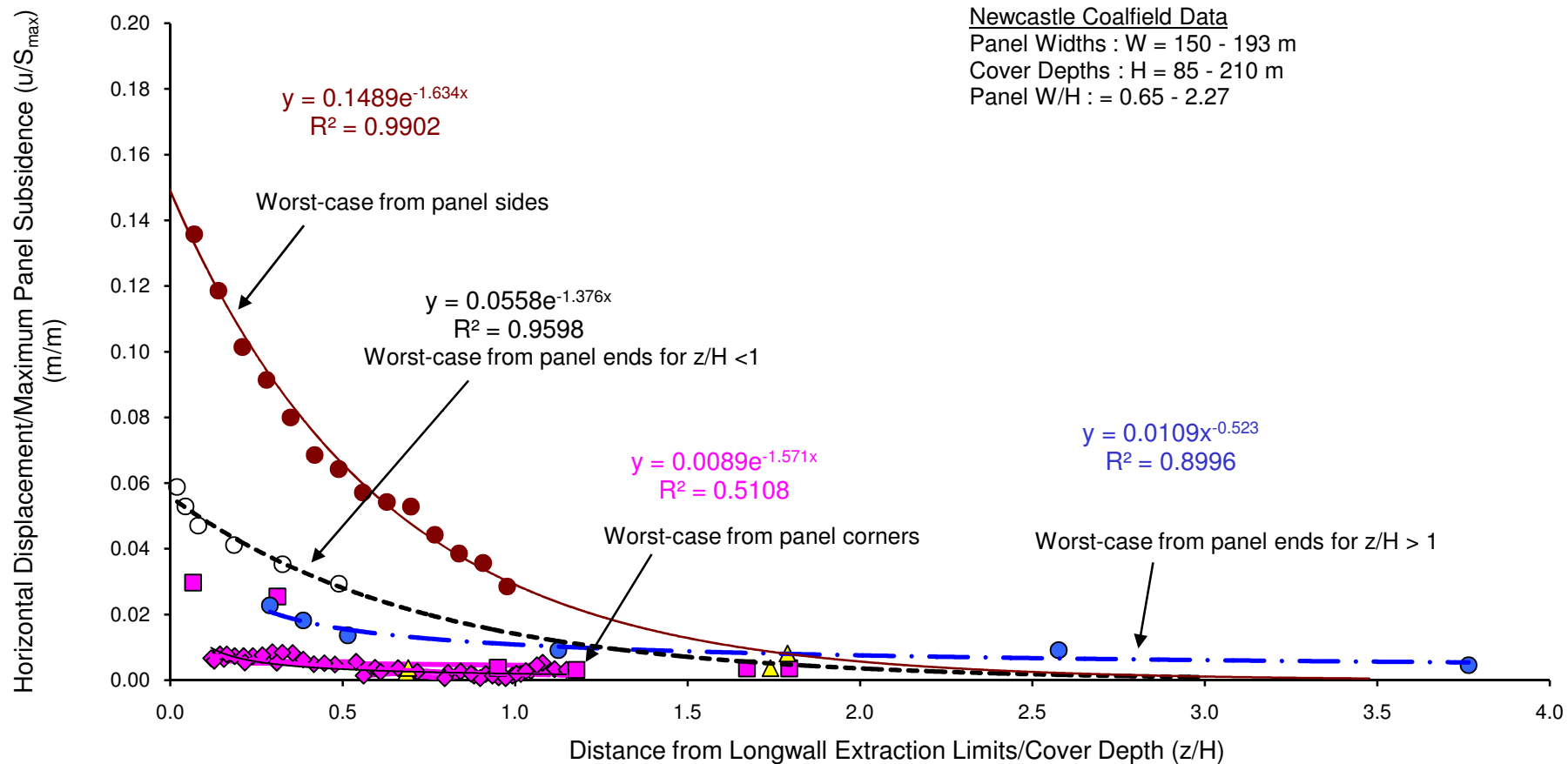
Ditton Geotechnical
Services Pty Ltd

Client: West Wallsend Colliery
WWD-012/1

Title: Post-Mining Topography (1m Contours) for Ponding Assessment
Along Central Creek

Scale: 1:5,000

Figure No: 54f



DgS



Engineer: S.Ditton

Drawn: S.Ditton

Date: 02.02.09

Ditton Geotechnical
 Services Pty Ltd

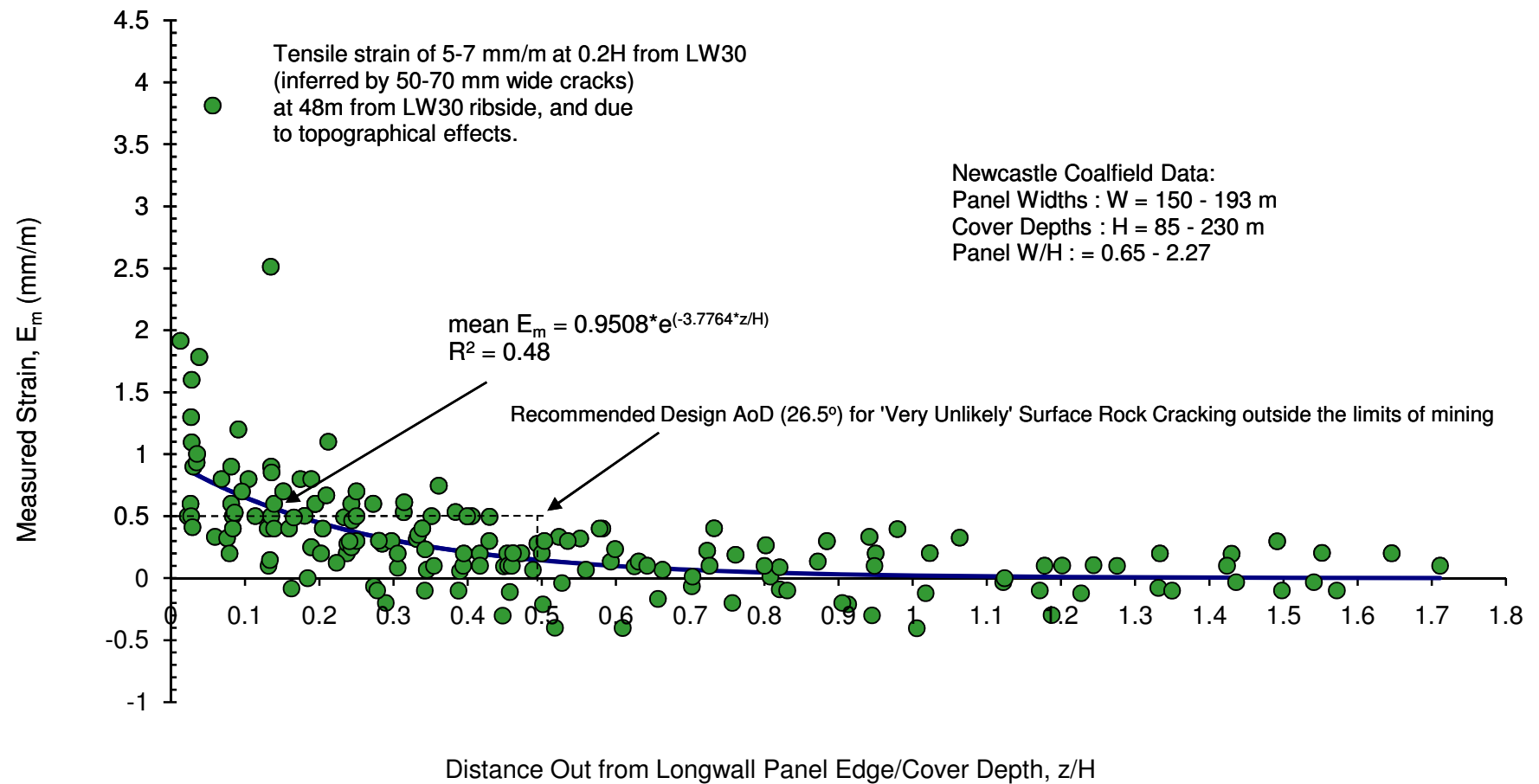
Client: West Wallsend Colliery

WWD-012/1

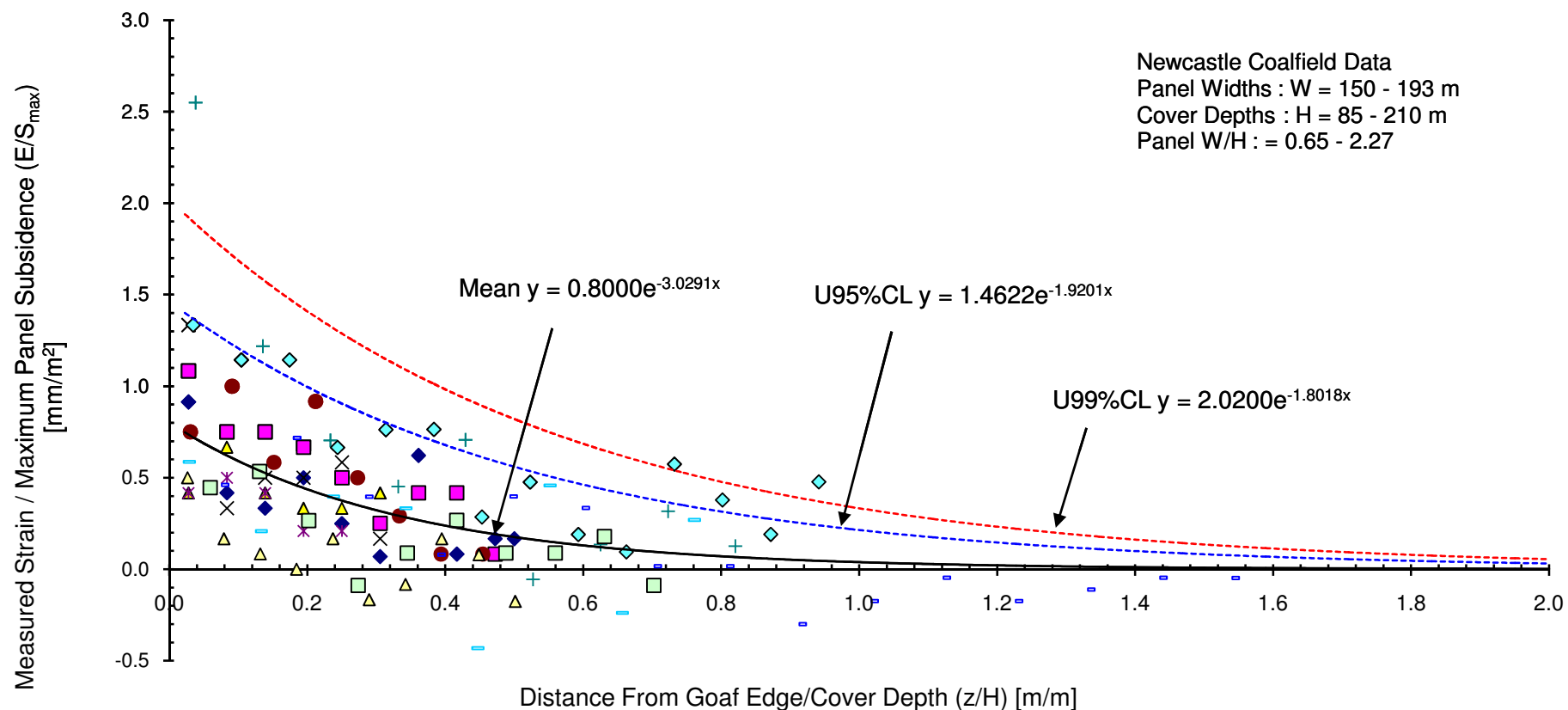
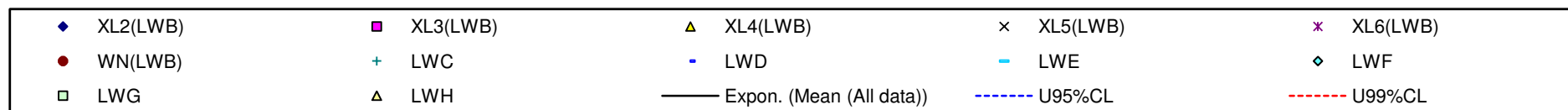
Title: Combined Empirical Far-Field Displacement Prediction Models for Longwall Panel Sides,
 Ends and Corners.

Scale: NTS

Figure No: 55



	Engineer:	S.Ditton	Client:	West Wallsend Colliery			
	Drawn:	S.Ditton		WWD-012/1			
	Date:	02.02.09	Title:	Measured Far-Field Strain Database Using Cumulative Steel Tape			
	Ditton Geotechnical			from Longwall Sides in the Newcastle Coalfield			
	Services Pty Ltd		Scale:	NTS		Figure No:	56a



DgS



Engineer: S.Ditton

Drawn: S.Ditton

Date: 02.02.09

Ditton Geotechnical
Services Pty Ltd

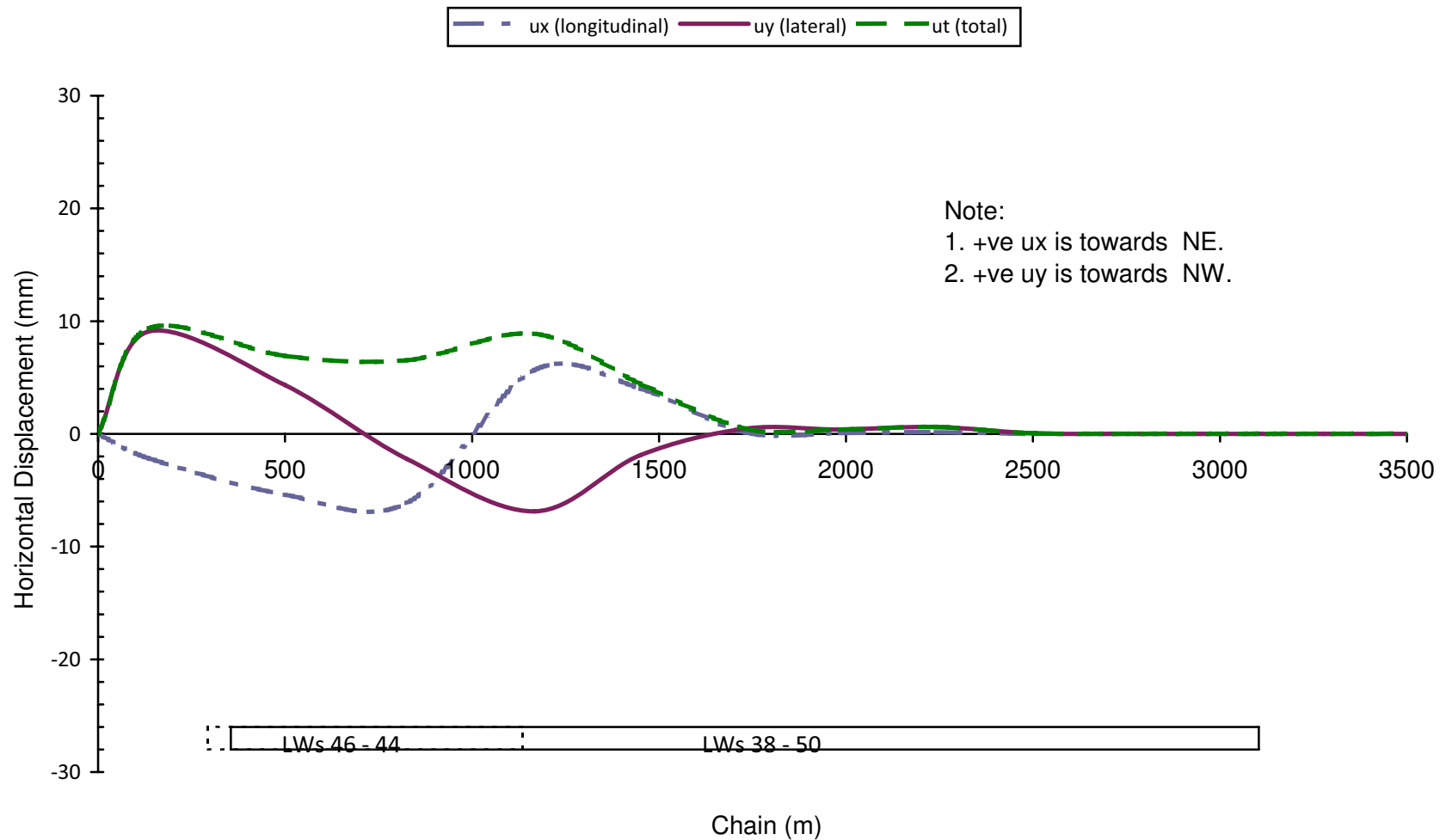
Client: West Wallsend Colliery

WWD-012/1

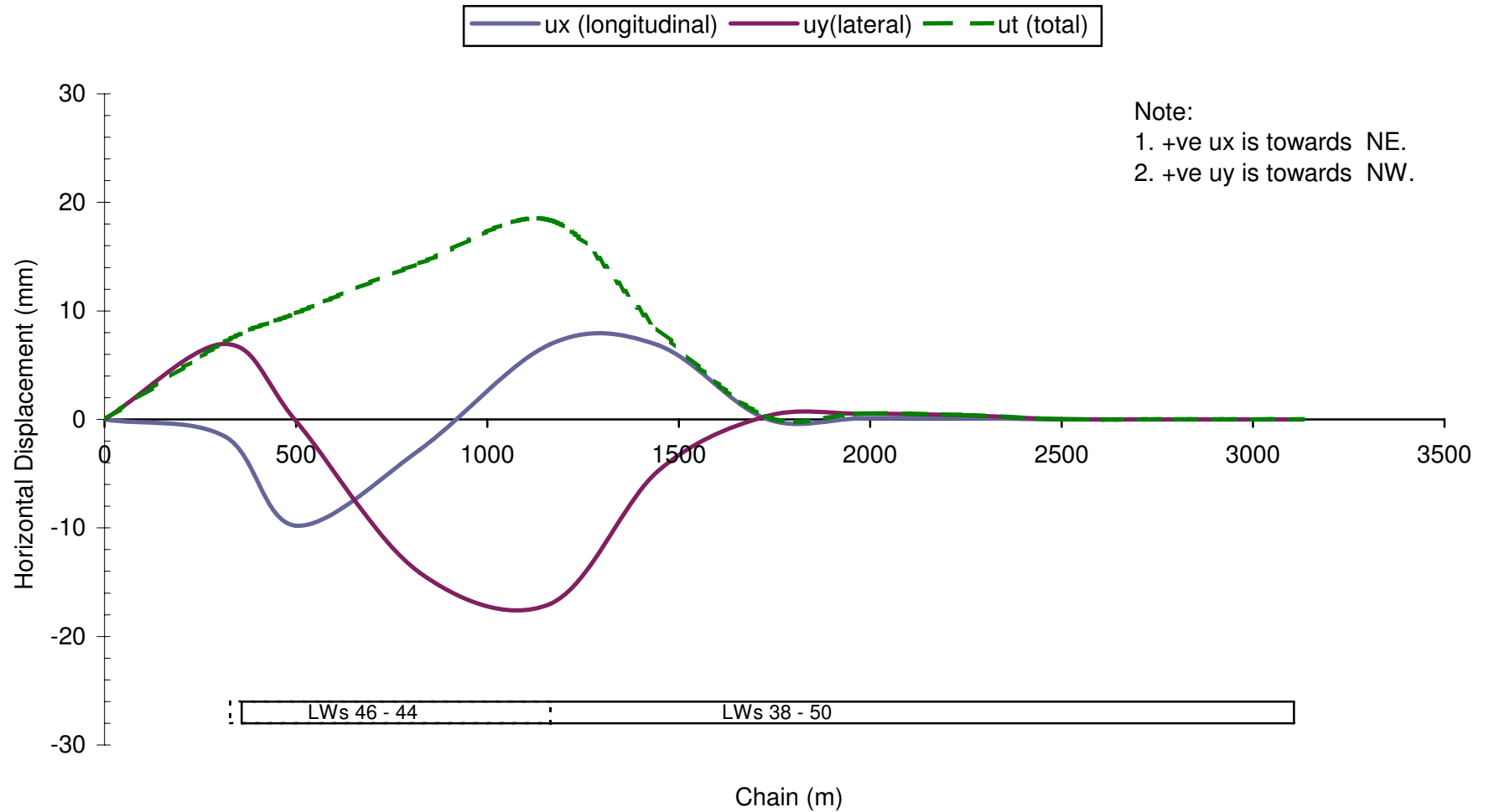
Title: Empirical Far-Field Strain Prediction Model Using Cumulative Steel Tape
Measurements from Longwall Sides in the Newcastle Coalfield

Scale: NTS

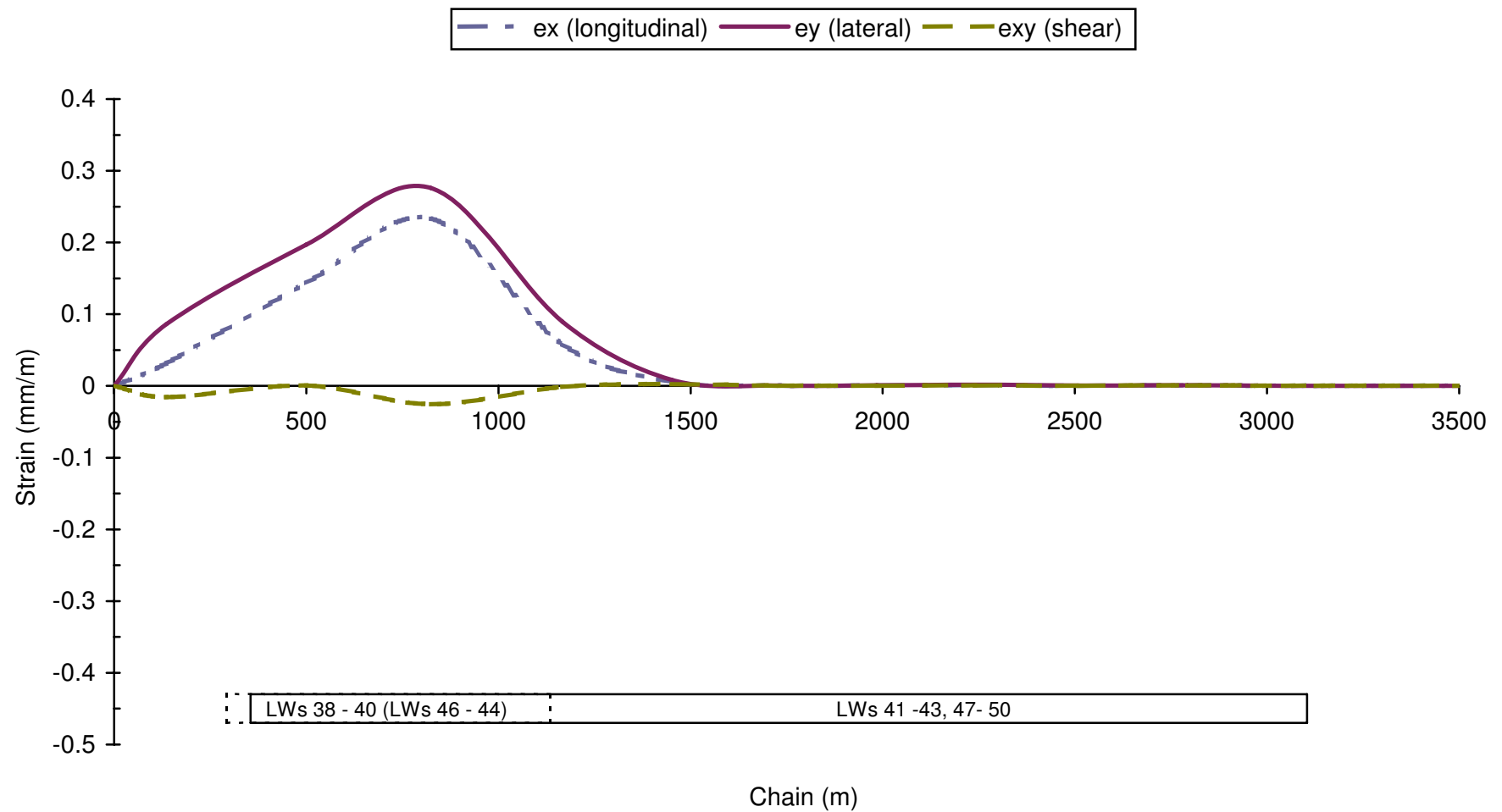
Figure No: 56b



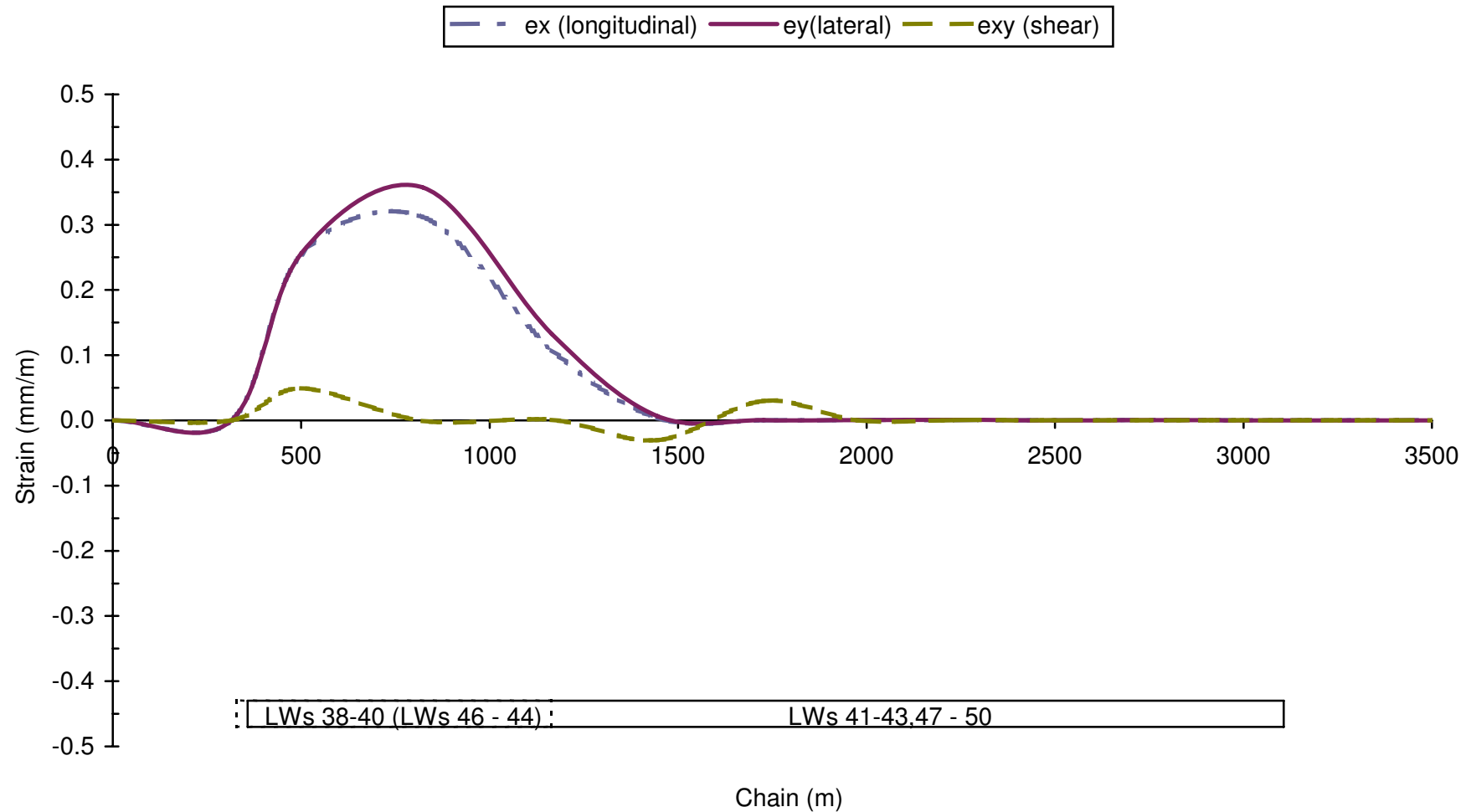
	Engineer:	S.Ditton	Client:	West Wallsend Colliery			
	Drawn:	S.Ditton		WWD-012/1			
	Date:	30.06.09	Title:	Empirical Far-Field Displacement Profile Predictions (worst-case) along the centreline of the North Bound Lane of the F3 Freeway			
	Ditton Geotechnical Services Pty Ltd						
			Scale:	NTS		Figure No:	57a



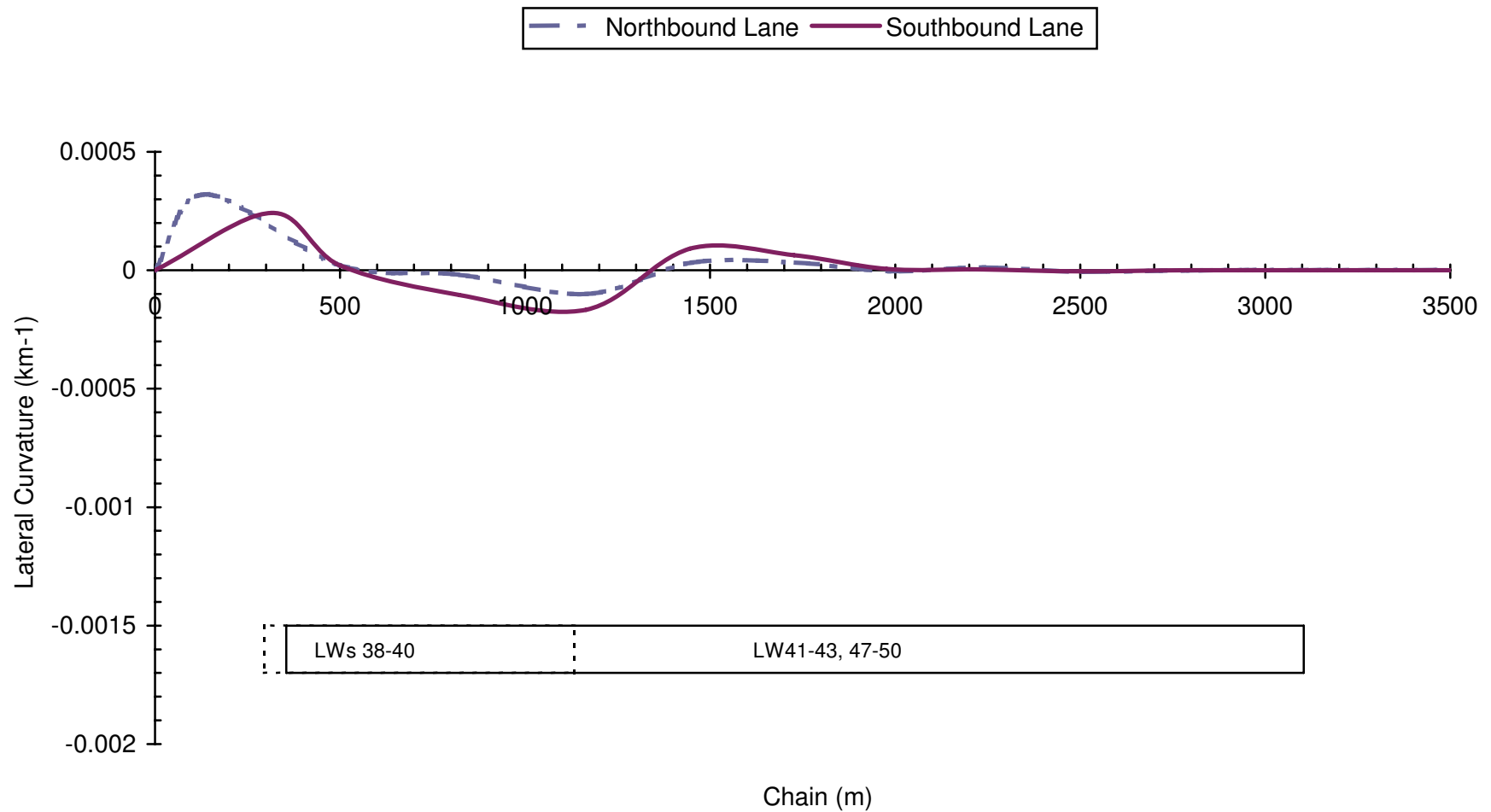
	Engineer:	S.Ditton	Client:	West Wallsend Colliery		
	Drawn:	S.Ditton		WWD-012/1		
	Date:	30.06.09	Title:	Empirical Far-Field Displacement Profile Predictions along the centreline of the		
	Ditton Geotechnical			South Bound Lane of F3		
	Services Pty Ltd		Scale:	NTS		Figure No:



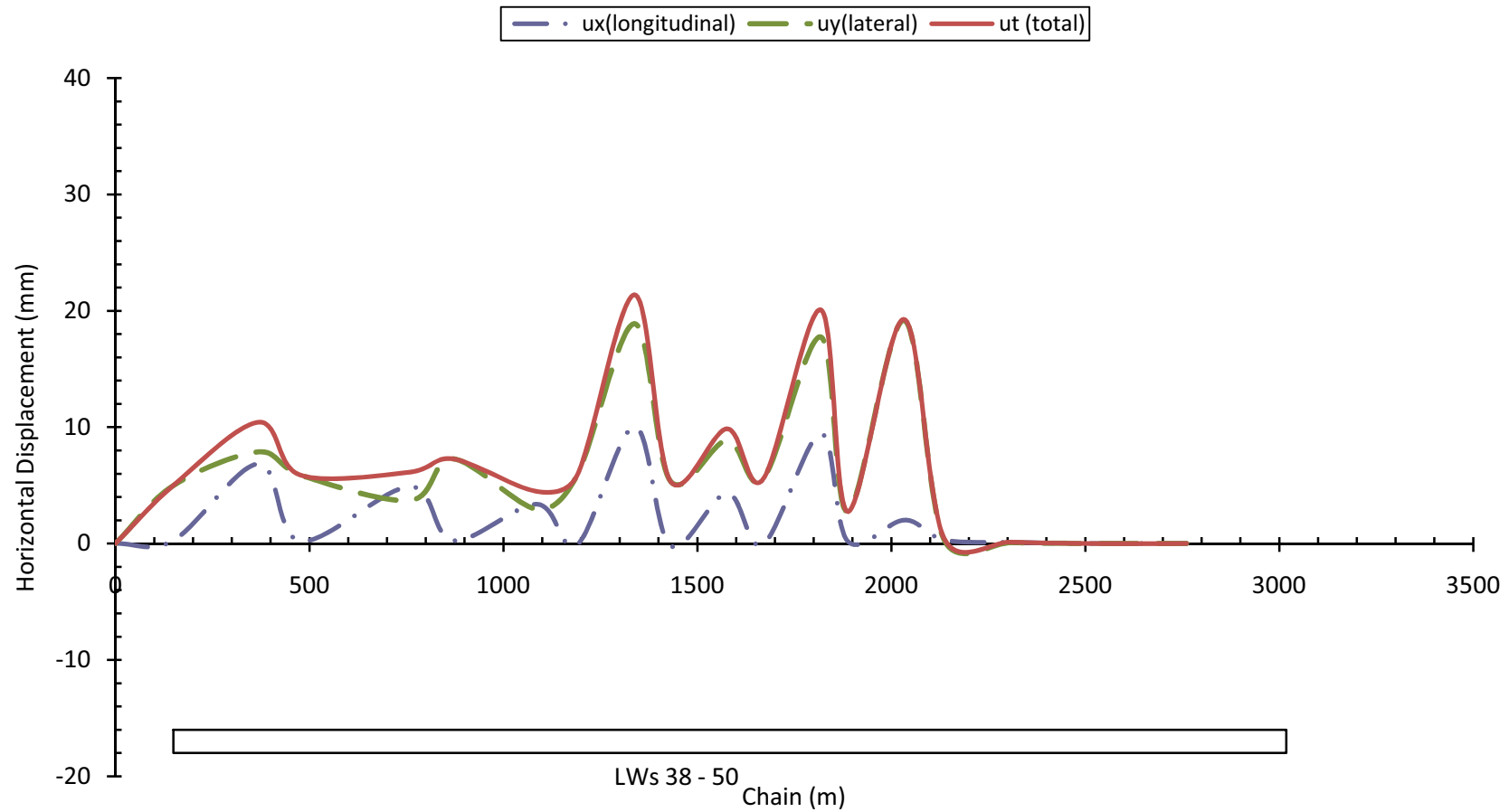
	Engineer:	S.Ditton	Client:	West Wallsend Colliery		
	Drawn:	S.Ditton		WWD-012/1		
	Date:	02.02.09	Title:	Empirical Far-Field Strain Profile Predictions (worst-case) along the centreline of the North Bound Lane of the F3 Freeway		
	Ditton Geotechnical					
	Services Pty Ltd		Scale:	NTS		Figure No:



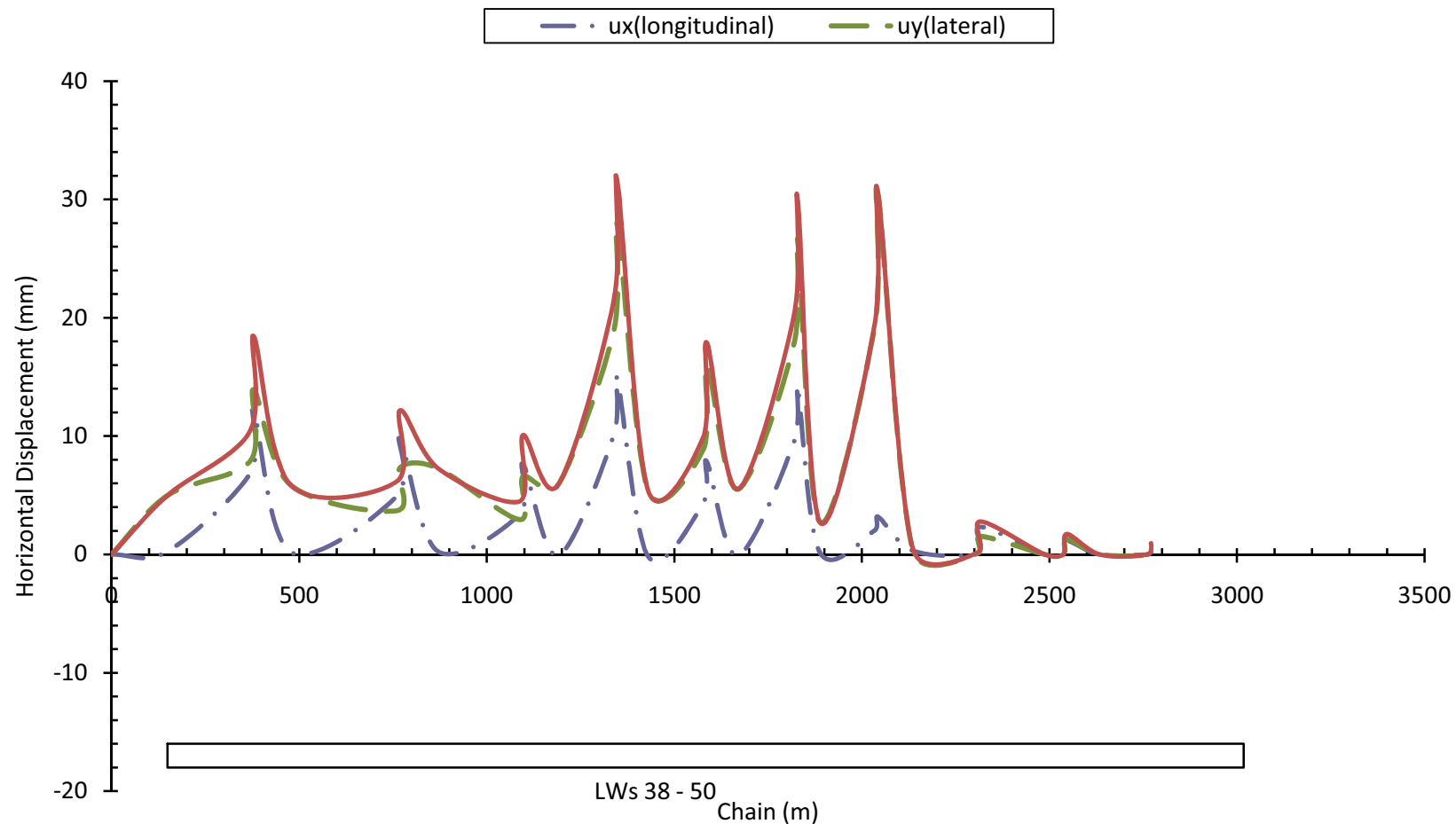
	Engineer:	S.Ditton	Client:	West Wallsend Colliery		
	Drawn:	S.Ditton		WWD-012/1		
	Date:	30.06.09	Title:	Empirical Far-Field Strain Profile Predictions (worst-case) along the centreline of the		
	Ditton Geotechnical			South Bound Lane of the F3 Freeway		
	Services Pty Ltd		Scale:	NTS		Figure No:



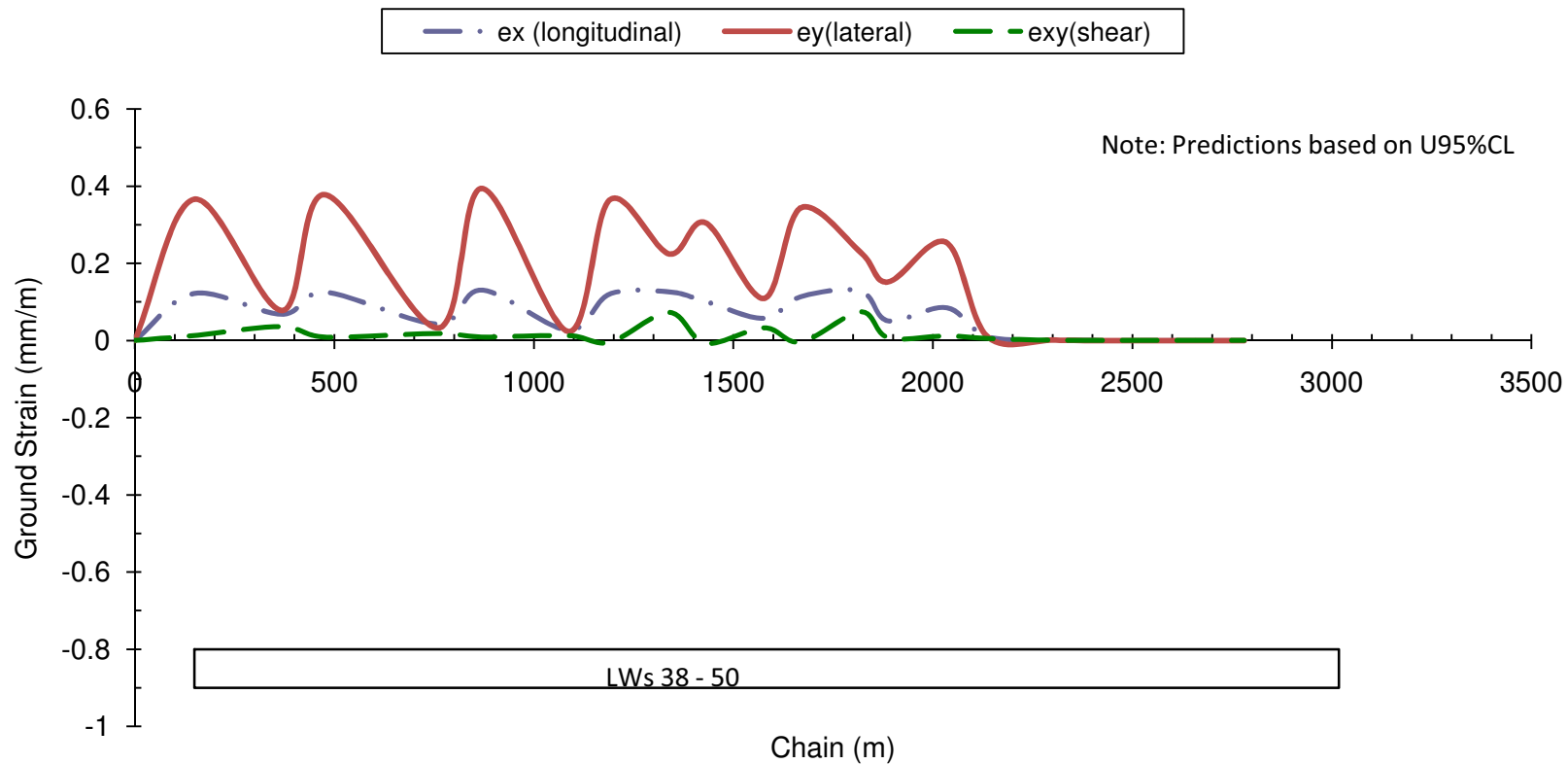
	Engineer:	S.Ditton	Client:	West Wallsend Colliery		
	Drawn:	S.Ditton		WWD-012/1		
	Date:	02.02.09	Title:	Empirical Far-Field Lateral Curvature Profile Predictions (worst-case) along the centreline of the North and South Bound Lanes of the F3 Freeway		
	Ditton Geotechnical					
	Services Pty Ltd		Scale:	NTS		Figure No:



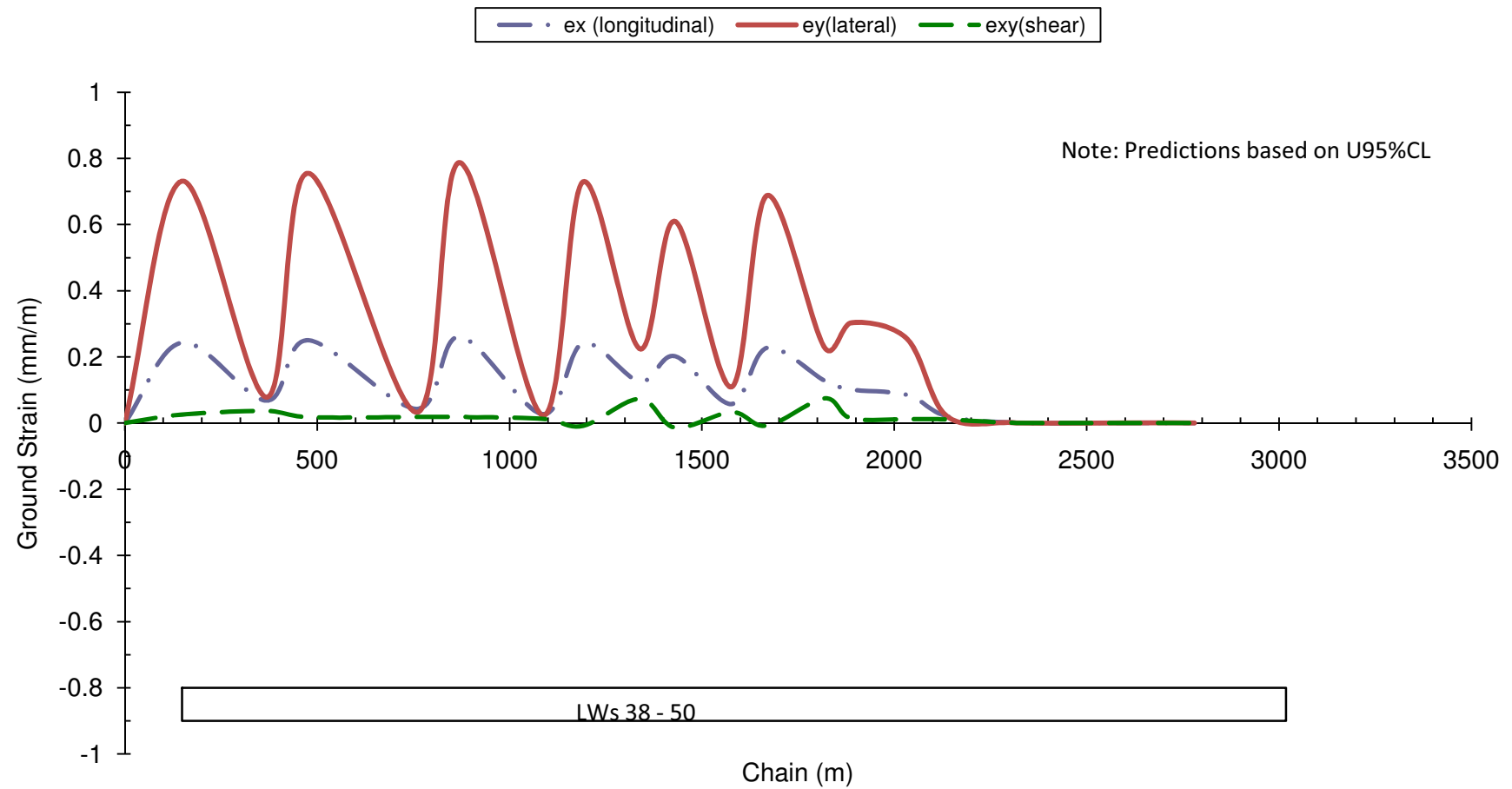
	Engineer:	S.Ditton	Client:	West Wallsend Colliery		
	Drawn:	S.Ditton		WWD-012/1		
	Date:	30.06.09	Title:	Empirical Far-Field Displacement Profile Predictions along the Services Easement for the Worst-case with No Fault Present		
	Ditton Geotechnical					
	Services Pty Ltd		Scale:	NTS		Figure No: 60a



	Engineer:	S.Ditton	Client:	West Wallsend Colliery			
	Drawn:	S.Ditton		WWD-012/1			
	Date:	25.01.10	Title:	Empirical Far-Field Displacement Profile Predictions along the Services Easement for the Worst-case with a Weak, NW-SE Striking Fault Present through Each Longwall Panel			
	Ditton Geotechnical Services Pty Ltd			Scale:	NTS		Figure No:



	Engineer:	S.Ditton	Client:	West Wallsend Colliery		
	Drawn:	S.Ditton		WWD-012/1		
	Date:	30.06.09	Title:	Empirical Far-Field Strain Profile Predictions along the Services Easement for the Worst-case with No Fault Present		
	Ditton Geotechnical					
	Services Pty Ltd		Scale:	NTS		Figure No:



DgS



Engineer: S.Ditton

Drawn: S.Ditton

Date: 30.06.09

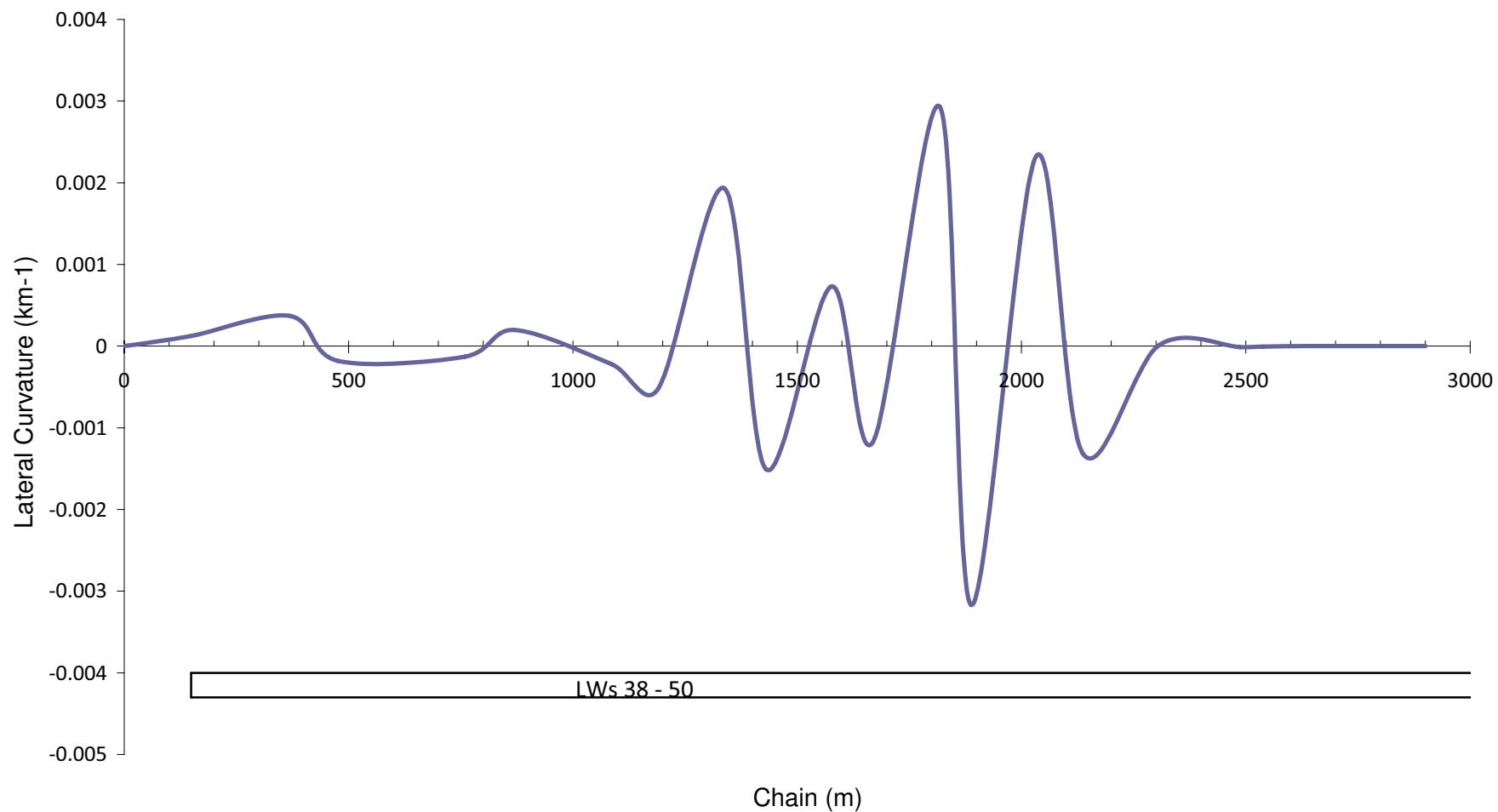
Ditton Geotechnical
Services Pty Ltd

Client: West Wallsend Colliery
WWD-012/1

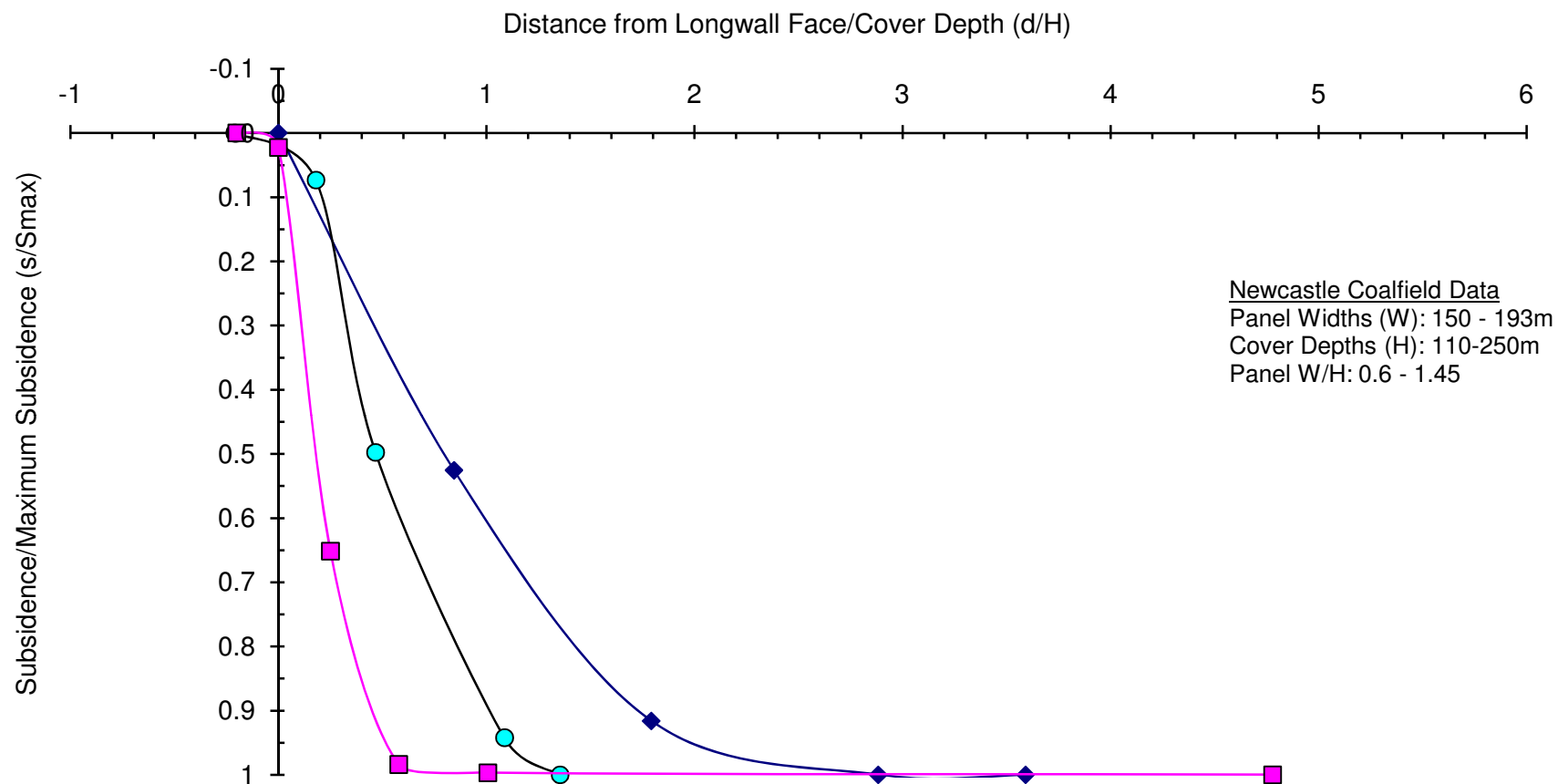
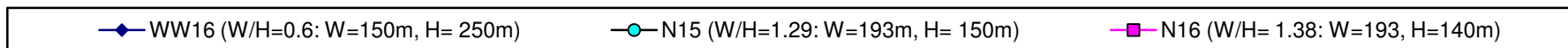
Title: Empirical Far-Field Strain Profile Predictions along the Services Easement for the
Worst-case with a Weak, NW-SE Striking Fault Present

Scale: NTS

Figure No: 61b



Engineer:	S.Ditton	Client:	West Wallsend Colliery			
Drawn:	S.Ditton		WWD-012/1			
Date:	30.06.09	Title:	Empirical Far-Field Lateral Curvature Profile Predictions (worst-case) along the			
Ditton Geotechnical			Services Easement			
Services Pty Ltd		Scale:	NTS		Figure No:	62



	Engineer:	S.Ditton	Client:	West Wallsend Colliery		
	Drawn:	S.Ditton		WWD-012/1		
	Date:	08.08.08	Title:	Empirical Single Longwall Centreline Subsidence Development Prediction Model		
	Ditton Geotechnical			(based on Newcastle Coalfield Measurements)		
	Services Pty Ltd		Scale:	NTS		Figure No: 63



Managed by



Business Hour Contact Number

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