

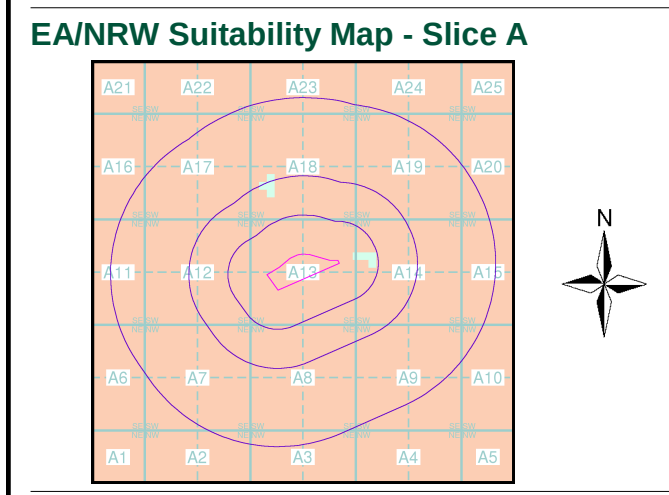


M

M

MOTT MACDONALD EA/NRW Surface Water 30 Year Return Depth Map (1:10,000)

- General**
- Specified Site
 - Specified Buffer(s)
 - Bearing Reference Point
- Surface Water Depth**
- 0 - 0.15m
 - 0.15 - 0.30m
 - 0.30 - 0.60m
 - 0.60 - 0.90m
 - 0.90 - 1.20m
 - > 1.20m
- Contours (height in metres)**
- Standard Contour
 - Master Contour
 - Spot Height
- Suitability**
- See the suitability map below
- National to county
 - County to town
 - Town to street
 - Street to parcels of land
 - Property



Order Details

Order Number: 167915730_1_1
Customer Ref: 394359GE05
National Grid Reference: 341330, 399790
Slice: A
Site Area (Ha): 5.08
Search Buffer (m): 1000

Site Details

Headbolt Lane Station, LIVERPOOL, L33 3AU

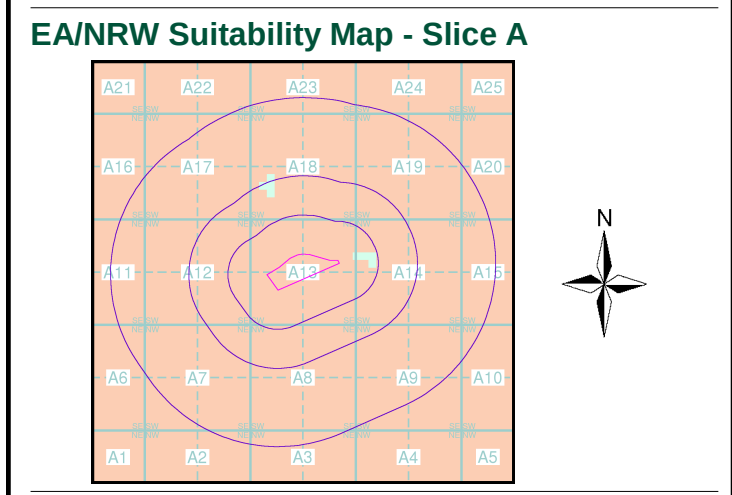


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MOTT MACDONALD EA/NRW Surface Water 100 Year Return Depth Map

- General**
- Specified Site
 - Specified Buffer(s)
 - Bearing Reference Point
- Surface Water Depth**
- 0 - 0.15m
 - 0.15 - 0.30m
 - 0.30 - 0.60m
 - 0.60 - 0.90m
 - 0.90 - 1.20m
 - > 1.20m
- Contours (height in metres)**
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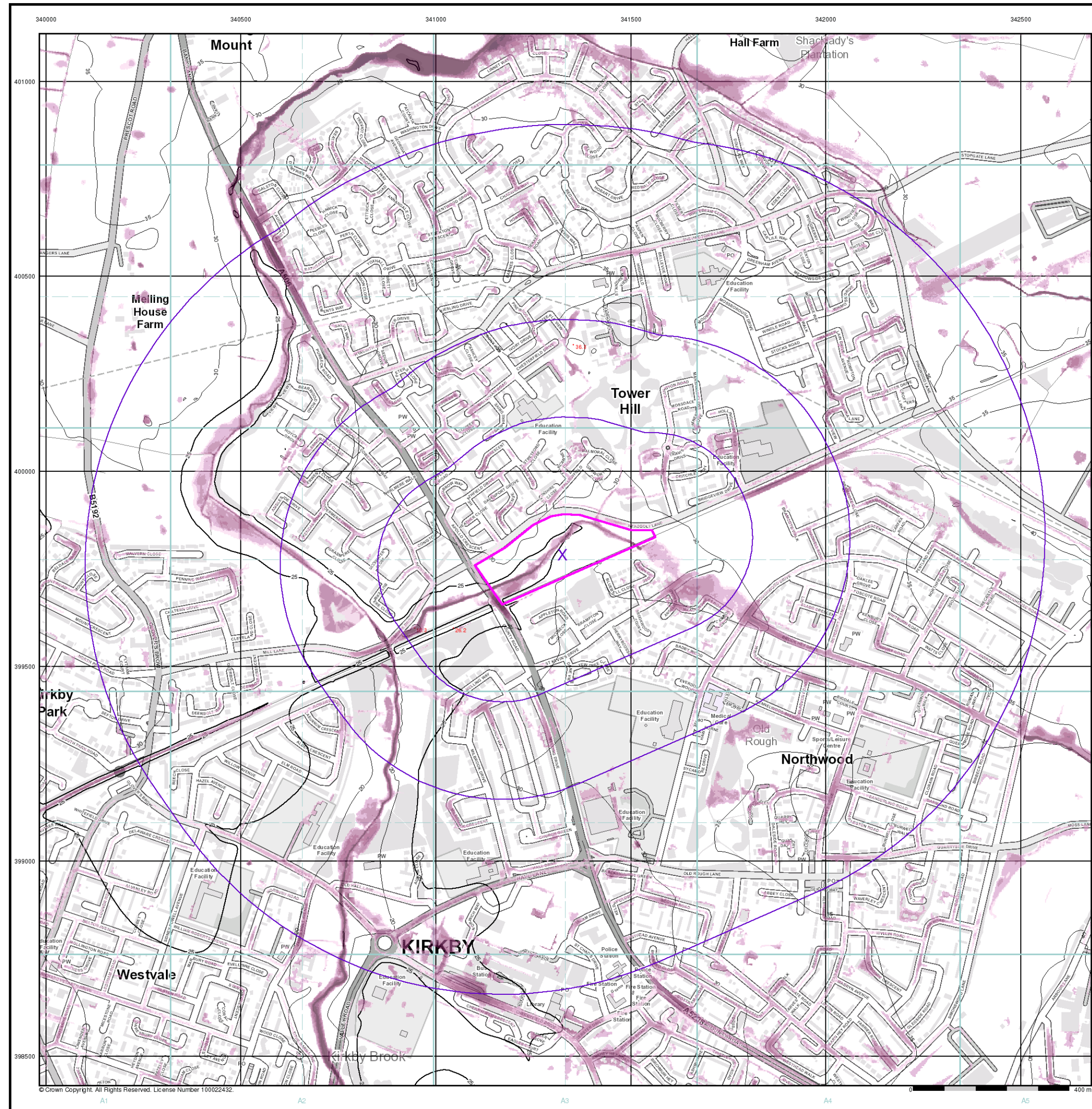


Order Details

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Site Details

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MOTT MACDONALD EA/NRW Surface Water 1000 Year Return Depth Map (1:10,000)

General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point

Surface Water Depth

- 0 - 0.15m
- 0.15 - 0.30m
- 0.30 - 0.60m
- 0.60 - 0.90m
- 0.90 - 1.20m
- > 1.20m

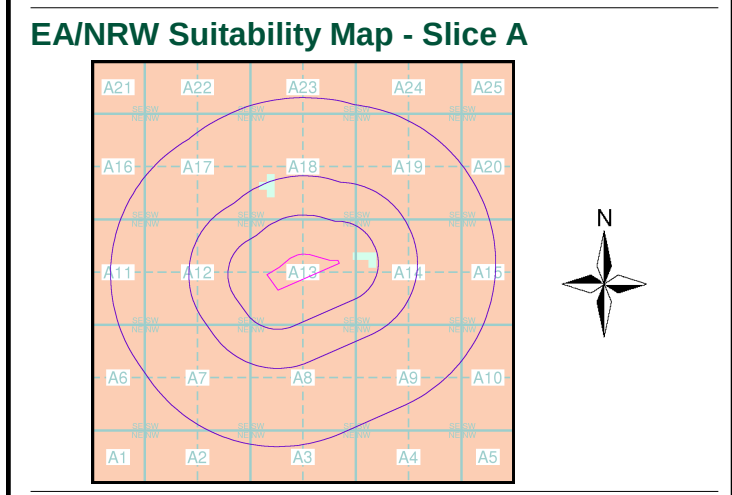
Contours (height in metres)

- Standard Contour
- Master Contour
- Spot Height

Suitability

See the suitability map below

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- County to town
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Customer Ref: 394359GE05
National Grid Reference: 341330, 399790
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Search Buffer (m): 1000

Site Details

Headbolt Lane Station, LIVERPOOL, L33 3AU



M

MOTT MACDONALD

EA/NRW Surface Water 30 Year Return Velocity and Flow Direction Map (1:10,000)

General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point

Surface Water Velocity and Direction

- 0.00 - 0.25m/s
- 0.25 - 0.50m/s
- 0.50 - 1.00m/s
- 1.00 - 2.00m/s
- > 2.00m/s

Flow Direction at maximum velocity

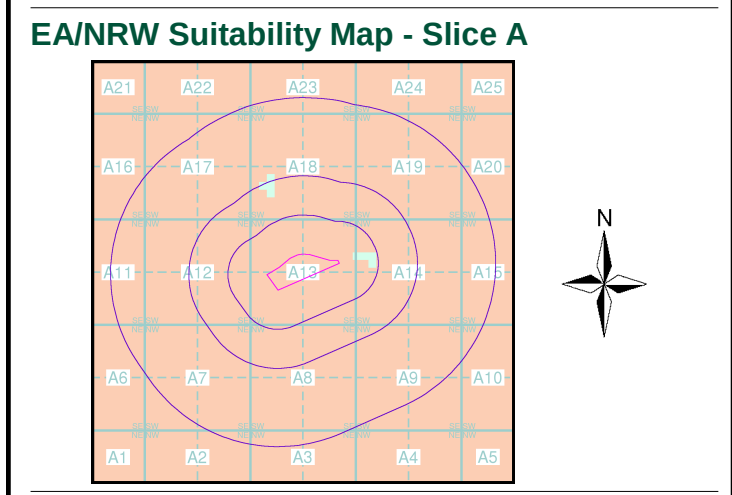
Contours (height in metres)

- Standard Contour
- Master Contour
- Spot Height

Suitability

See the suitability map below

- National to county
- County to town
- Town to street
- Street to parcels of land
- Property



Order Details

Order Number: 167915730_1_1
Customer Ref: 394359GE05
National Grid Reference: 341330, 399790
Slice: A
Site Area (Ha): 5.08
Search Buffer (m): 1000

Site Details

Headbolt Lane Station, LIVERPOOL, L33 3AU



M

MOTT MACDONALD

EA/NRW Surface Water 100 Year Return Velocity and Flow Direction Map (1:10,000)

General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point

Surface Water Velocity and Direction

- 0.00 - 0.25m/s
- 0.25 - 0.50m/s
- 0.50 - 1.00m/s
- 1.00 - 2.00m/s
- > 2.00m/s

Flow Direction at maximum velocity

Contours (height in metres)

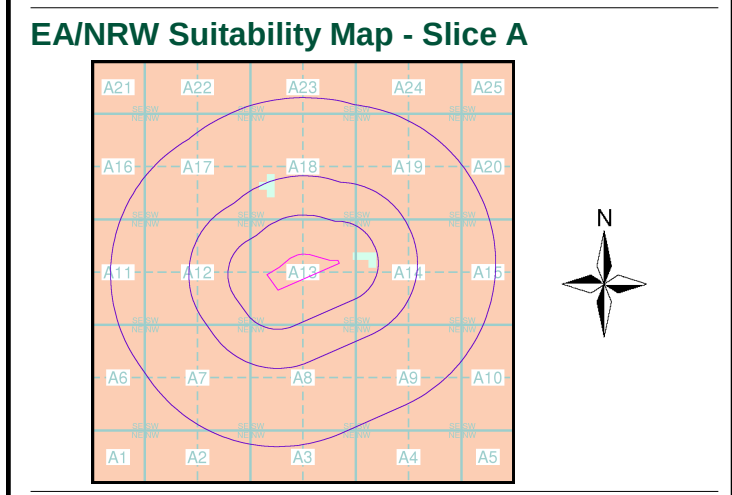
- Standard Contour
- Master Contour
- Spot Height

MLW Mean Low Water
MHW Mean High Water

Suitability

See the suitability map below

- National to county
- County to town
- Town to street
- Street to parcels of land
- Property

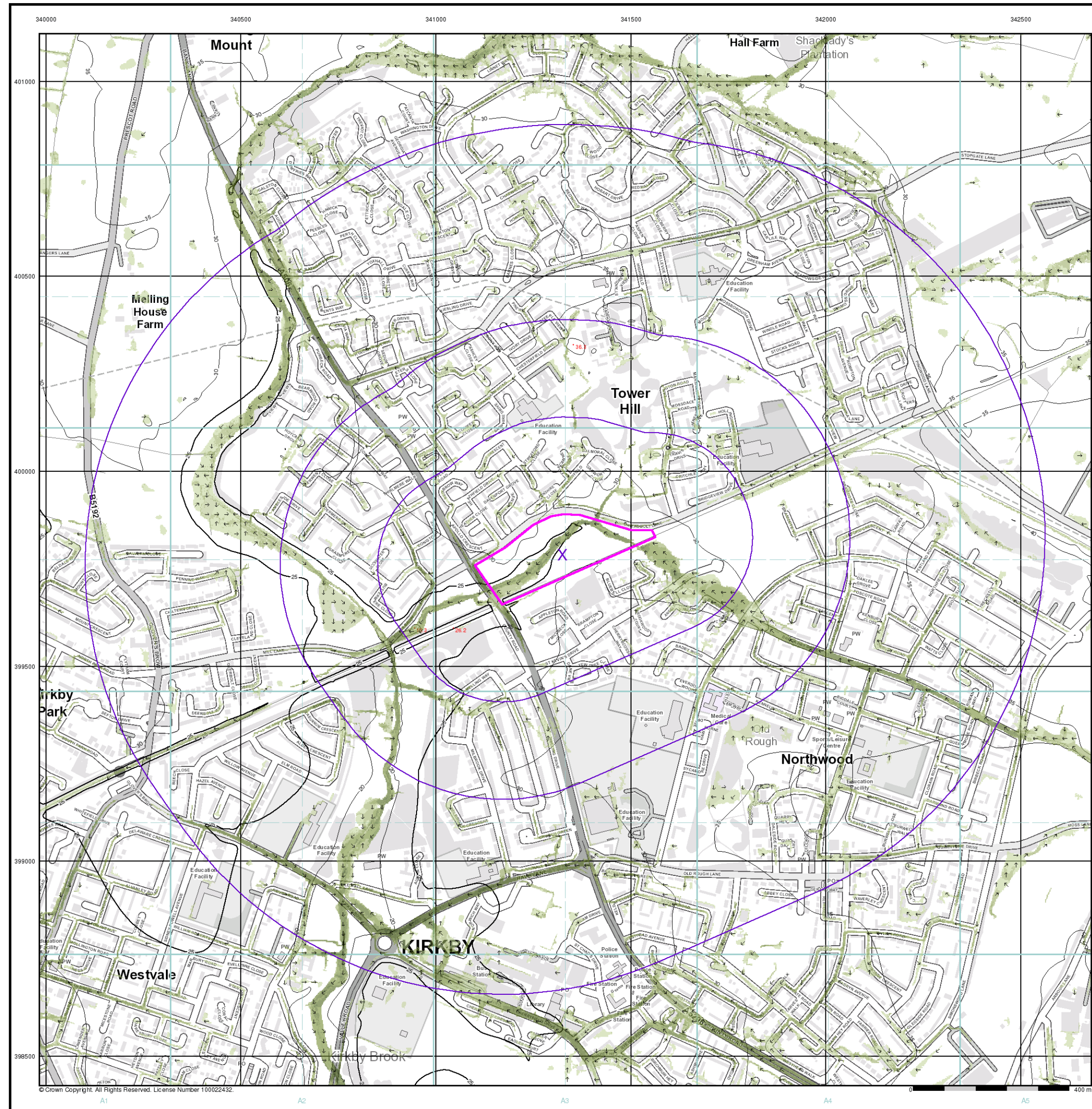


Order Details

Order Number: 167915730_1_1
Customer Ref: 394359GE05
National Grid Reference: 341330, 399790
Slice: A
Site Area (Ha): 5.08
Search Buffer (m): 1000

Site Details

Headbolt Lane Station, LIVERPOOL, L33 3AU



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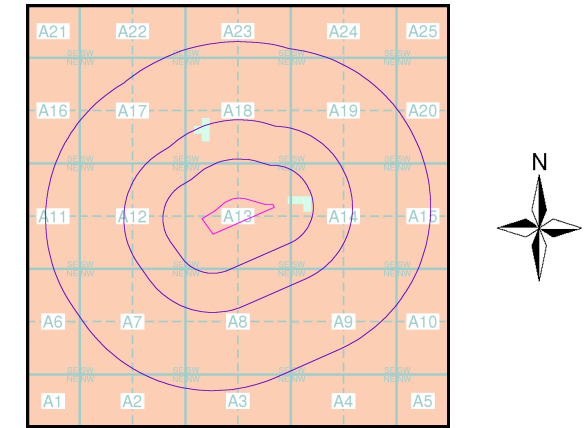
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MOTT MACDONALD

EA/NRW Surface Water 1000 Year Return Velocity and Flow Direction Map (1:10,000)

- General**
- Specified Site
 - Specified Buffer(s)
 - Bearing Reference Point
- Surface Water Velocity and Direction**
- 0.00 - 0.25m/s
 - 0.25 - 0.50m/s
 - 0.50 - 1.00m/s
 - 1.00 - 2.00m/s
 - > 2.00m/s
- Flow Direction at maximum velocity
- Contours (height in metres)**
- Standard Contour
 - Master Contour
 - Spot Height
- MLW Mean Low Water
- MHW Mean High Water
- Suitability**
- See the suitability map below
- National to county
 - County to town
 - Town to street
 - Street to parcels of land
 - Property

EA/NRW Suitability Map - Slice A



Order Details

Order Number: 167915730_1_1
Customer Ref: 394359GE05
National Grid Reference: 341330, 399790
Slice: A
Site Area (Ha): 5.08
Search Buffer (m): 1000

Site Details

Headbolt Lane Station, LIVERPOOL, L33 3AU



M

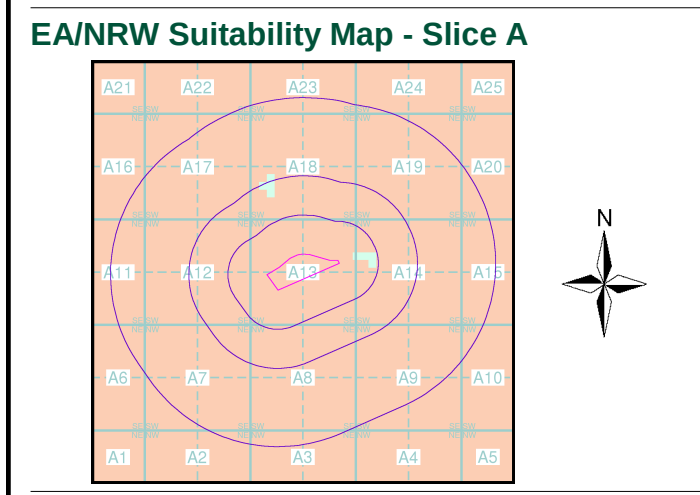
M

MOTT MACDONALD EA/NRW Surface Water 30 Year Return Hazard Rating Map (1:10,000)

- General**
- Specified Site
 - Specified Buffer(s)
 - Bearing Reference Point
- Surface Water Hazard Rating**
- Low (0.5 – 0.75)
 - Moderate (0.75 – 1.25)
 - Significant (1.25 – 2.0)
 - Extreme (>2.0)

- Contours (height in metres)**
- Standard Contour
 - Master Contour
 - Spot Height
- MLW Mean Low Water
- MHW Mean High Water
- 167.8

- Suitability**
- See the suitability map below
- National to county
 - County to town
 - Town to street
 - Street to parcels of land
 - Property



Order Details

Order Number: 167915730_1_1
Customer Ref: 394359GE05
National Grid Reference: 341330, 399790
Slice: A
Site Area (Ha): 5.08
Search Buffer (m): 1000

Site Details

Headbolt Lane Station, LIVERPOOL, L33 3AU



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M

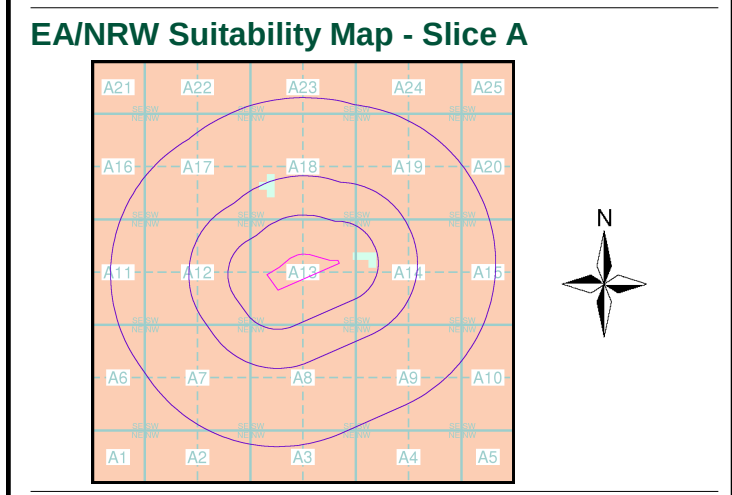
MOTT MACDONALD

EA/NRW Surface Water 100 Year Return Hazard Rating Map (1:10,000)

- General**
- Specified Site
 - Specified Buffer(s)
 - Bearing Reference Point
- Surface Water Hazard Rating**
- Low (0.5 – 0.75)
 - Moderate (0.75 – 1.25)
 - Significant (1.25 – 2.0)
 - Extreme (>2.0)

- Contours (height in metres)**
- Standard Contour
 - Master Contour
 - Spot Height
- MLW Mean Low Water
- MHW Mean High Water
- 167.8

- Suitability**
- See the suitability map below
- National to county
 - County to town
 - Town to street
 - Street to parcels of land
 - Property



Order Details

Order Number: 167915730_1_1
Customer Ref: 394359GE05
National Grid Reference: 341330, 399790
Slice: A
Site Area (Ha): 5.08
Search Buffer (m): 1000

Site Details

Headbolt Lane Station, LIVERPOOL, L33 3AU



M

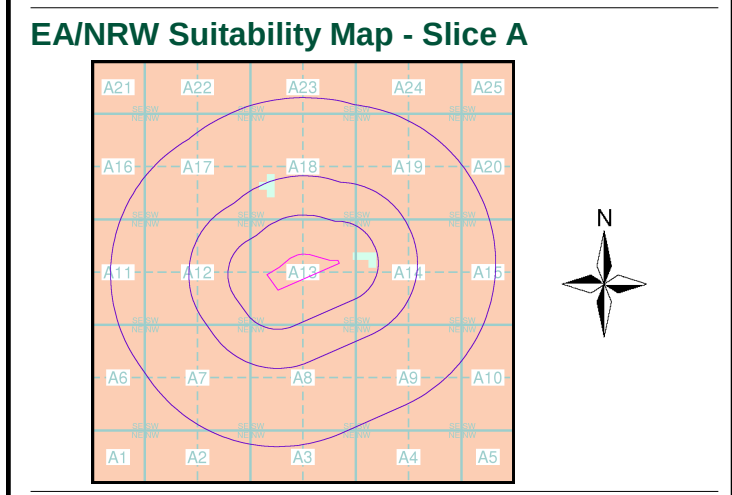
M

MOTT MACDONALD EA/NRW Surface Water 1000 Year Return Hazard Rating Map (1:10,000)

- General**
- Specified Site
 - Specified Buffer(s)
 - Bearing Reference Point
- Surface Water Hazard Rating**
- Low (0.5 – 0.75)
 - Moderate (0.75 – 1.25)
 - Significant (1.25 – 2.0)
 - Extreme (>2.0)

- Contours (height in metres)**
- Standard Contour
 - Master Contour
 - Spot Height
- MLW Mean Low Water
MHW Mean High Water
- Spot Height: 167.8

- Suitability**
- See the suitability map below
- National to county
 - County to town
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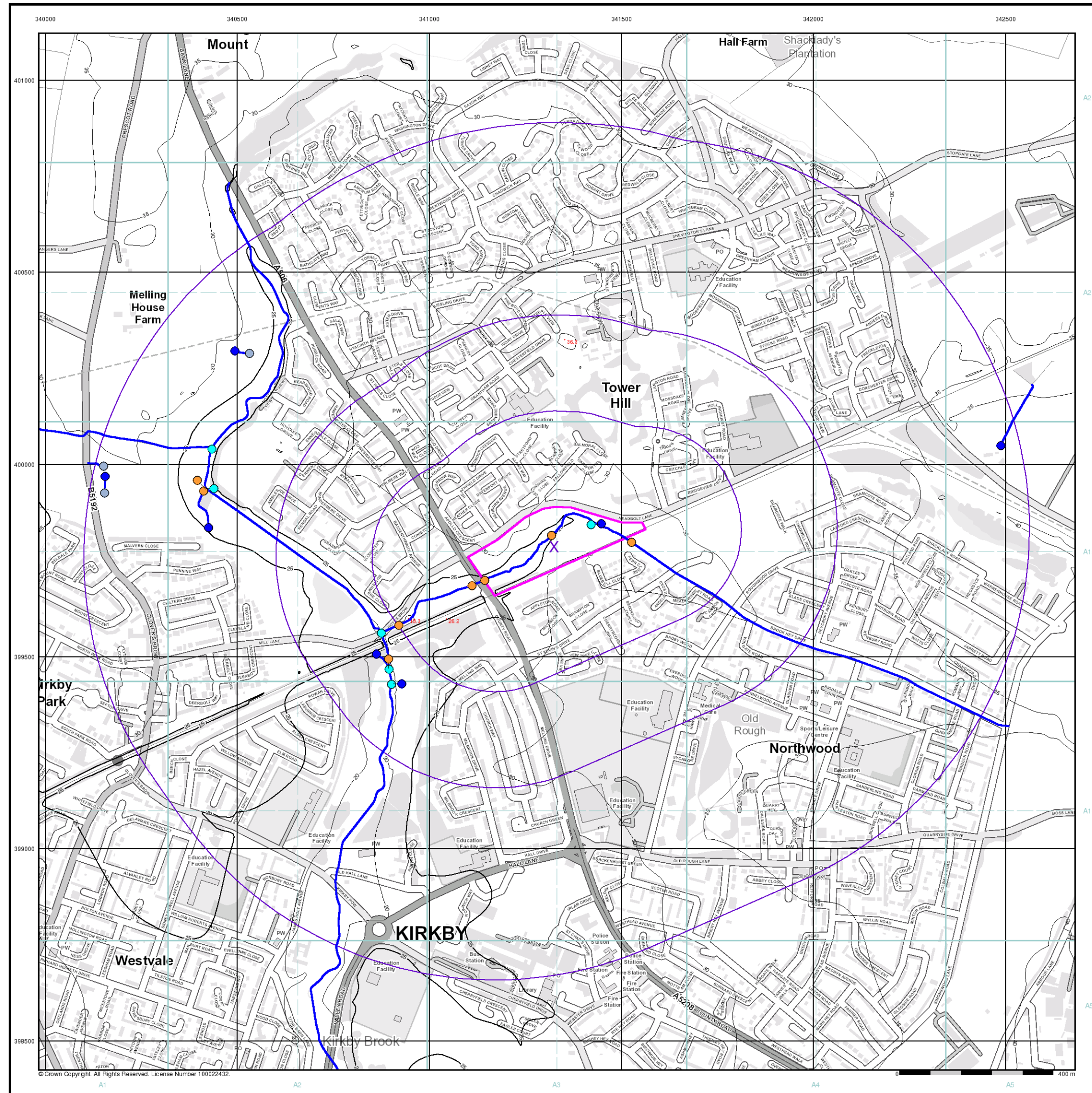


Order Details

Order Number: 167915730_1_1
Customer Ref: 394359GE05
National Grid Reference: 341330, 399790
Slice: A
Site Area (Ha): 5.08
Search Buffer (m): 1000

Site Details

Headbolt Lane Station, LIVERPOOL, L33 3AU

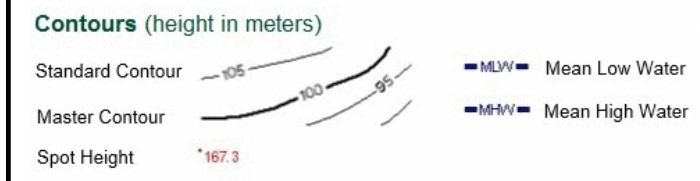


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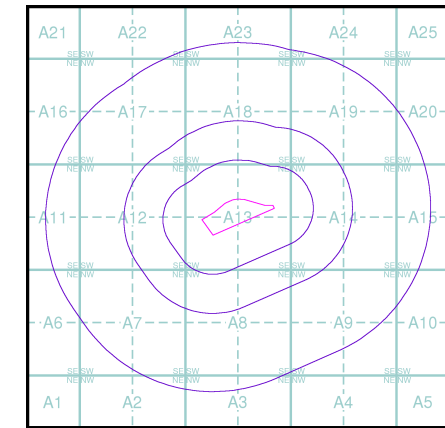
M

MOTT MACDONALD OS Water Network Lines Map (1:10,000)

- General**
- Specified Site
 - Specified Buffer(s)
 - Bearing Reference Point
- OS Water Network Data**
- | | |
|--------------|-------------------------|
| Canal | Drain |
| Reservoir | Other |
| Foreshore | Lake |
| Marsh | Transfer |
| Tidal River | Lock Or Flight Of Locks |
| Inland River | Sea |
| Junction | Source |
| Outlet | Other |
| Pseudo | |



OS Water Network Map - Slice A



Order Details

Order Number: 167915730_1_1
Customer Ref: 394359GE05
National Grid Reference: 341330, 399790
Slice: A
Site Area (Ha): 5.08
Search Buffer (m): 1000

Site Details

Headbolt Lane Station, LIVERPOOL, L33 3AU



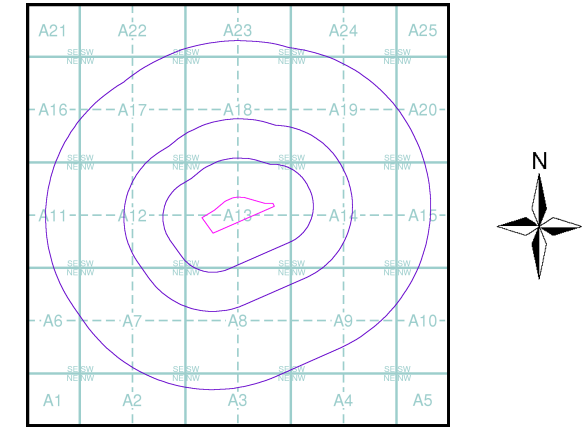
M

M

MOTT MACDONALD EA/NRW Historic Flood Map (1:10,000)

- ### General
- Specified Site
 - Specified Buffer(s)
 - Bearing Reference Point
 - Map ID
- ### Historic Flood Events Data
- | | |
|--|---------------------------------------|
| Channel Capacity Exceeded (no raised defences) | Obstruction/Blockage - Culvert |
| Channel Capacity Exceeded /Surface Water | Obstruction/Blockage - Debris Screen |
| Groundwater/High Water Table | Operational Failure/Breach of Defence |
| Local Drainage/Surface Water | Other |
| Mechanical Failure | Overtopping of Defences |
| Obstruction/Blockage - Bridge | Surface Water |
| Obstruction/Blockage - Channel | Unknown |
| Historical Flood Liabilities | |
- ### Contours (height in metres)
- Standard Contour 105
- Master Contour 100
- Spot Height 167.8
- MLW Mean Low Water
- MHW Mean High Water

EA/NRW Historic Flood Map - Slice A

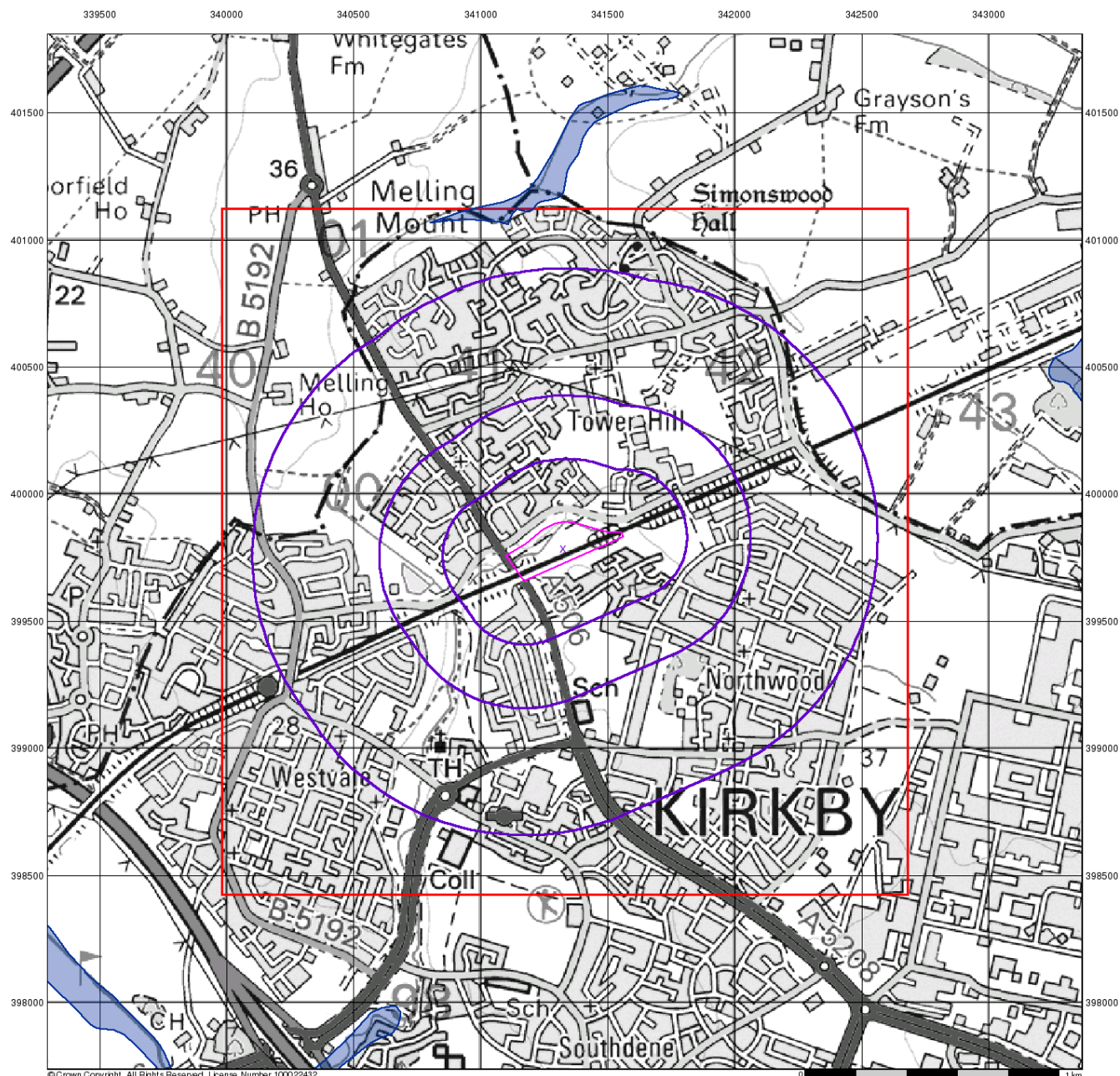


Order Details

Order Number: 167915730_1_1
Customer Ref: 394359GE05
National Grid Reference: 341330, 399790
Slice: A
Site Area (Ha): 5.08
Search Buffer (m): 1000

Site Details

Headbolt Lane Station, LIVERPOOL, L33 3AU



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BGS Flood Data (1:50,000)

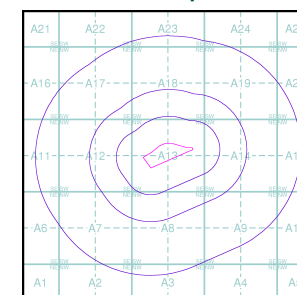
General

- Specified Site
- Specified Buffer(s)
- Slice
- Bearing Reference Point
- Map ID

BGS Geological Indicators of Flooding

- Coastal
- Inland
- Bodies of Water

BGS Flood Data Map - Slice A



Order Details

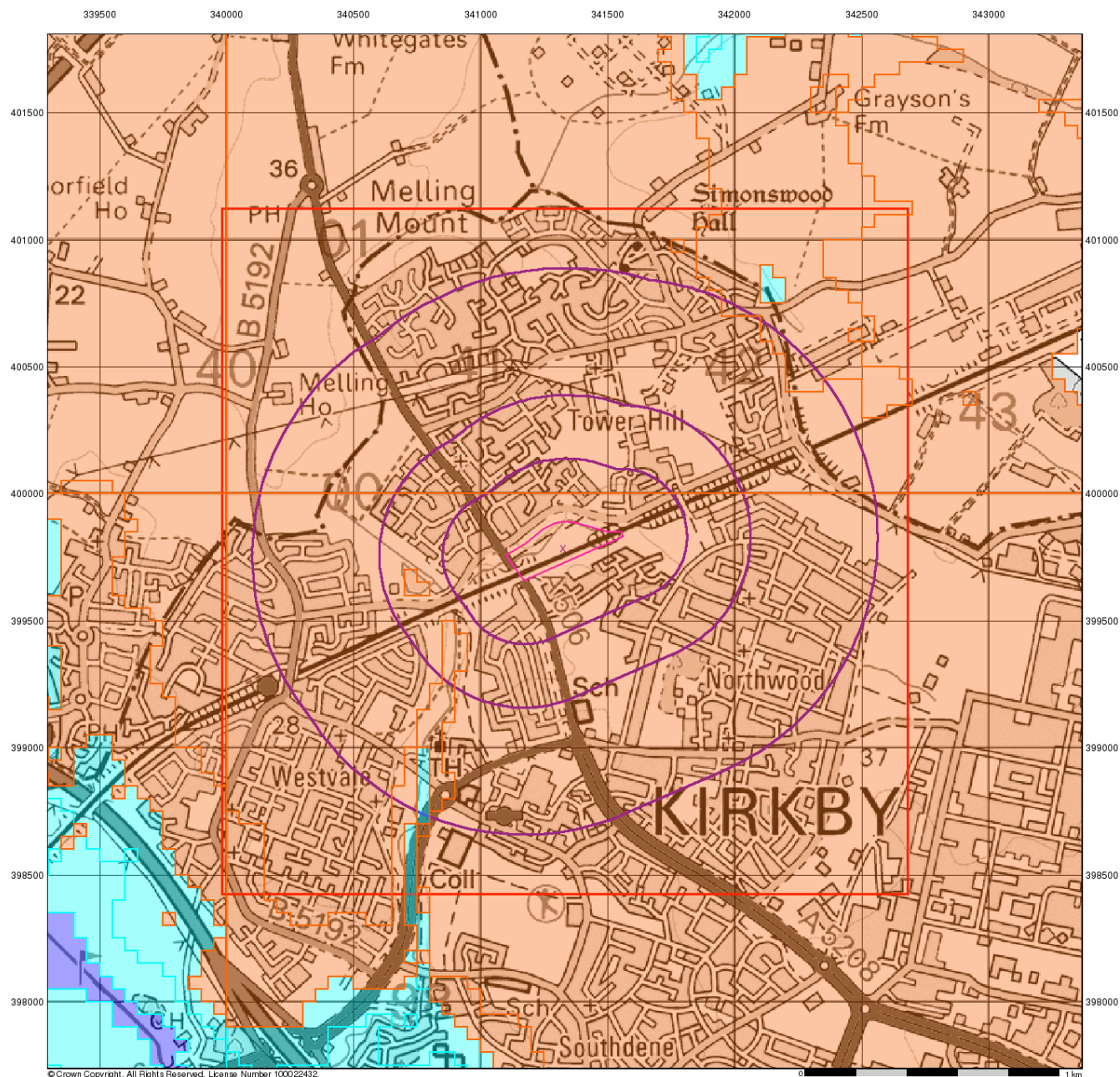
Order Number: 167915730_1_1
Customer Ref: 394359GE05
National Grid Reference: 341330, 399790
Slice: A
Site Area (Ha): 5.08
Search Buffer (m): 1000

Site Details

Headbolt Lane Station, LIVERPOOL, L33 3AU

Landmark
INFORMATION GROUP

Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



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BGS Flood Data (1:50,000)

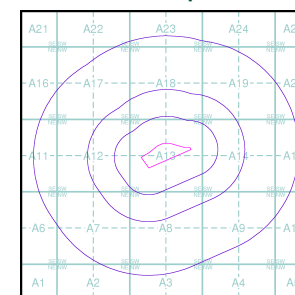
General

- ◊ Specified Site
- Specified Buffer(s)
- X Bearing Reference Point
- Slice
- B Map ID

BGS Groundwater Flooding Susceptibility

- Potential for Groundwater Flooding to Occur at Surface
- Potential for Groundwater Flooding of Property Situated Below Ground Level
- Limited Potential for Groundwater Flooding to Occur

BGS Flood Data Map - Slice A



Order Details

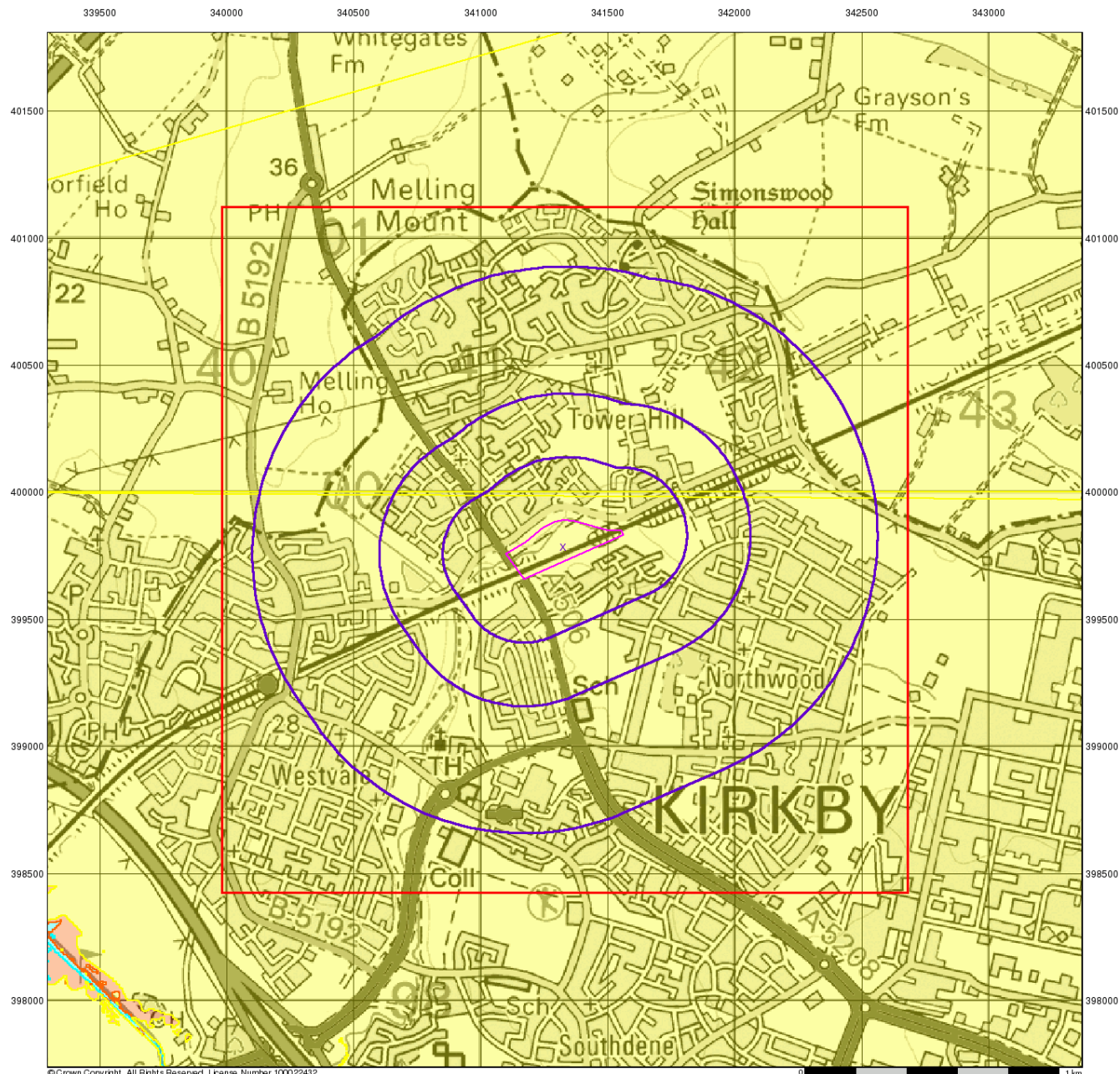
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Customer Ref: 394359GE05
National Grid Reference: 341330, 399790
Slice: A
Site Area (Ha): 5.08
Search Buffer (m): 1000

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GeoSmart Information Groundwater Flood Map (1:50,000)

General

Specified Site Specified Buffer(s) Bearing Reference Point

Slice

GeoSmart Information Groundwater Flooding Risk

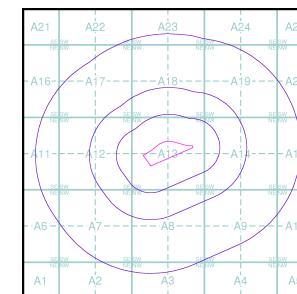
High Risk

Moderate Risk

Low Risk

Negligible Risk

GeoSmart Information Groundwater Flood Map - Slice A



Order Details

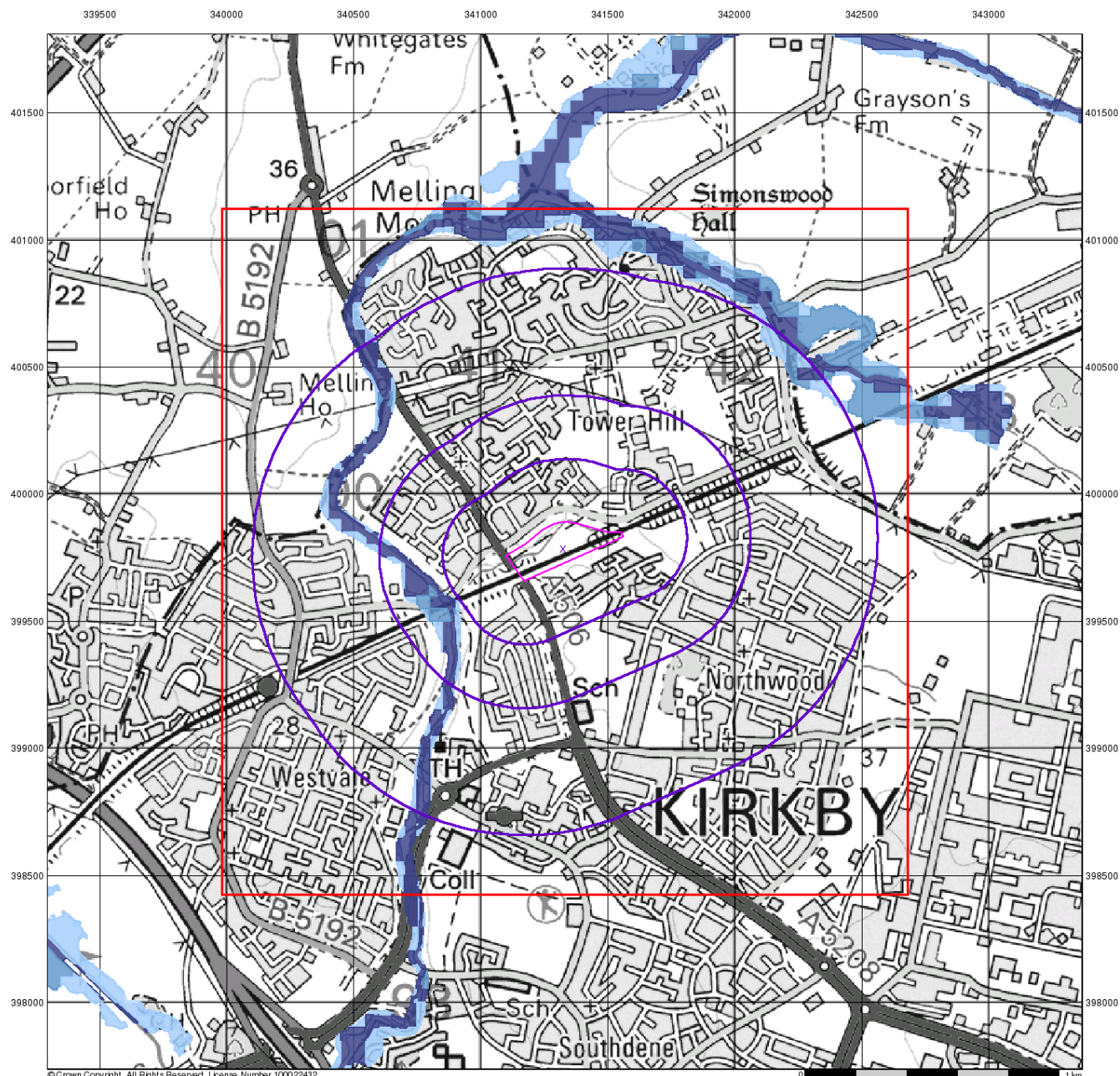
Order Number: 167915730_1_1
Customer Ref: 394359GE05
National Grid Reference: 341330, 399790
Slice: A
Site Area (Ha): 5.08
Search Buffer (m): 1000

Site Details

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EA/NRW RoFRS Data (1:50,000)

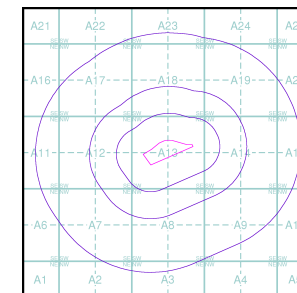
General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice
- Map ID

Risk of Flooding from Rivers and Sea (RoFRS)

- High Risk
- Medium Risk
- Low Risk
- Very Low Risk

EA/NRW RoFRS Data Map - Slice A



Order Details

Order Number: 167915730_1_1
 Customer Ref: 394359GE05
 National Grid Reference: 341330, 399790
 Slice: A
 Site Area (Ha): 5.08
 Search Buffer (m): 1000

Site Details

Headbolt Lane Station, LIVERPOOL, L33 3AU

Landmark
 INFORMATION GROUP

Tel: 0844 844 9952
 Fax: 0844 844 9951
 Web: www.ernirocheck.co.uk

E. Network Rail Earthwork Inspection Records

SEHI Soil Embankment

Reference WKL2_28.1440_U_341224_399704_23_01_2013_12_37_36
 EHC  A

Location Information

Inspection 5 Chain Reference	WKL2_28.1430_U_341288_399718_05_03_2012_14_03_42				
ELR	WKL2				
Start Mileage (Miles.Yards)	28.1440	End Mileage	28.1539	Side	Up
Start Easting	341,267	Northing	399,720		
End Easting	341,181	Northing	399,688		
Length (Mile.Yards)	0.0099				
Start Connection	-				
End Connection	-				
Approach	False				
Structure Name	-				

Height Ranges

Start Height (m)	1.0	End Height (m)	5.0
Min. Height (m)	1.0	Max. Height (m)	5.0

Actual Geometry Information

	Slope Angle (deg)	Slope Hyp (m)	Slope Height (m)
Upper Slope	32.0	9.4	5.0
Middle Slope	0.0	0.0	0.0
Lower Slope	0.0	0.0	0.0
Actual Slope to Track Separation (m)	2.0		

LIDAR Derived Geometry

LIDAR Adjacent Natural Slope Angle (deg.)	0
LIDAR Adjacent Natural Slope Direction	Not Inspected
LIDAR Maximum Height (m)	0.00
LIDAR Maximum Angle (deg.)	0

SEHI Soil Embankment

Scored Geometry (A-H) Information

(A) Slope Angle and Height	25 to <35 degrees, 3m to <10m High (A7)
(B) Slope Angle Adjacent to Earthwork	(-)ve falls away from earthwork (B1)
(D) Construction Activity	None (D1)
(E) Min. Slope to Track Separation	Embankment cess width 1-3m (E3)
(F) Historic Geology	Granular Glacial Till / Terrace Deposits / Blown Sand (F7)
(FF) Bedrock Geology	General Competent Rock (FF11)
(FF) Drift Geology	Granular Glacial Till / Terrace Deposits / Blown Sand (FF7)
BGS Superficial Geology	-
BGS Bedrock Geology	-
(G) Slope Composition at Crest	Fine granular / Ash (G2)
(H) Slope Composition at Toe	Fine granular / Ash (H3)
Boulders Present?	None Present
Rock Outcrops \ Faces Present?	None Present

Retaining Walls (C) Information

No Retaining Walls Present

Drainage (I-P) Information

(I) Slope Face Drainage Condition	Face dry (I1)
(J) Slope Toe Drainage Condition	Dry / free draining (J1)
(K) Sub-Drainage	Absent & not required (K1)
(L) Drainage of Adjacent Land	None (L1)
(M) Adjacent Catchment Depth	< 100m (M4)
(N) Adjacent Catchment Gradient	Slopes away from structure (N4)
(O) Catchment Surface	Grazed Pasture (O2)
(P) Catchment Geology	Mixed (P3)

SEHI Soil Embankment

Movement Indicators (Q-DD) Information

(Q) Slope Form of Earthwork	Uniform toe (Q1) And Uniform Crest (Q5)
(R) Geomorphology of Adjacent Land	No Significant Features (R3)
(S) Track Movements	No Significant Features (S4)
(T) Ballast	Maximum 0.5m <1.5m thickness, sleeper ends covered (T3)
(U) Troughing	No Significant Features or Absent (U5)
(V) Leaning Trees / Structures	Random (V2)
(W) Cracking	None (W1)
(X) Mass Movement	None (X1)
(Y) History of Instability	None (Y1)
(Z) Mining / Removal of Support	No Significant Features (Z2)
(AA) Animal Activity	Occasional Rabbit - <10 burrow holes /20sq.m (AA2)
(BB) Tree Cover	Occasional mature trees - <10 trees /20sq.m on slope angles >25deg. (BB4)
(CC) Ground Cover	Sparse grass / bramble cover (CC3) Dense grass / bramble cover (CC4)
(DD) Condition of Opposite Side Embankment	Adjacent ground falls away from toe of embankment or falls towards it at <5 degrees (DD1)

No Line Movement Indicators Present
No Point Movement Indicators Present

Intervention Works

Pre-Intervention SEHI -115

No Linear Intervention Works Present
No Point Intervention Works Present

SEHI Soil Embankment

Photograph Information

ELR	Start Mileage	Up/Down Side	Photo Date	Photo Time
WKL2	28.1520	Up	09 March 2018	13:43

SEHI Soil Embankment

Examiner

Completed in Current Season	True
Examined By	Phil McNerney, Amey (LNW)
Examined Date	09 March 2018 13:46

Comments

Current Season Comments	Phil McNerney, Amey (LNW): 09/03/18: grade increasing to 5m emb, no mi's noted, uniform crest with small conc bag ballast retention, occ burrowing
Historic Comments	2013: EE: Rob Mullen, Amey (LNW): 23/01/13: Up to 5m high embankment; no significant defects noted.

CP4 SSHI

	Rot.	Trans.	Earth.	Wash.	Burrow.
Actual Score	4	4	3	4	24
Potential Score	26	34	45	44	75
SSHI	2.6	3.9	3.9	3.9	6.5
Earthworks Factor	1.3				
Overall SSHI Score	6.5				
SSHI Category	 Marginal				
CP5 Category	 Marginal				

EHC

SEHI	-115
EHC	 A
Asset Examination Status	Full

EACB

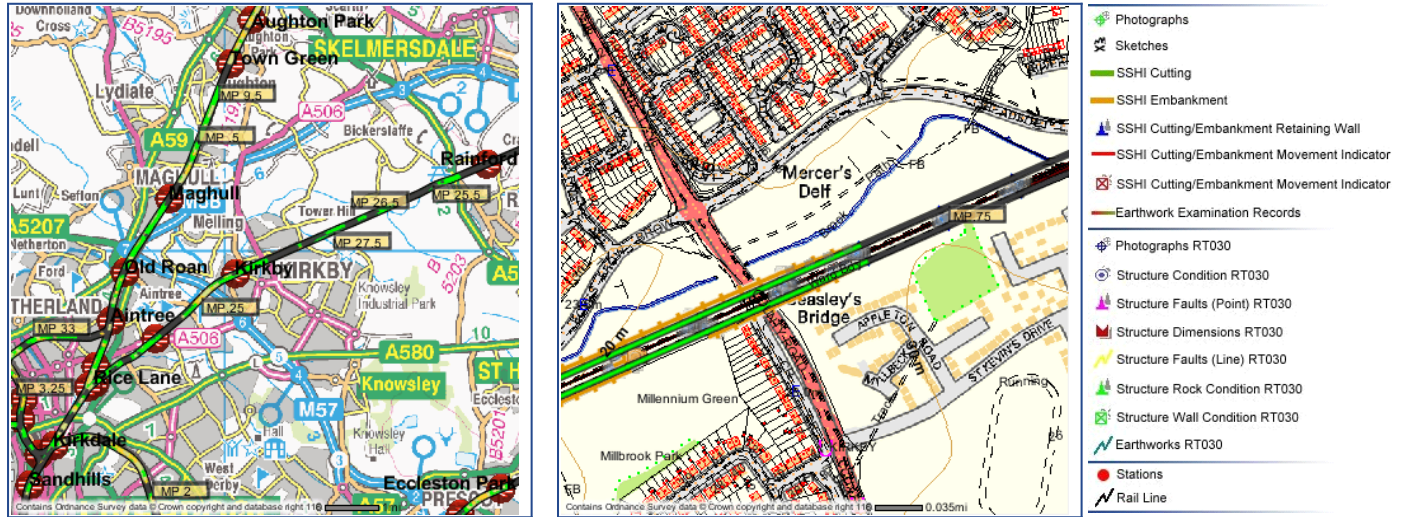
CCT Value	0.00020
EACB	1

Asset Examination Frequency (Years)

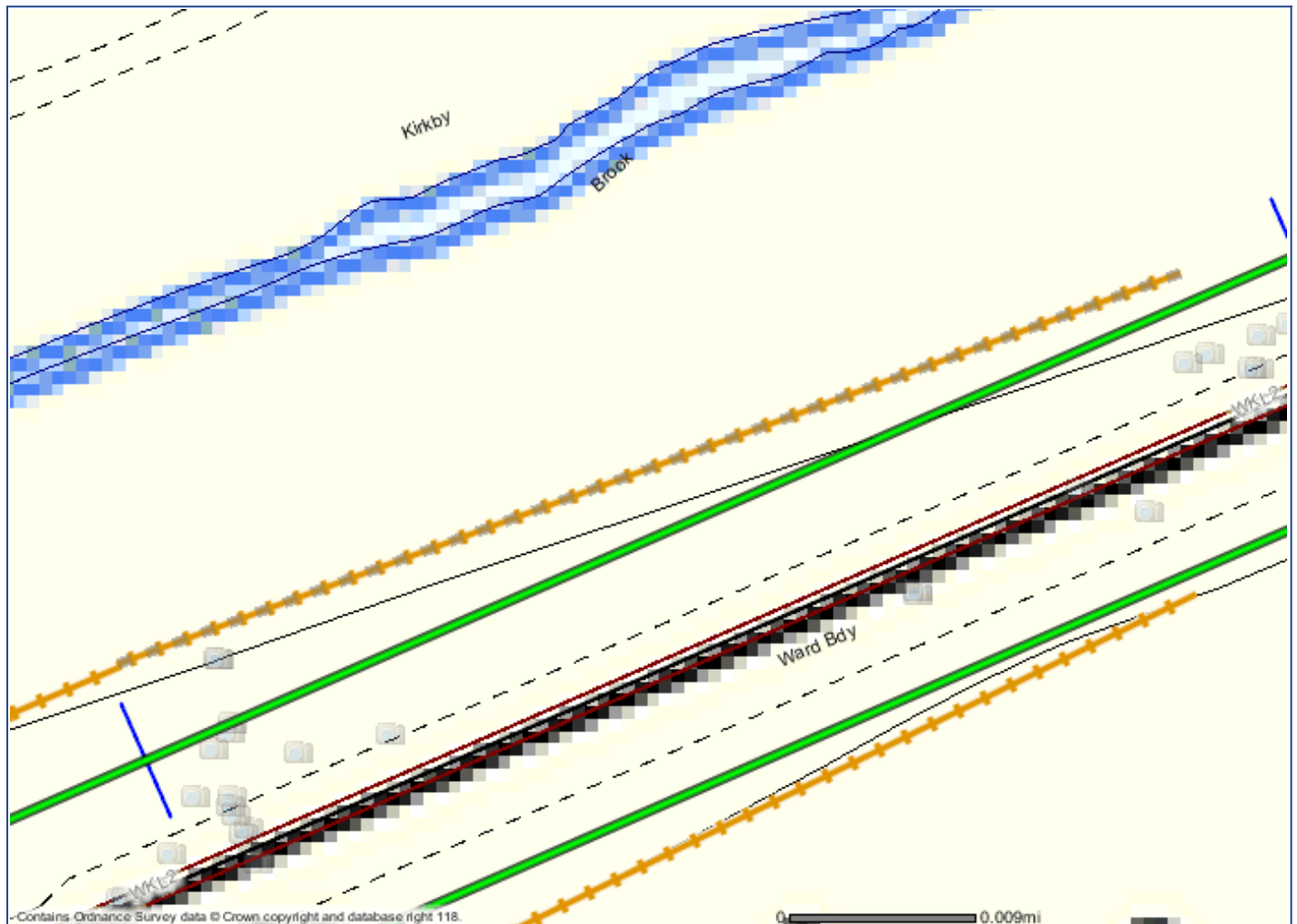
Scored Asset Examination Frequency	10
Reviewed Asset Examination Frequency	0
Overall Asset Examination Frequency	5

SEHI Soil Embankment

Overview Maps



Location Map



SEHI Soil Embankment

Reference WKL2_28.1450_D_341231_399675_23_01_2013_12_38_14
 EHC  A

Location Information

Inspection 5 Chain Reference	WKL2_28.1430_D_341182_399670_05_03_2012_11_43_32				
ELR	WKL2				
Start Mileage (Miles.Yards)	28.1450	End Mileage	28.1541	Side	Down
Start Easting	341,268	Northing	399,694		
End Easting	341,193	Northing	399,657		
Length (Mile.Yards)	0.0092				
Start Connection	-				
End Connection	-				
Approach	False				
Structure Name	-				

Height Ranges

Start Height (m)	1.0	End Height (m)	4.0
Min. Height (m)	1.0	Max. Height (m)	4.0

Actual Geometry Information

	Slope Angle (deg)	Slope Hyp (m)	Slope Height (m)
Upper Slope	32.0	7.5	4.0
Middle Slope	0.0	0.0	0.0
Lower Slope	0.0	0.0	0.0
Actual Slope to Track Separation (m)	4.0		

LIDAR Derived Geometry

LIDAR Adjacent Natural Slope Angle (deg.)	0
LIDAR Adjacent Natural Slope Direction	Not Inspected
LIDAR Maximum Height (m)	0.00
LIDAR Maximum Angle (deg.)	0

SEHI Soil Embankment

Scored Geometry (A-H) Information

(A) Slope Angle and Height	25 to <35 degrees, 3m to <10m High (A7)
(B) Slope Angle Adjacent to Earthwork	(+)ve falls towards e/work 5 to 15 degs (B3)
(D) Construction Activity	None (D1)
(E) Min. Slope to Track Separation	Embankment cess width 3-6m (E2)
(F) Historic Geology	Granular Glacial Till / Terrace Deposits / Blown Sand (F7)
(FF) Bedrock Geology	Not Inspected
(FF) Drift Geology	Granular Glacial Till / Terrace Deposits / Blown Sand (FF7)
BGS Superficial Geology	-
BGS Bedrock Geology	-
(G) Slope Composition at Crest	Fine granular / Ash (G2)
(H) Slope Composition at Toe	Unknown (H8)
Boulders Present?	Not Inspected
Rock Outcrops \ Faces Present?	None Present

Retaining Walls (C) Information

No Retaining Walls Present

Drainage (I-P) Information

(I) Slope Face Drainage Condition	Face dry (I1)
(J) Slope Toe Drainage Condition	Dry / free draining (J1)
(K) Sub-Drainage	Absent & not required (K1)
(L) Drainage of Adjacent Land	None (L1)
(M) Adjacent Catchment Depth	100m to 1km (M3)
(N) Adjacent Catchment Gradient	5-25degs. (N2)
(O) Catchment Surface	Rough Grass (O1) Residential (O6)
(P) Catchment Geology	Mixed (P3)

SEHI Soil Embankment

Movement Indicators (Q-DD) Information

(Q) Slope Form of Earthwork	Uniform toe (Q1) And Uniform Crest (Q5)
(R) Geomorphology of Adjacent Land	No Significant Features (R3)
(S) Track Movements	No Significant Features (S4)
(T) Ballast	Maximum 0.5m <1.5m thickness, sleeper ends covered (T3)
(U) Troughing	No Significant Features or Absent (U5)
(V) Leaning Trees / Structures	Random (V2)
(W) Cracking	None (W1)
(X) Mass Movement	None (X1)
(Y) History of Instability	None (Y1)
(Z) Mining / Removal of Support	No Significant Features (Z2)
(AA) Animal Activity	None observed (AA1)
(BB) Tree Cover	Occasional mature trees - <10 trees /20sq.m on slope angles >25deg. (BB4)
(CC) Ground Cover	Dense grass / bramble cover (CC4)
(DD) Condition of Opposite Side Embankment	Adjacent ground falls away from toe of embankment or falls towards it at <5 degrees (DD1)

No Line Movement Indicators Present
No Point Movement Indicators Present

Intervention Works

Pre-Intervention SEHI -135

No Linear Intervention Works Present
No Point Intervention Works Present

SEHI Soil Embankment

Photograph Information

No Photograph Information

SEHI Soil Embankment

Examiner

Completed in Current Season False
 Examined By Rob Mullen, Amey (LNW)
 Examined Date 23 January 2013 12:41

Comments

Current Season Comments -
 Historic Comments 2013:
 EE: Rob Mullen, Amey (LNW): 23/01/13:
 Up to 4m high embankment; no significant defects noted.

CP4 SSHI

	Rot.	Trans.	Earth.	Wash.	Burrow.
Actual Score	4	4	3	4	-21
Potential Score	33	34	40	57	40
SSHI	3.9	3.9	3.9	3.9	3.9
Earthworks Factor	1.3				
Overall SSHI Score	3.9				
SSHI Category	 Serviceable				
CP5 Category	 Serviceable				

EHC

SEHI -135
 EHC  A
 Asset Examination Status Full

EACB

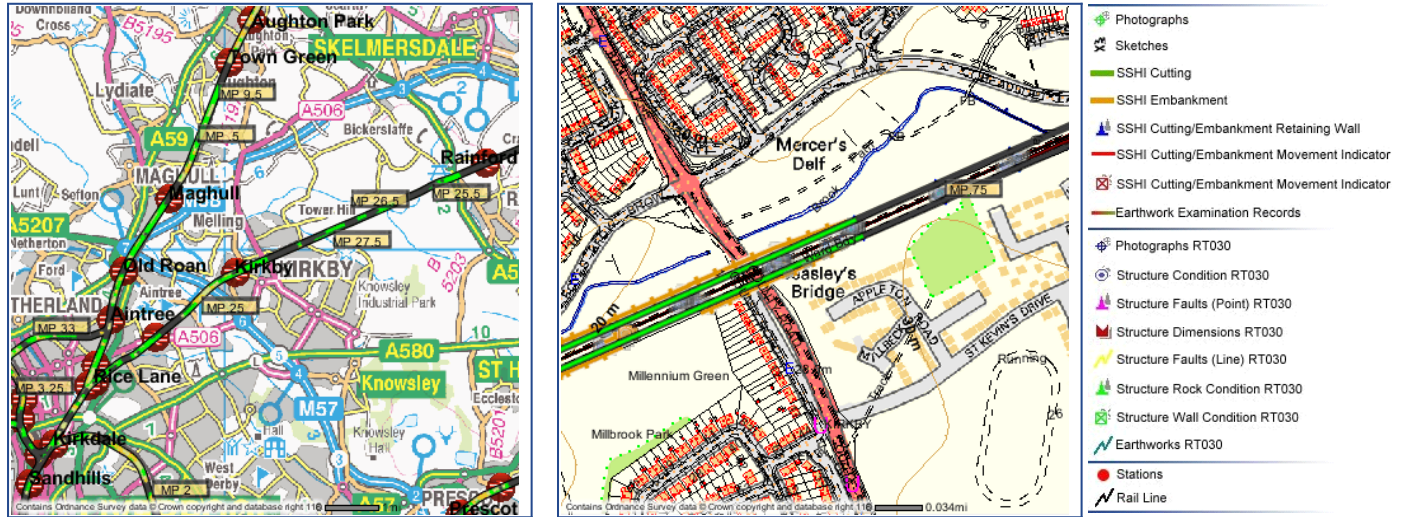
CCT Value 0.00020
 EACB 1

Asset Examination Frequency (Years)

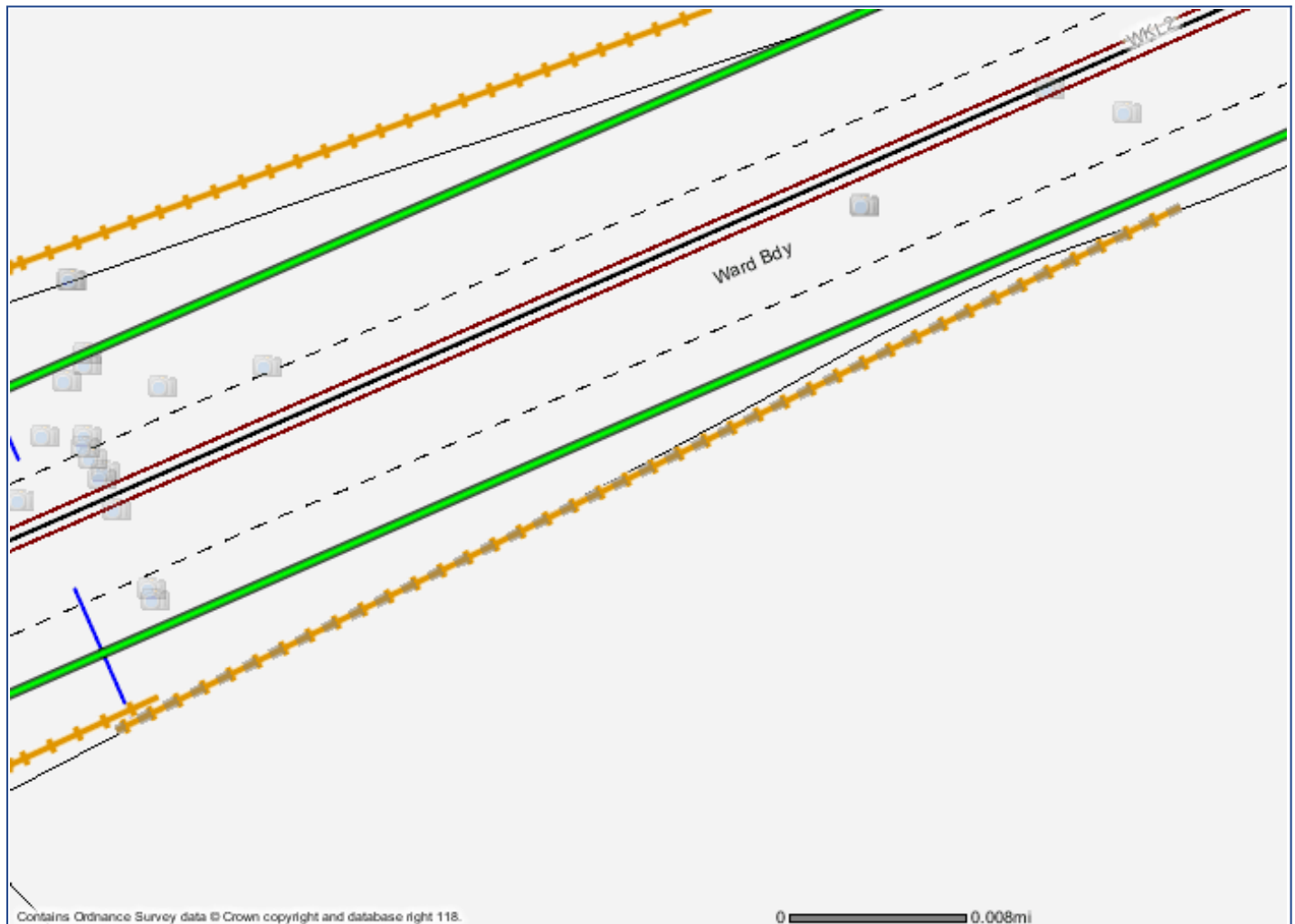
Scored Asset Examination Frequency 10
 Reviewed Asset Examination Frequency 0
 Overall Asset Examination Frequency 10

SEHI Soil Embankment

Overview Maps



Location Map



SEHI Soil Embankment

Reference WKL2_28.1538_D_341149_399637_23_01_2013_12_12_04
 EHC  A

Location Information

Inspection 5 Chain Reference	WKL2_28.1540_D_341092_399627_05_03_2012_11_39_46				
ELR	WKL2				
Start Mileage (Miles.Yards)	28.1538	End Mileage	28.1651	Side	Down
Start Easting	341,196	Northing	399,659		
End Easting	341,101	Northing	399,616		
Length (Mile.Yards)	0.0113				
Start Connection	-				
End Connection	-				
Approach	False				
Structure Name	-				

Height Ranges

Start Height (m)	4.0	End Height (m)	5.0
Min. Height (m)	4.0	Max. Height (m)	5.0

Actual Geometry Information

	Slope Angle (deg)	Slope Hyp (m)	Slope Height (m)
Upper Slope	32.0	9.4	5.0
Middle Slope	0.0	0.0	0.0
Lower Slope	0.0	0.0	0.0
Actual Slope to Track Separation (m)	4.0		

LIDAR Derived Geometry

LIDAR Adjacent Natural Slope Angle (deg.)	0
LIDAR Adjacent Natural Slope Direction	Not Inspected
LIDAR Maximum Height (m)	0.00
LIDAR Maximum Angle (deg.)	0

SEHI Soil Embankment

Scored Geometry (A-H) Information

(A) Slope Angle and Height	25 to <35 degrees, 3m to <10m High (A7)
(B) Slope Angle Adjacent to Earthwork	(+)ve falls towards e/work <5 degrees (B2)
(D) Construction Activity	None (D1)
(E) Min. Slope to Track Separation	Embankment cess width 3-6m (E2)
(F) Historic Geology	Granular Glacial Till / Terrace Deposits / Blown Sand (F7)
(FF) Bedrock Geology	Not Inspected
(FF) Drift Geology	Granular Glacial Till / Terrace Deposits / Blown Sand (FF7)
BGS Superficial Geology	-
BGS Bedrock Geology	-
(G) Slope Composition at Crest	Fine granular / Ash (G2)
(H) Slope Composition at Toe	Unknown (H8)
Boulders Present?	Not Inspected
Rock Outcrops \ Faces Present?	None Present

Retaining Walls (C) Information

No Retaining Walls Present

Drainage (I-P) Information

(I) Slope Face Drainage Condition	Face dry (I1)
(J) Slope Toe Drainage Condition	Dry / free draining (J1)
(K) Sub-Drainage	Absent & not required (K1)
(L) Drainage of Adjacent Land	None (L1)
(M) Adjacent Catchment Depth	100m to 1km (M3)
(N) Adjacent Catchment Gradient	< 5deg. (N3)
(O) Catchment Surface	Rough Grass (O1) Industrial/Hardstanding (O7)
(P) Catchment Geology	Mixed (P3)

SEHI Soil Embankment

Movement Indicators (Q-DD) Information

(Q) Slope Form of Earthwork	Uniform toe (Q1) And Uniform Crest (Q5)
(R) Geomorphology of Adjacent Land	No Significant Features (R3)
(S) Track Movements	No Significant Features (S4)
(T) Ballast	Maximum 0.5m <1.5m thickness, sleeper ends covered (T3)
(U) Troughing	No Significant Features or Absent (U5)
(V) Leaning Trees / Structures	Random (V2)
(W) Cracking	None (W1)
(X) Mass Movement	None (X1)
(Y) History of Instability	None (Y1)
(Z) Mining / Removal of Support	No Significant Features (Z2)
(AA) Animal Activity	None observed (AA1)
(BB) Tree Cover	Occasional mature trees - <10 trees /20sq.m on slope angles >25deg. (BB4)
(CC) Ground Cover	Dense grass / bramble cover (CC4)
(DD) Condition of Opposite Side Embankment	Adjacent ground falls away from toe of embankment or falls towards it at <5 degrees (DD1)

No Line Movement Indicators Present
No Point Movement Indicators Present

Intervention Works

Pre-Intervention SEHI -105

No Linear Intervention Works Present
No Point Intervention Works Present

SEHI Soil Embankment

Photograph Information

No Photograph Information

SEHI Soil Embankment

Examiner

Completed in Current Season False
 Examined By Rob Mullen, Amey (LNW)
 Examined Date 23 January 2013 12:25

Comments

Current Season Comments -
 Historic Comments 2013:
 EE: Rob Mullen, Amey (LNW): 23/01/13:
 ~5m high embankment; no significant defects noted.

CP4 SSHI

	Rot.	Trans.	Earth.	Wash.	Burrow.
Actual Score	4	4	3	4	-21
Potential Score	30	34	40	54	40
SSHI	2.6	3.9	3.9	3.9	3.9
Earthworks Factor	1.3				
Overall SSHI Score	3.9				
SSHI Category	 Serviceable				
CP5 Category	 Serviceable				

EHC

SEHI -105
 EHC  A
 Asset Examination Status Full

EACB

CCT Value 0.00030
 EACB 1

Asset Examination Frequency (Years)

Scored Asset Examination Frequency 10
 Reviewed Asset Examination Frequency 0
 Overall Asset Examination Frequency 10