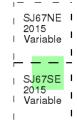




VectorMap Local Published 2015 Source map scale - 1:10,000

VectorMap Local (Raster) is Ordnance Survey's highest detailed 'backdrop' mapping product. These maps are produced from OS's VectorMap Local, a simple vector dataset at a nominal scale of 1:10,000, covering the whole of Great Britain, that has been designed for creating graphical mapping. OS VectorMap Local is derived from large-scale information surveyed at 1:1250 scale (covering major towns and cities),1:2500 scale (smaller towns, villages and developed rural areas), and 1:10 000 scale (mountain, moorland and river estuary areas).

Map Name(s) and Date(s)



Historical Map - Slice A

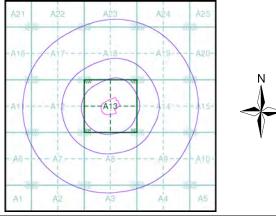


Figure Number: 5.0



A Landmark Information Group Service v47.0 18-May-2015 48 9952 of 13 18! Fax: 0844 844 9951

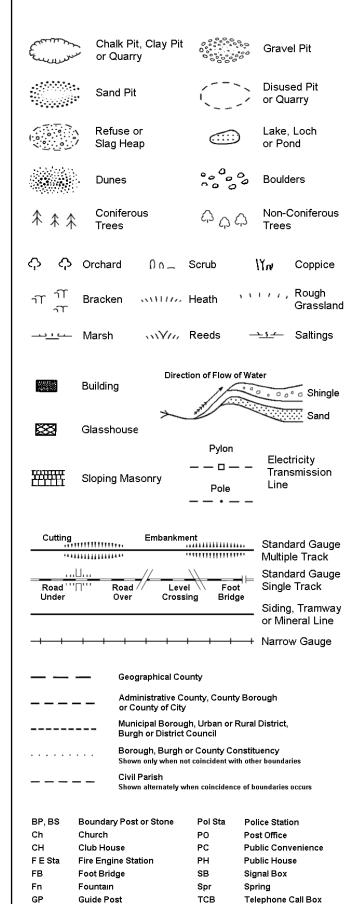
Historical Mapping Legends

Other Gravel Sand Pits Orchard Quarry Reeds Osiers Mixed Wood Deciduous Brushwood Furze Rough Pasture Arrow denotes Trigonometrical flow of water Station Site of Antiquities Bench Mark Pump, Guide Post, Well, Spring, Signal Post **Boundary Post** ·285 Surface Level Sketched Instrumental Contour Contour Fenced Fenced Main Roads Minor Roads Un-Fenced Sunken Road Raised Road Railway over Road over Ri∨er Railway Railway over Level Crossing Road Road over Road over Road over County Boundary (Geographical) County & Civil Parish Boundary Administrative County & Civil Parish Boundary County Borough Boundary (England) Co. Boro. Bdy. County Burgh Boundary (Scotland) Co. Burgh Bdy. Rural District Boundary RD. Bdy.

Civil Parish Boundary

Ordnance Survey County Series 1:10,560

Ordnance Survey Plan 1:10,000



MP

Mile Post

Mile Stone

TCP

Telephone Call Post

1:10,000 Raster Mapping

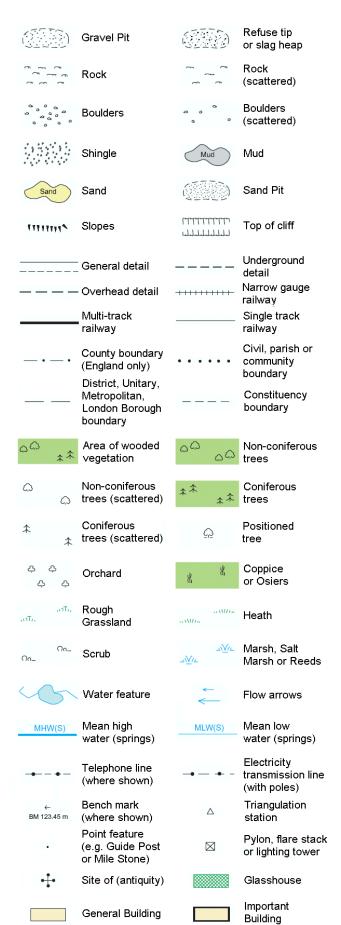
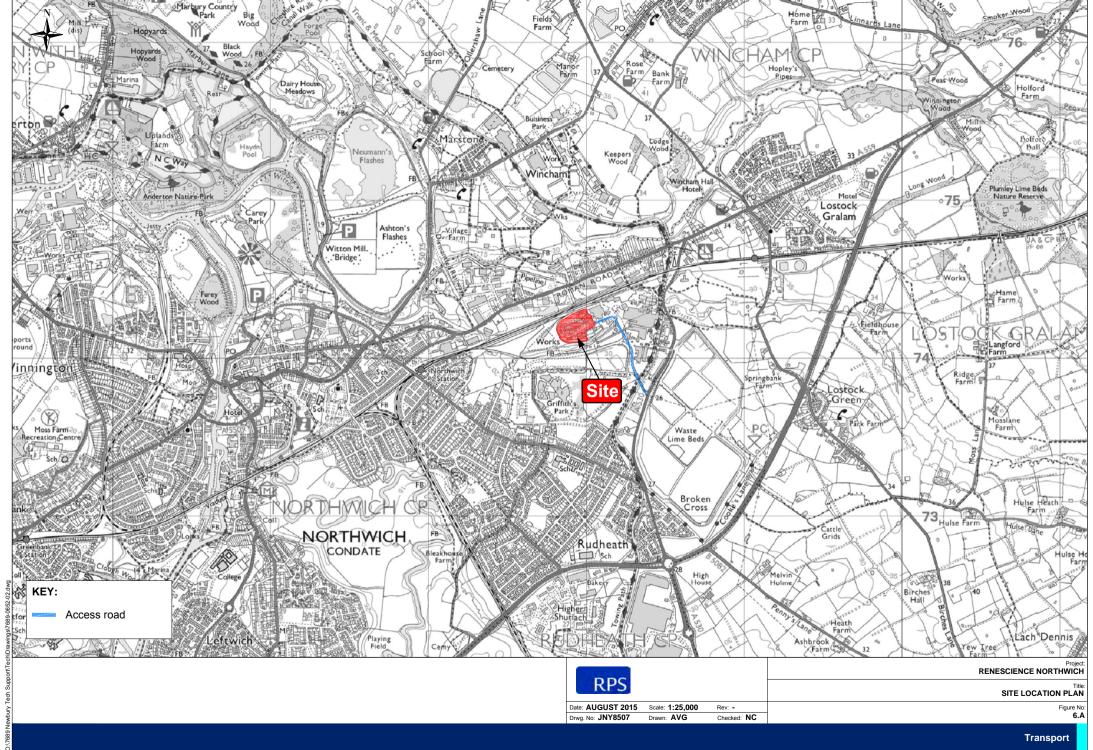
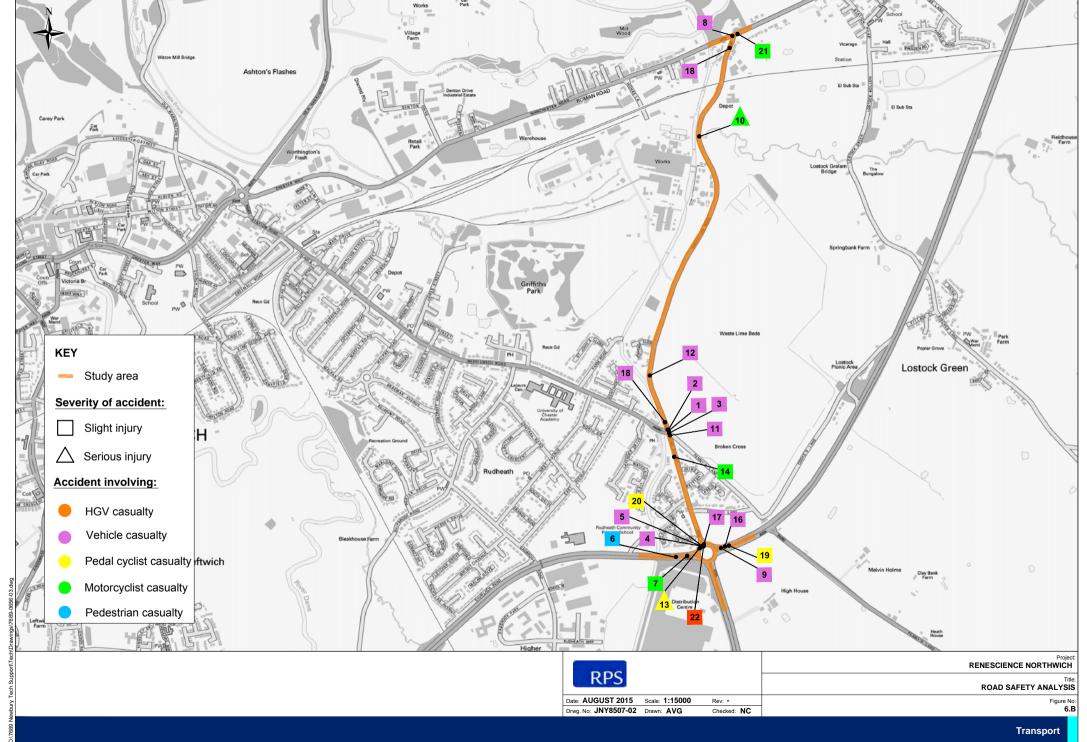


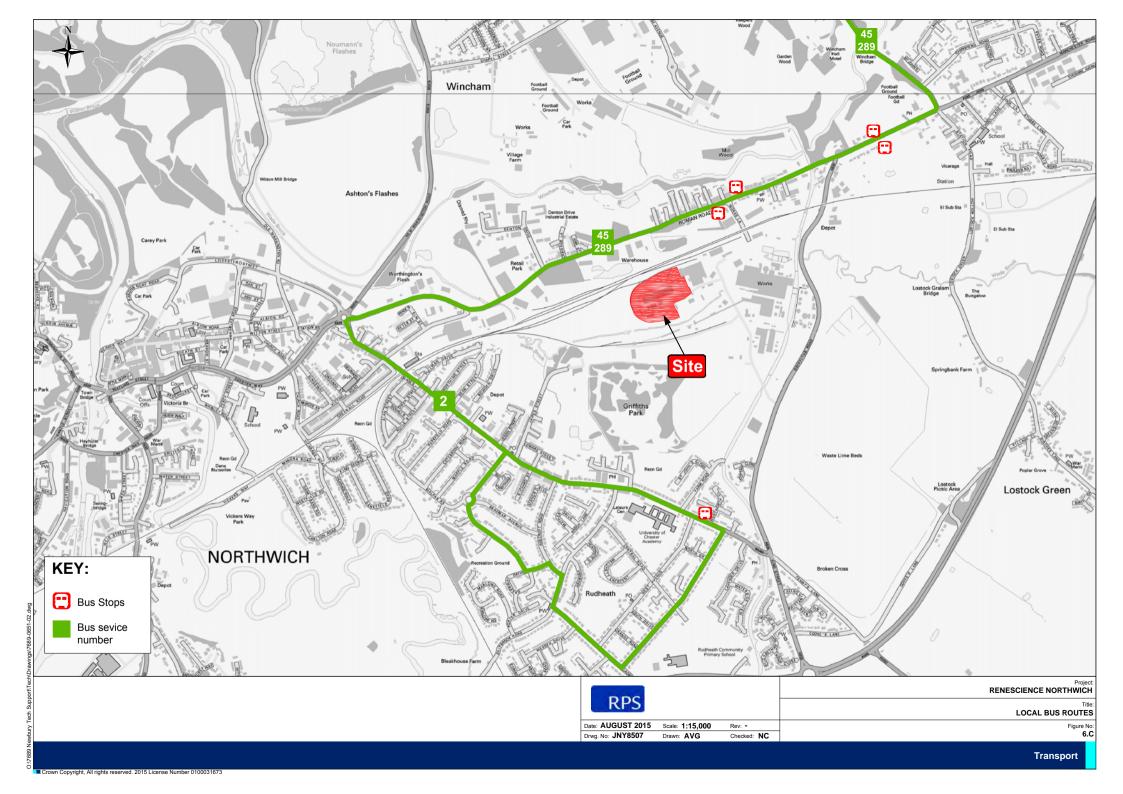


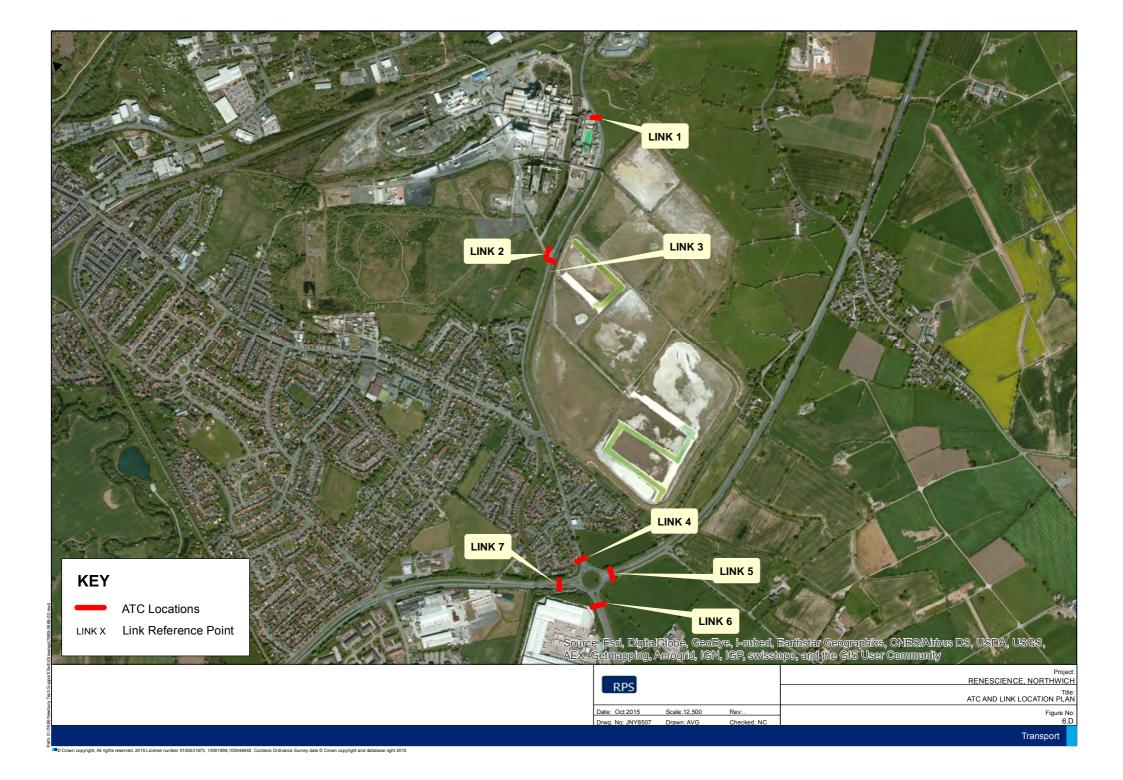
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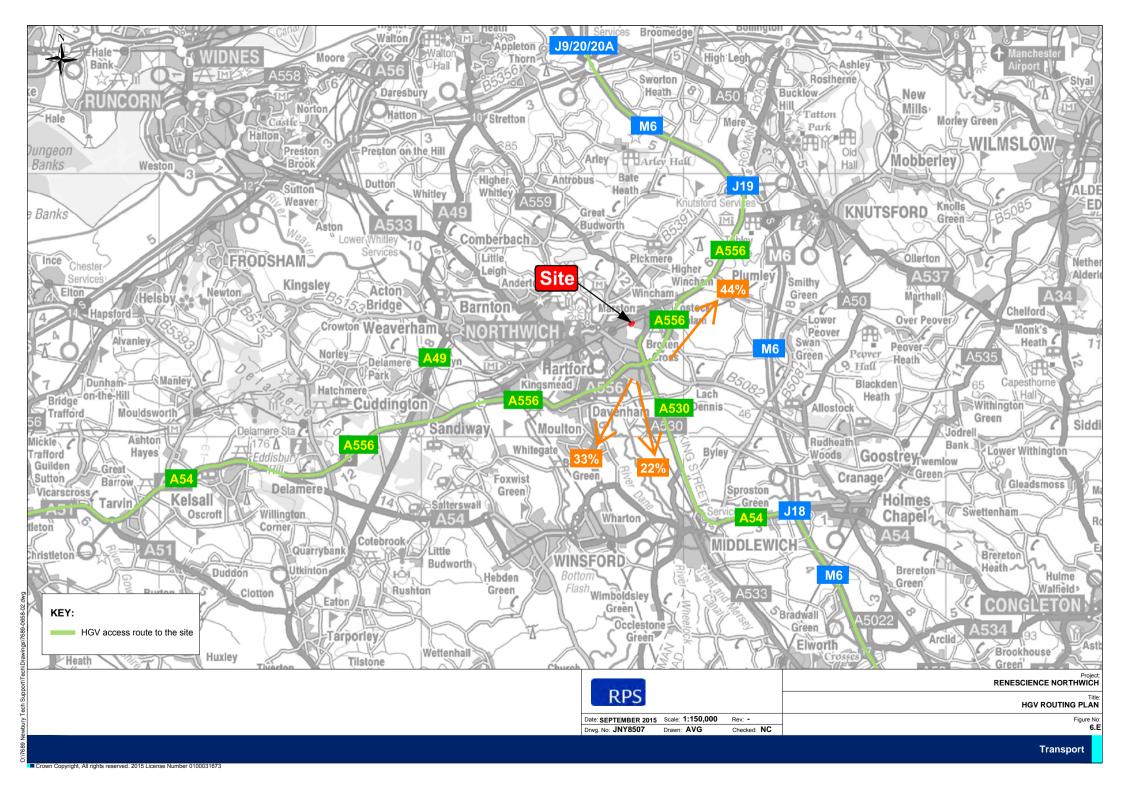


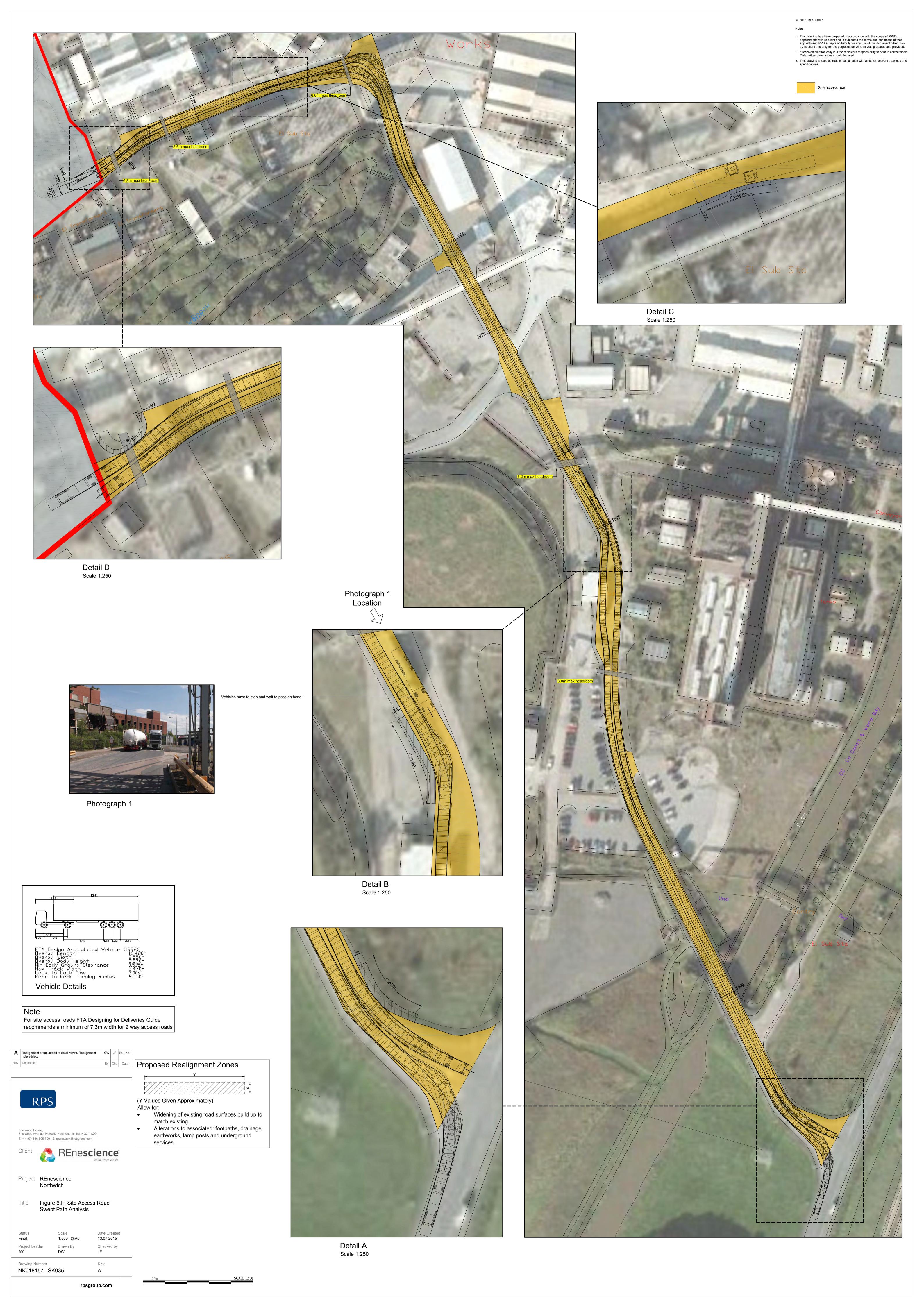


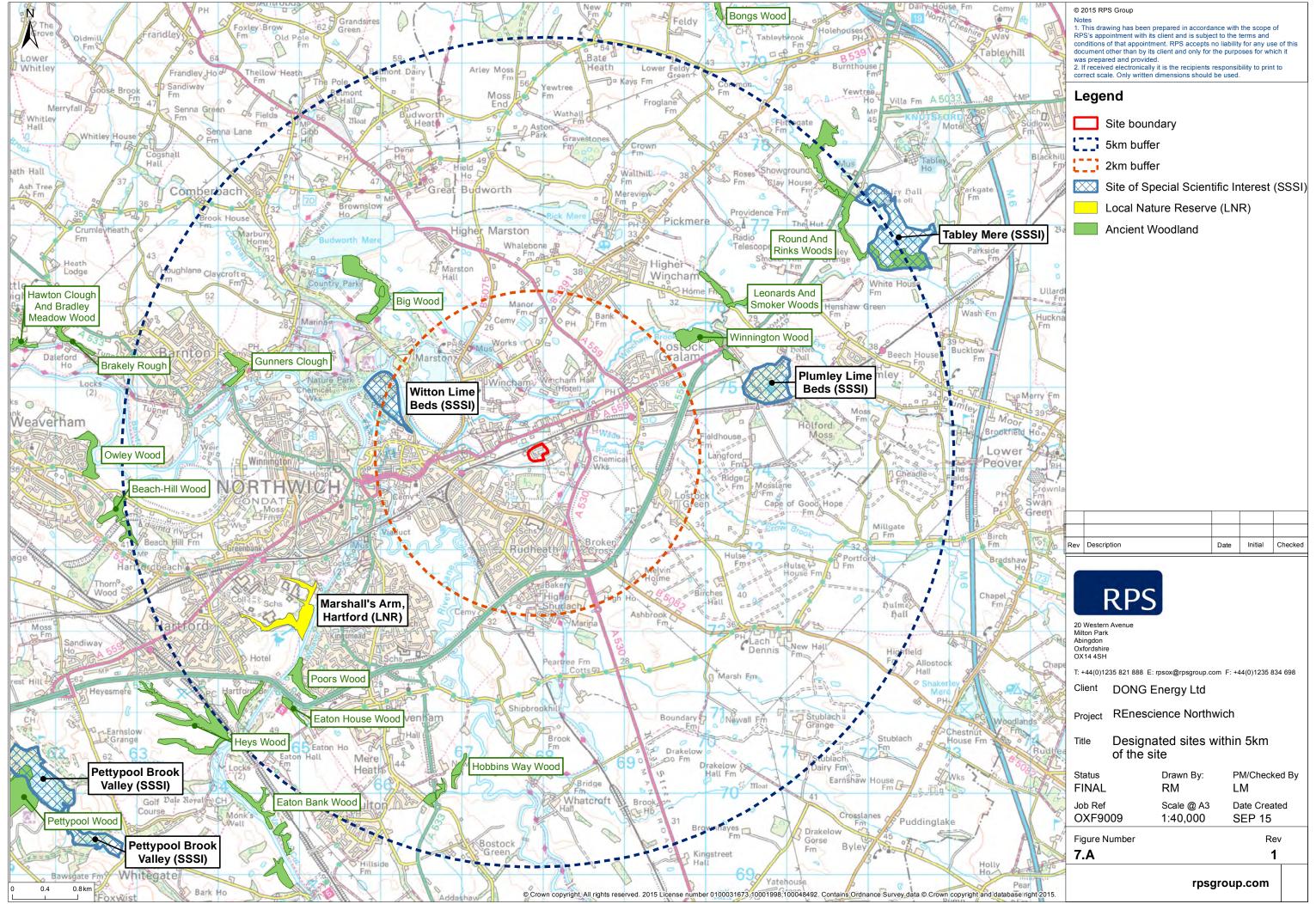


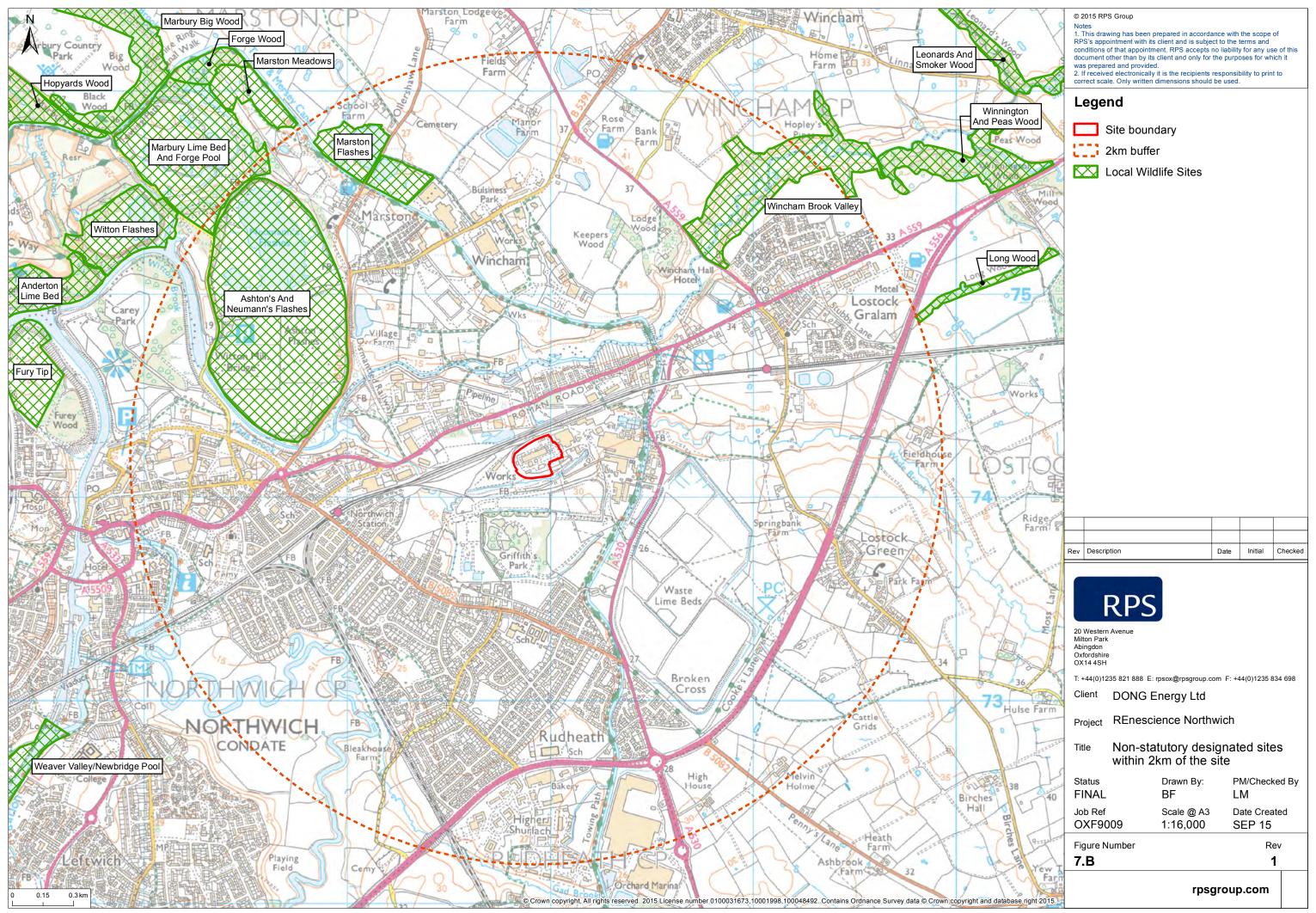


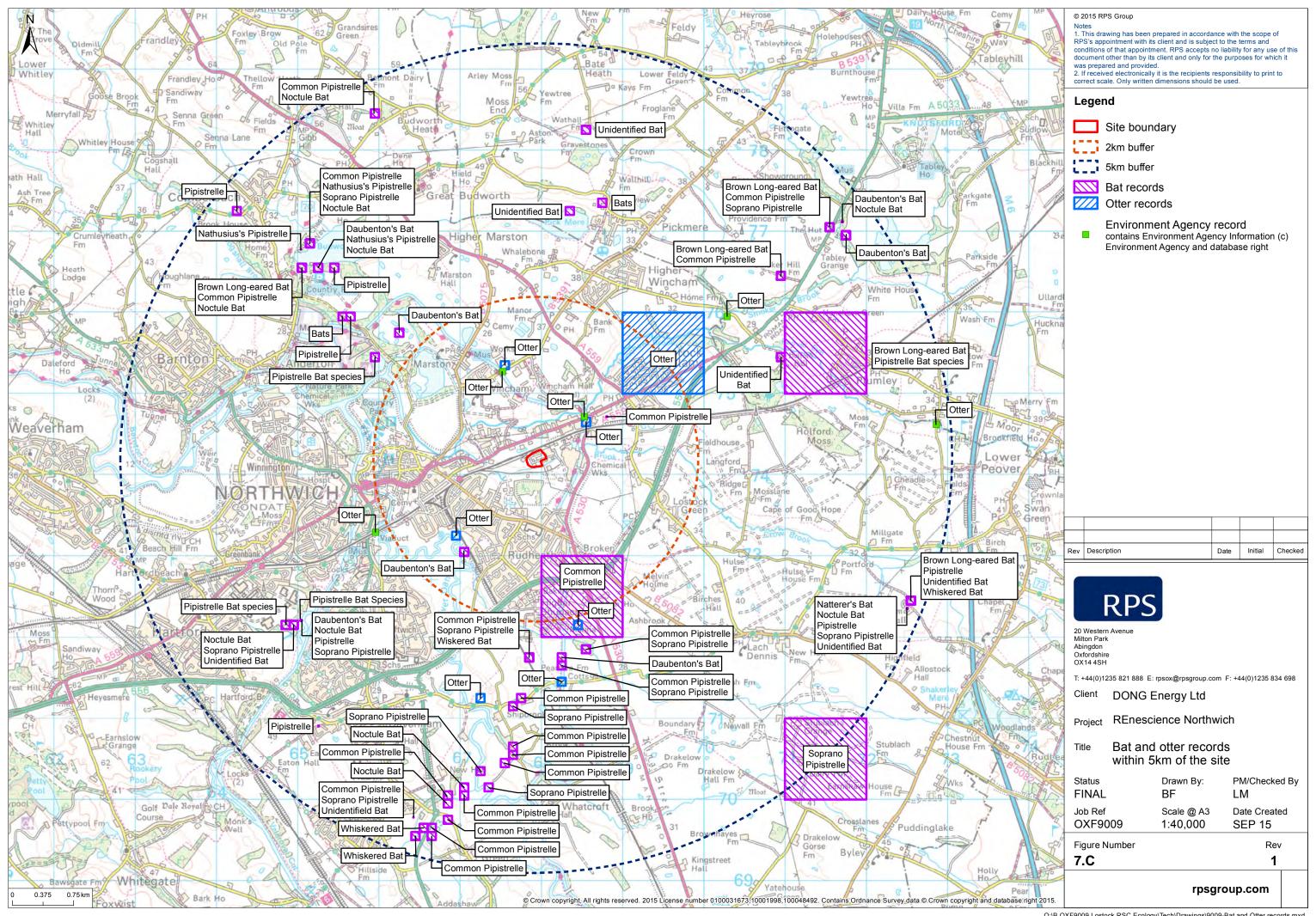


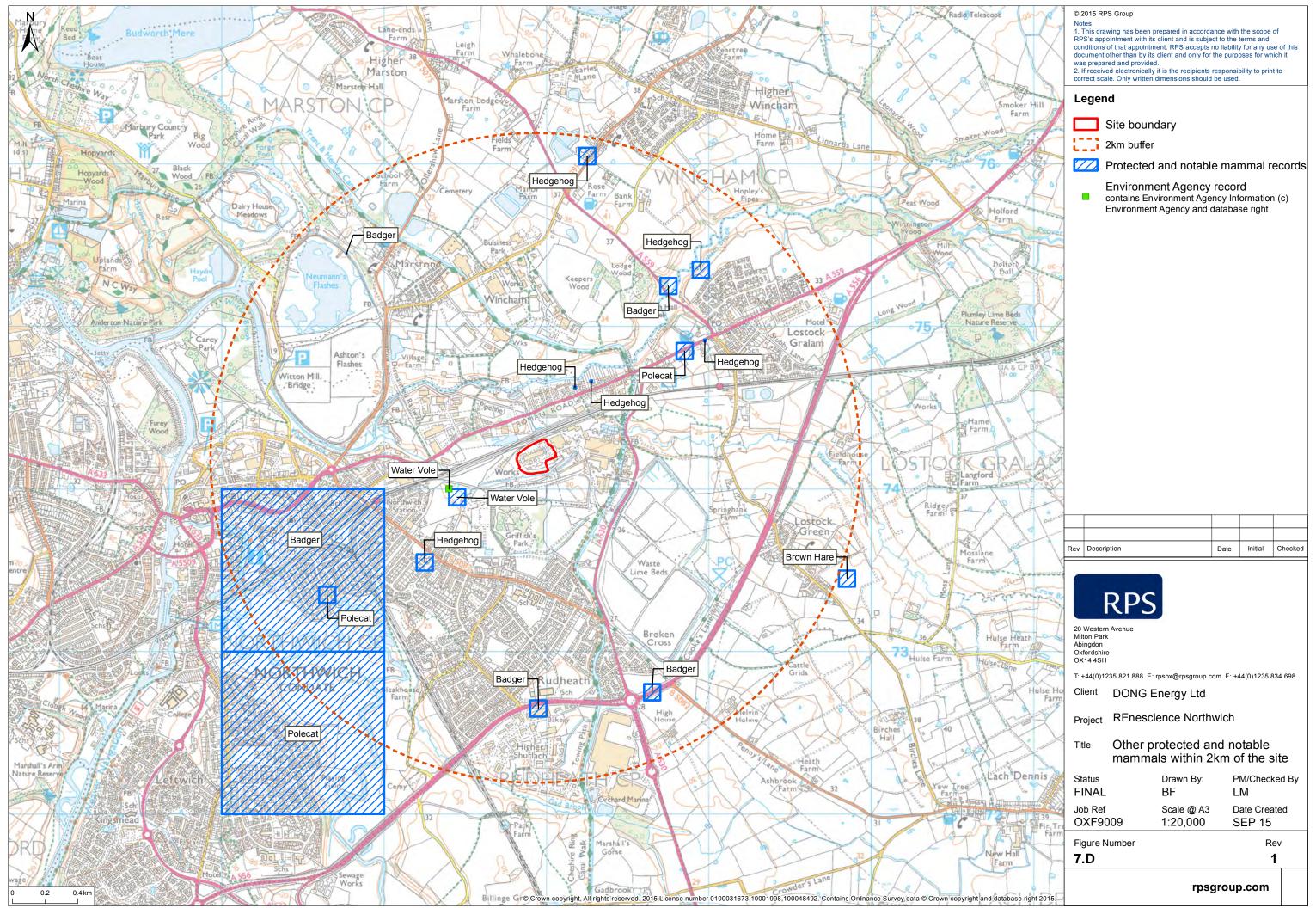


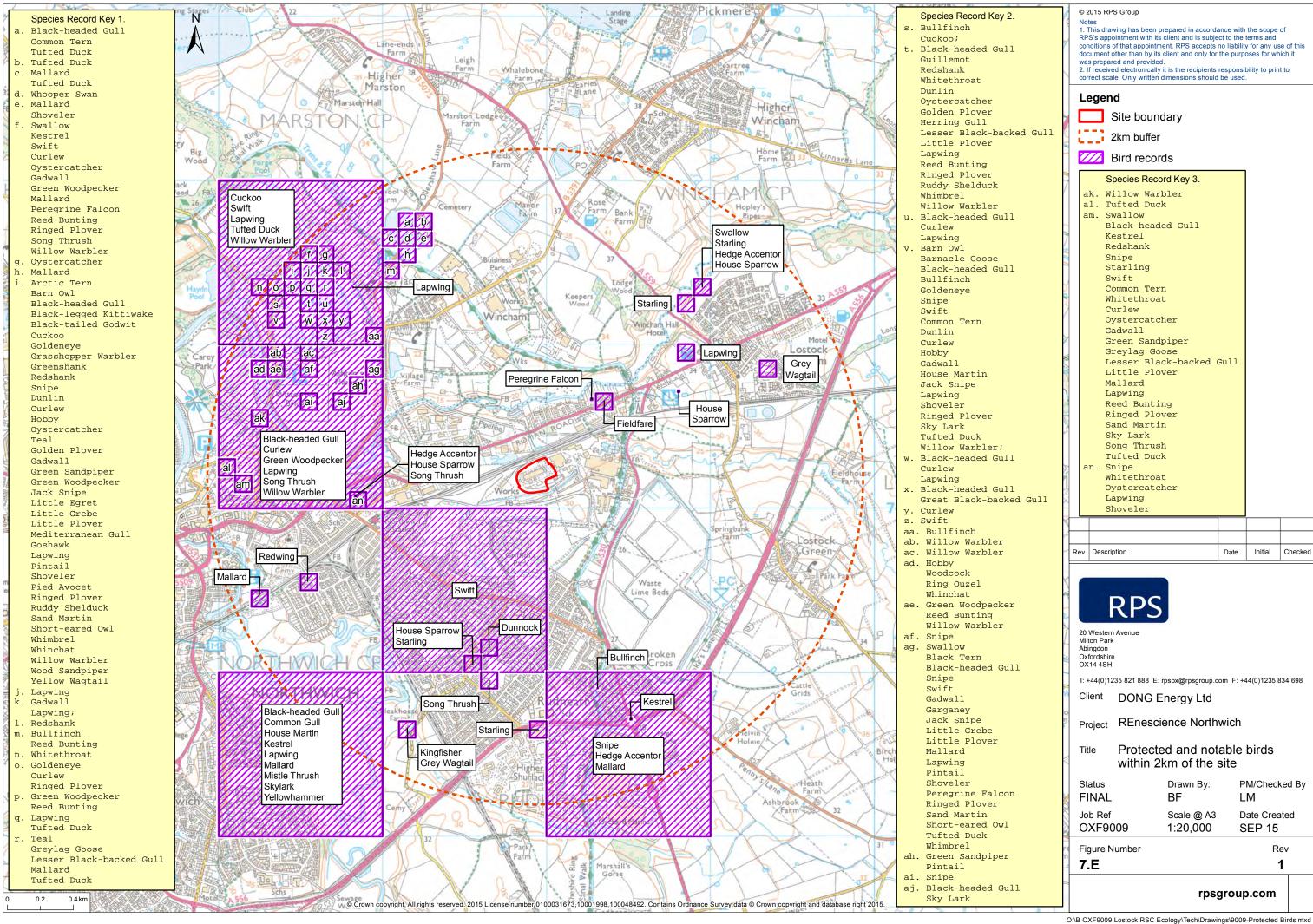


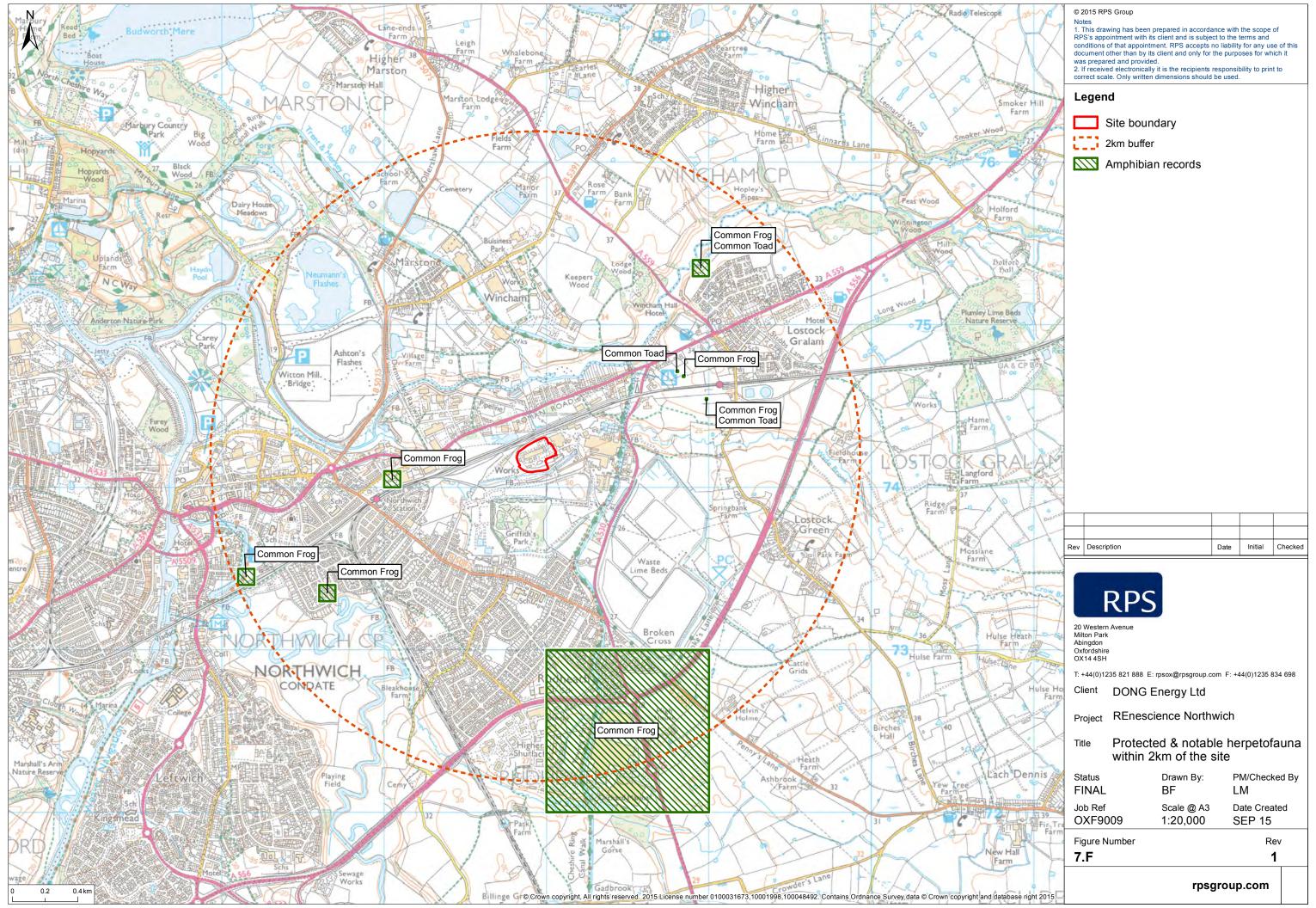


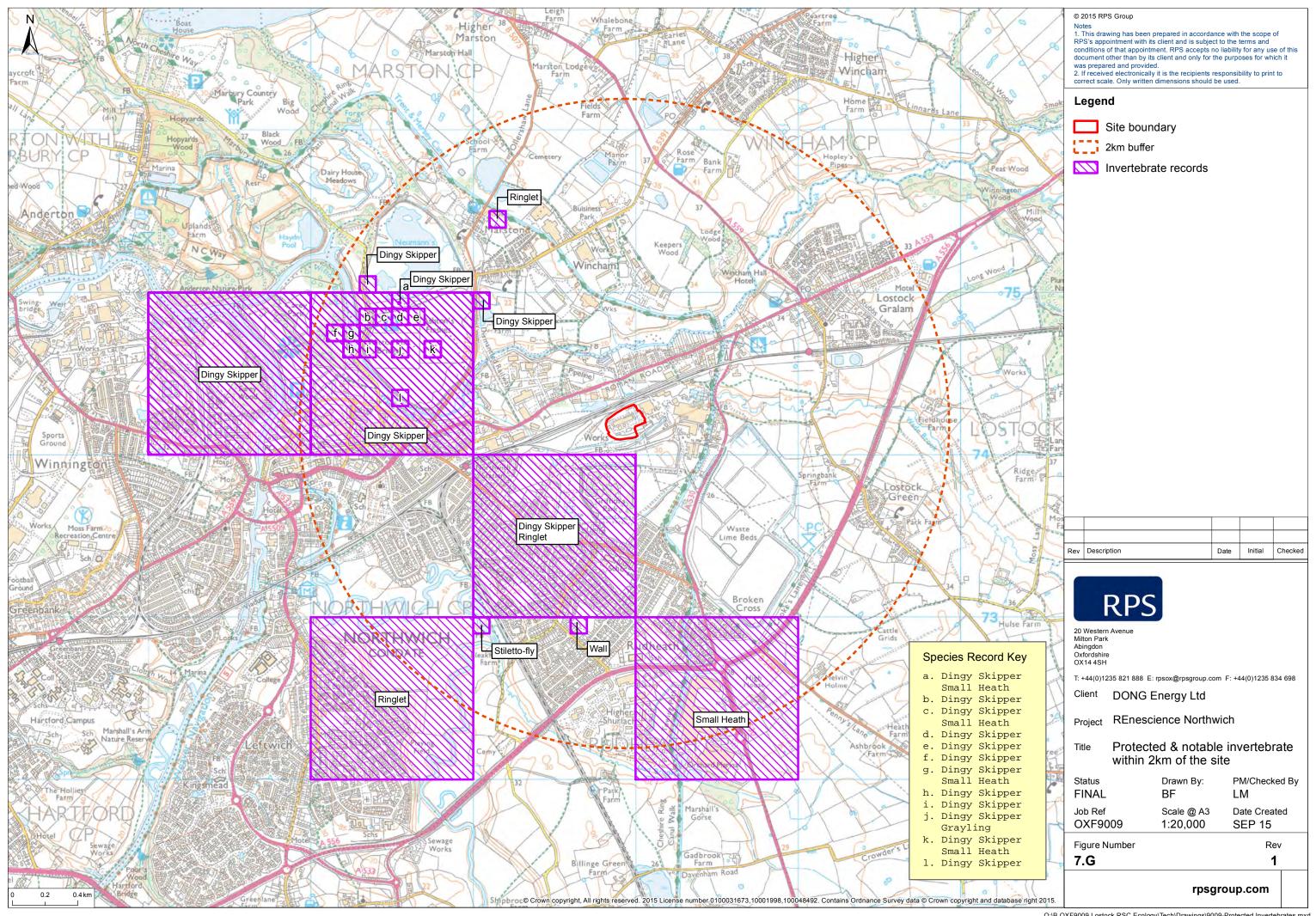


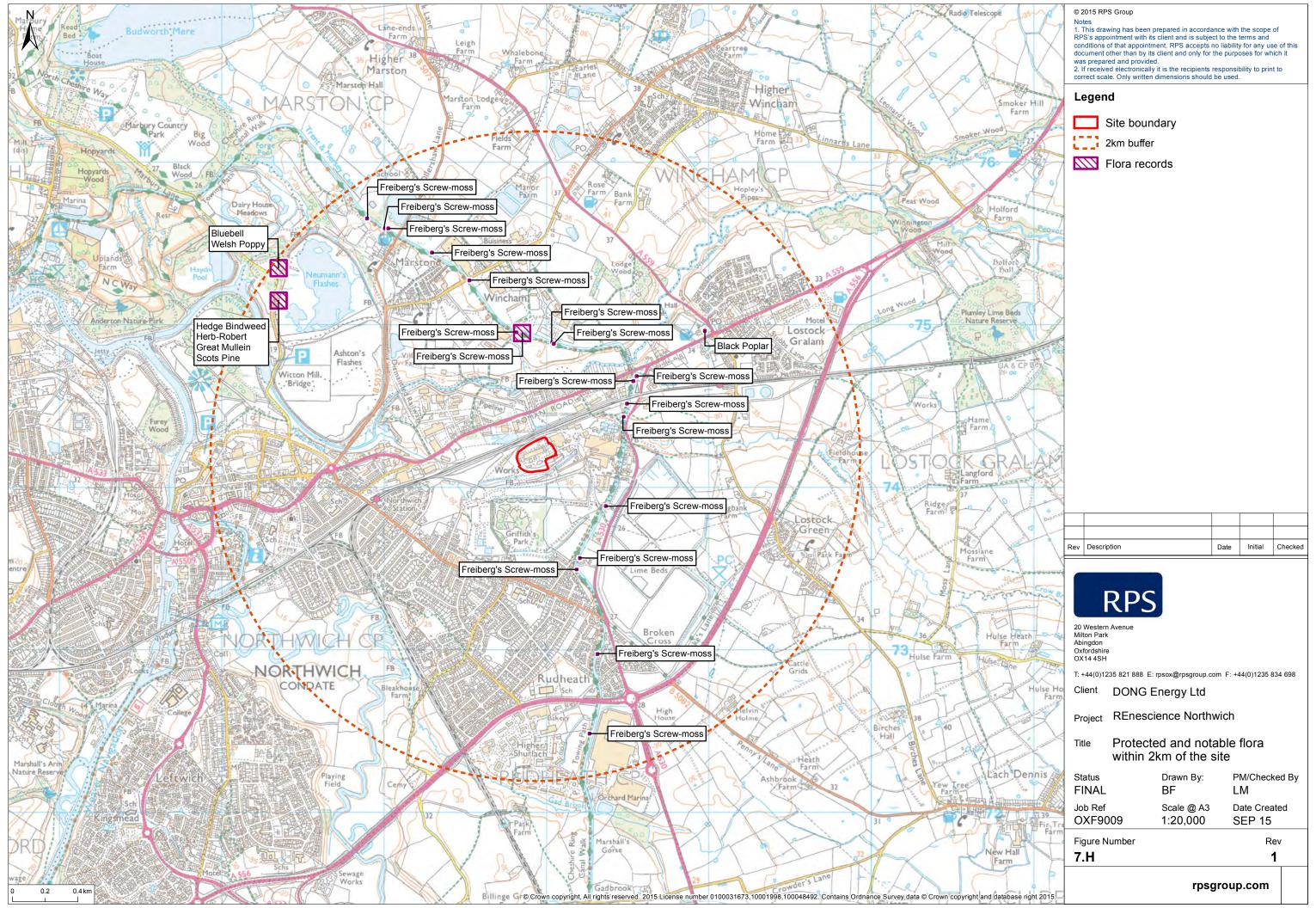


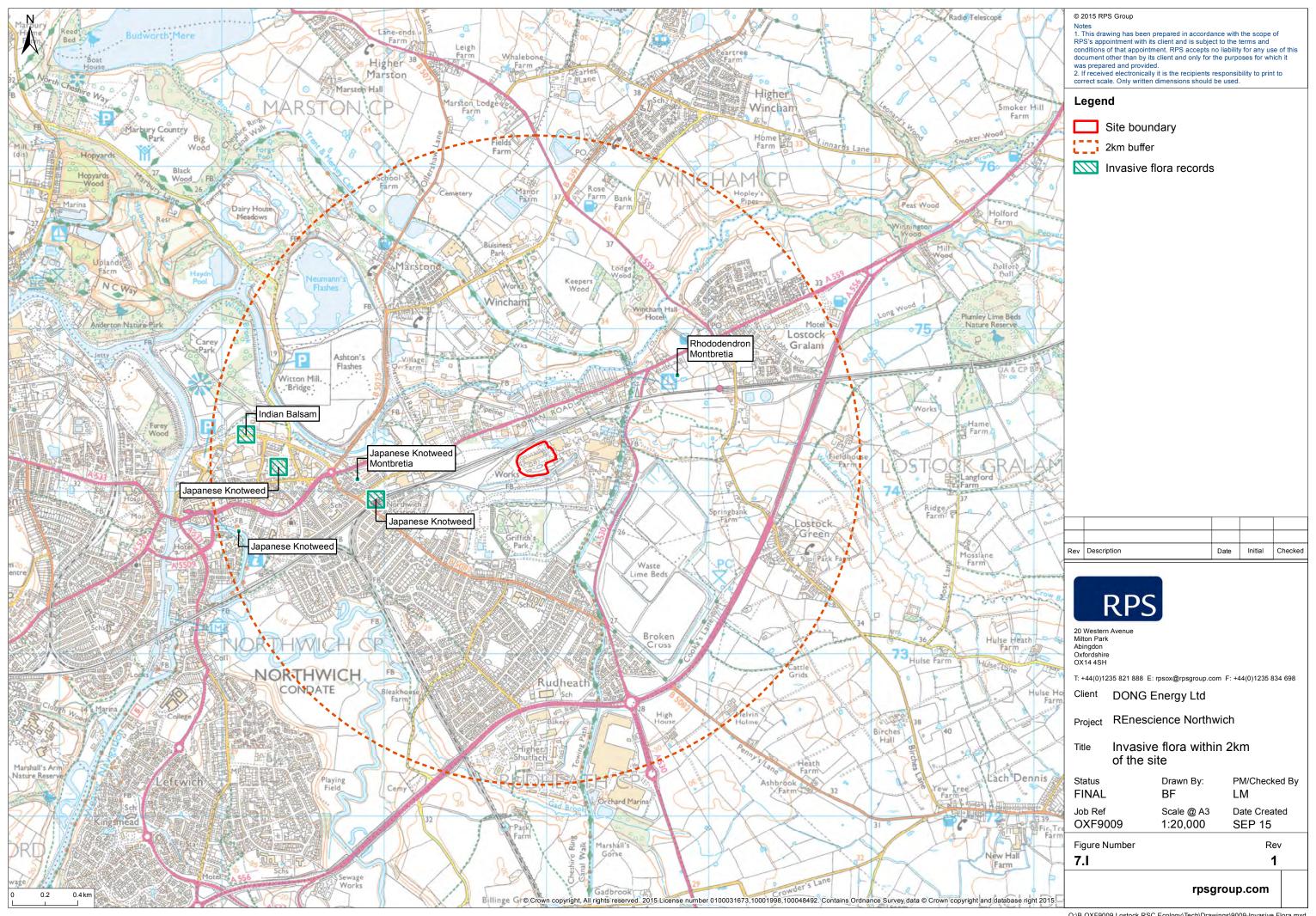


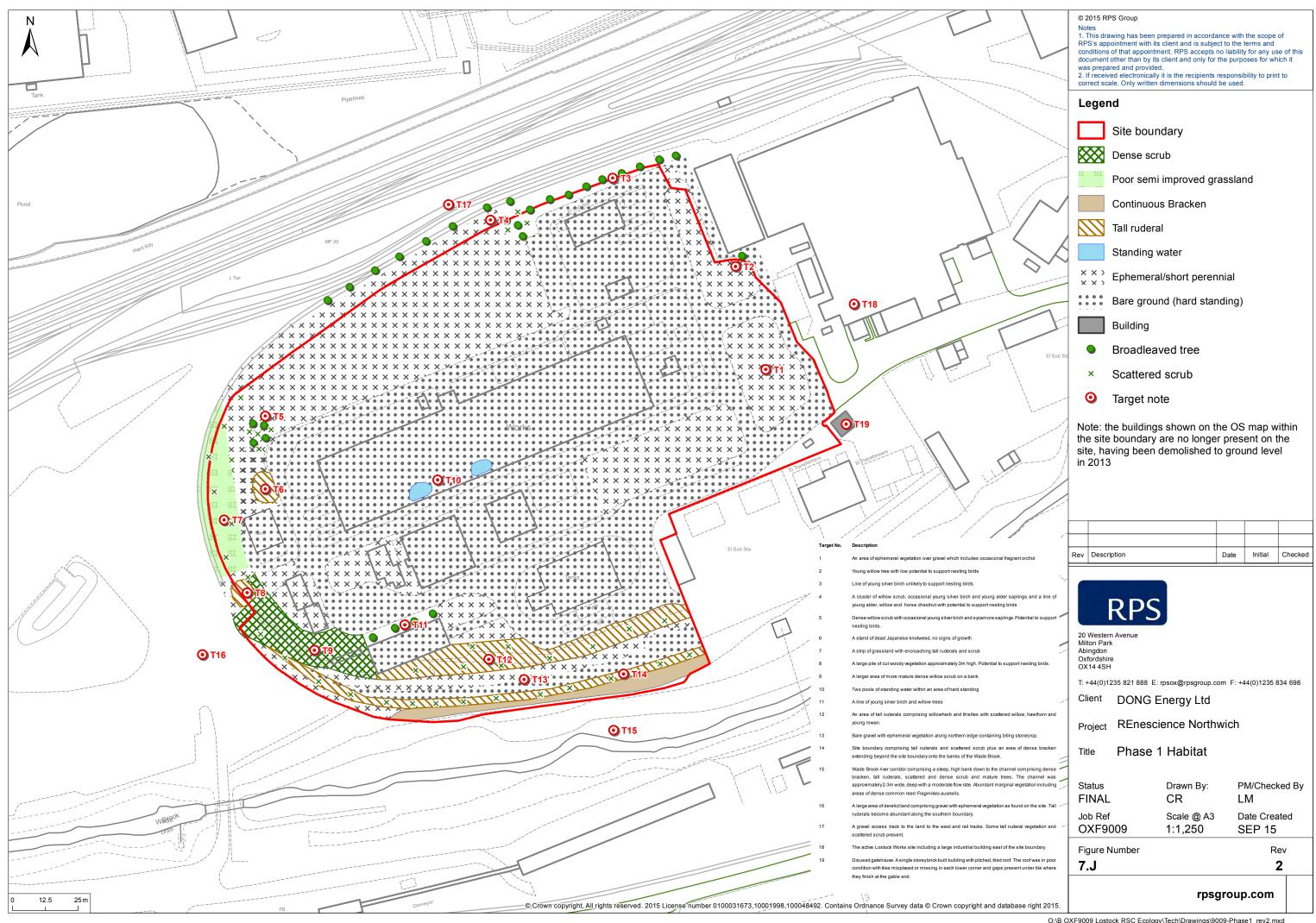


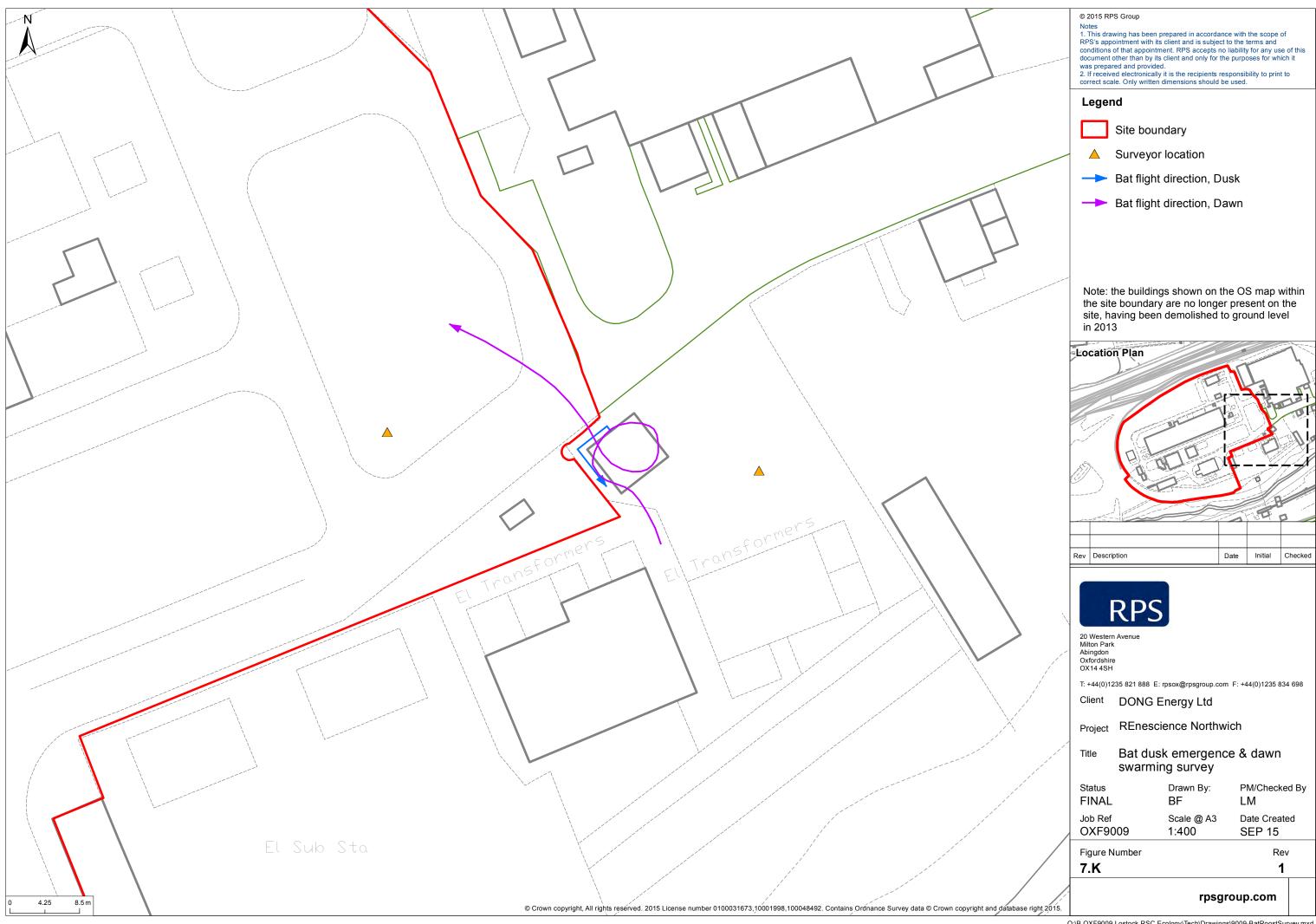


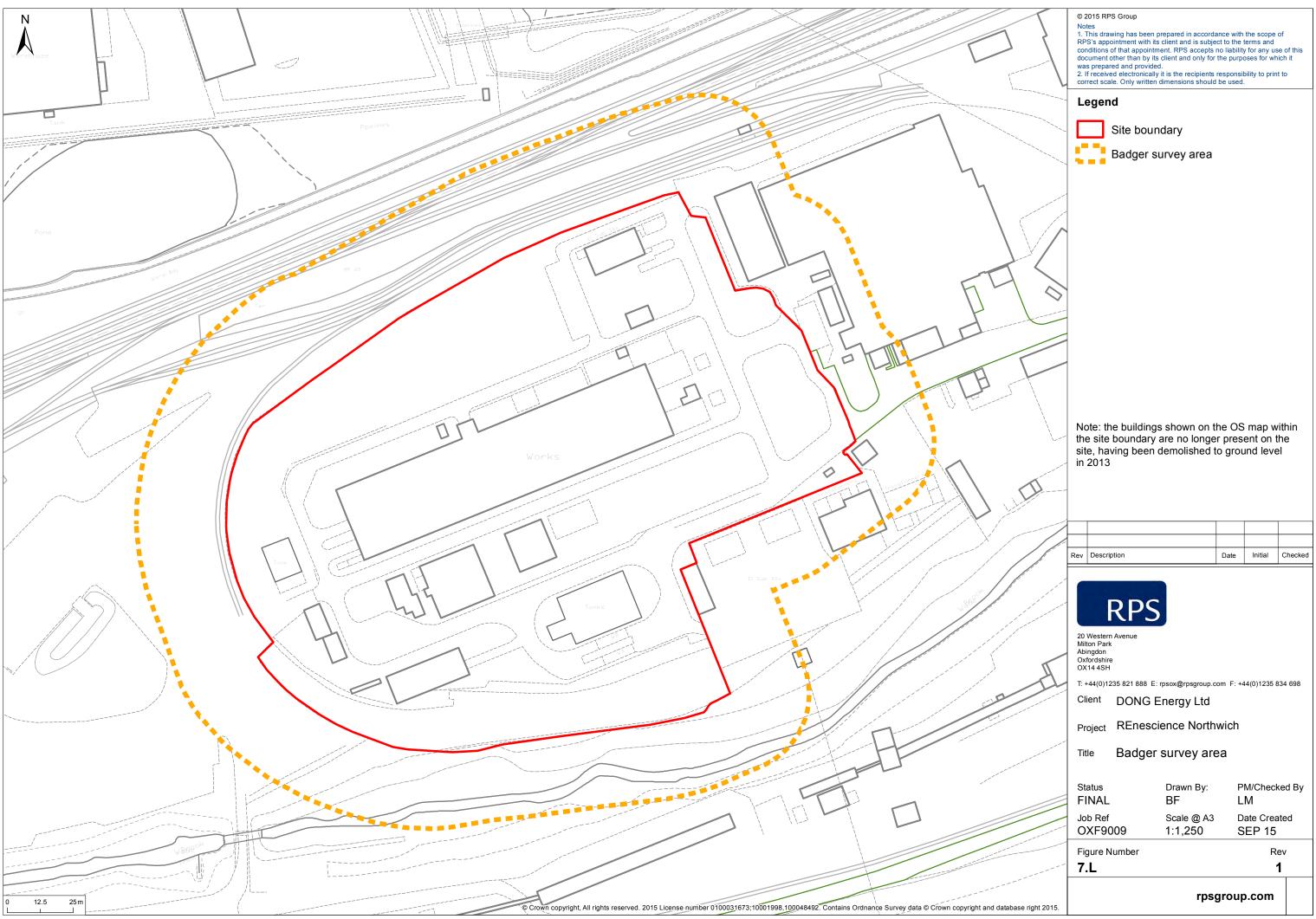


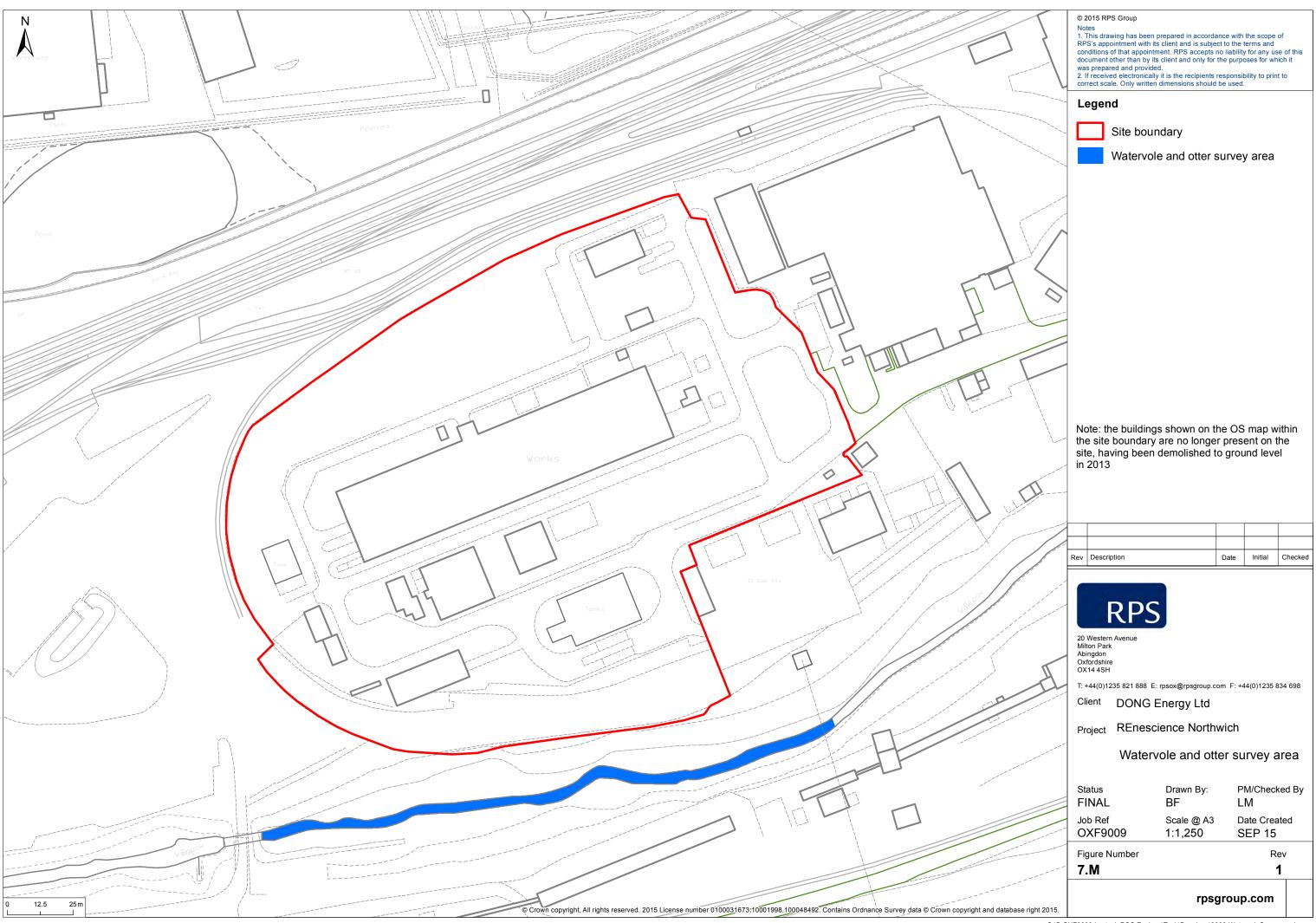














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Key:

Existing Impermeable Area Total Area = 2.19 Hectares

Rev Description By Ckd Date

RPS

Sherwood House, Sherwood Avenue, Newark, Nottinghamshire, NG24 1QQ T:+44 (0)1636 605 700 E: rpsnewark@rpsgroup.com F:+44 (0)1636 610 696

Client



Project REnescience Northwich

Title Existing Site Plan Showing Impermeable Areas

Status Scale Date Created
Final 1:500 @A1 11.09.2015

Project Leader Drawn By Checked by

Project Number Originator - Zone - Level - Type - Role - Drawing Number

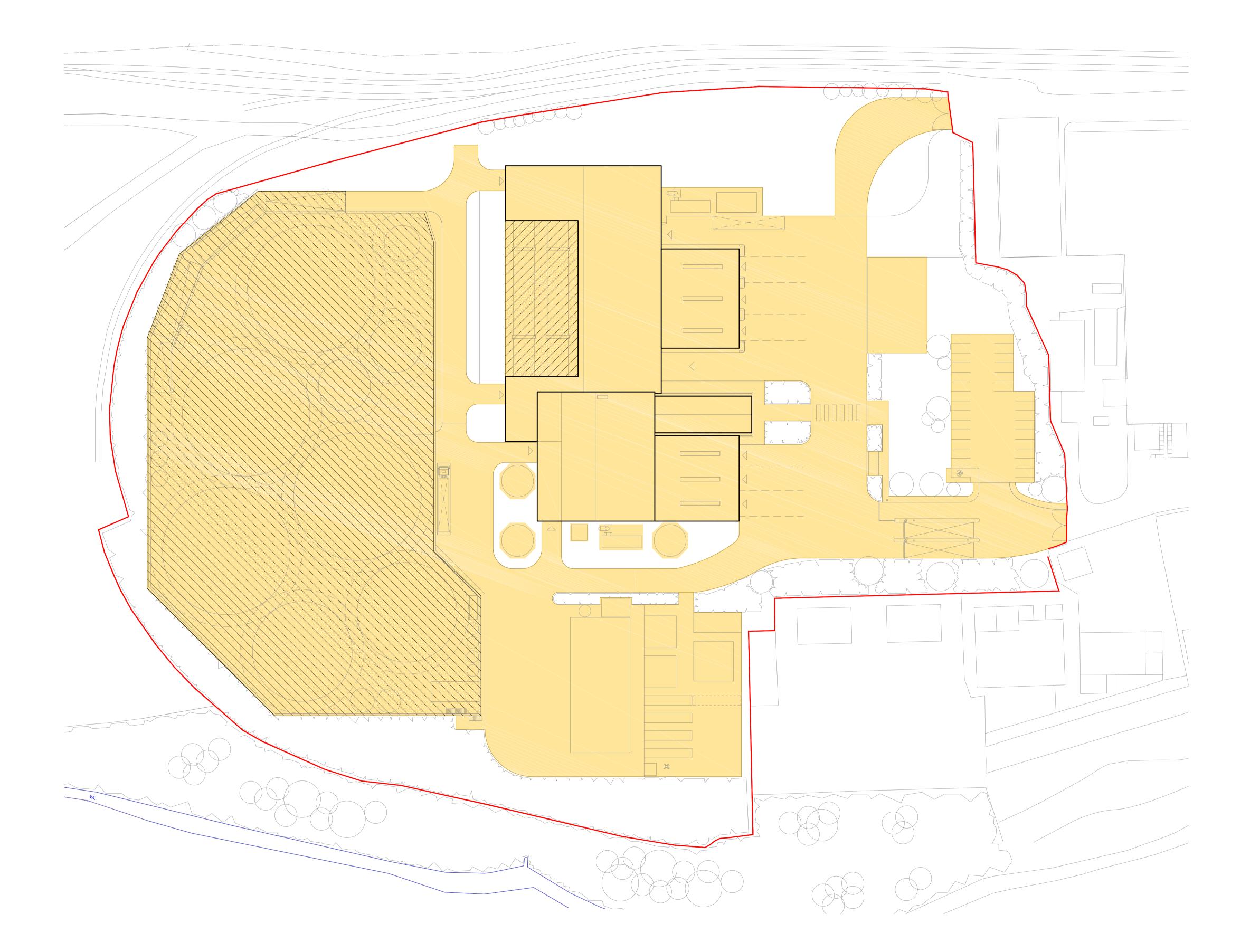
 AMS
 CW
 GB

 Document Number
 Revision
 Suitability

 Figure 8.A
 S2

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- Key:



Total Proposed Development Impermeable Area

Area = 23,642m²



Proposed Anaerobic Digester Plant Bund Containment Area (Controlled Discharge)

Area = 8,851m²



Proposed Bioreactor Bund Containment Area (Controlled Discharge)

Total Area = 713m²

Net Impermeable Area (Free Discharge) Area = 23,642 - 8,851 - 713 = <u>14,078m²</u>

Site plan updated.	DW	GB	29.09.15
Key notation updated.	DW	GB	25.09.15
Minor amendments.	CW	DW	23.09.15
Description	Ву	Ckd	Date
	Key notation updated. Minor amendments.	Key notation updated. DW Minor amendments. CW	Key notation updated. DW GB Minor amendments. CW DW



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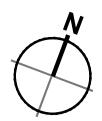
Project REnescience Northwich

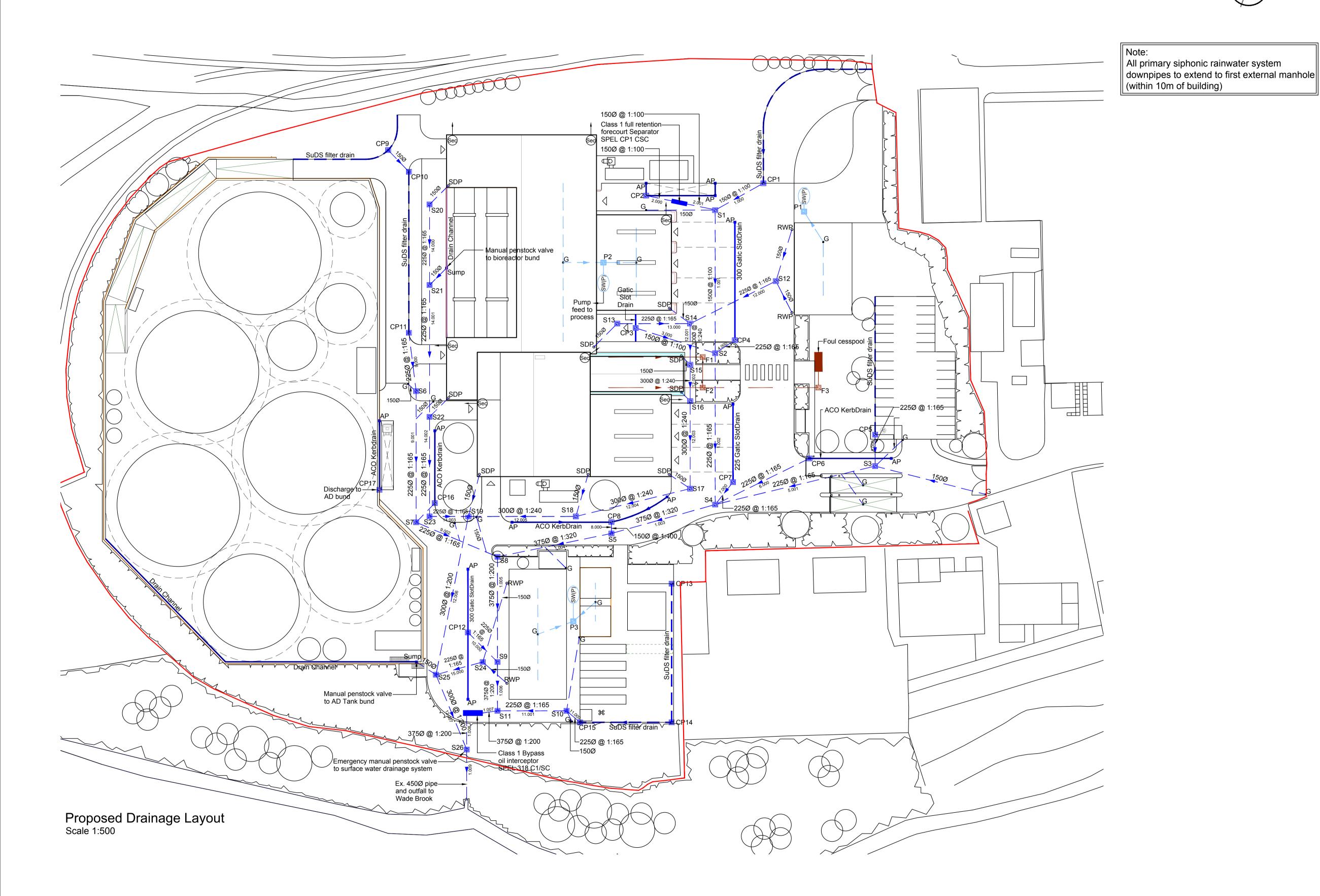
Title Proposed Site Plan Showing Impermeable Areas

Status	Scale	Date Created
Final	1:500 @A1	18.09.2015
Project Leader	Drawn By	Checked by
AS	CW	DW

Document Number		Revision	Suitability
Figure 8.B		С	S2
Project Number	Originator - Zone - Level - Type - Role - Drawing Number		

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Key: 150Ø 1/135 FW Sewer (I/D & Gradient) *** mmØ 1/300 - SW Sewer (I/D & Gradient) F1 — FW Manhole - SW Manhole ——

P1
—— SW (Process Drainage) Fi4 — Internal FW Manhole (≤150ø) Fi4 — Internal FW Manhole (>150ø) Backdrop Manhole (FW Illustrated) Slot Drain (with subsoil drain below) _ _ _ SuDS Filter Drain - - $\frac{(11.60)}{}$ - SW Pumping Station with Inlet Invert FW Pumping Station with Inlet Invert - ***mm O/D ____ SW HDPE Rising Main (O/D & Gradient) ***mm O/D FW HDPE Rising Main (O/D & Gradient) Trade Effluent (discharge to tank for offsite disposal) G Trapped Gully

■ FG Trapped Floor Gully

• SVP Soil Vent Pipe

SVP Soil Vent Pipe

AAV Air Admittance Valve

Discharge Stack

RWP Rainwater Pipe (c/w RE)SDP Syphonic Primary Downpipe

Syphonic Secondary Discharge

RE Rodding Eye

CL Cover Level
CRL Crown Level

SL Soffit Level

IL Invert Level

I/D Internal Diamater
CP Catch pit

Access pointWater retaining bund wallsDesigned to BS EN 1992-3

Back Drop

Rev Description

By Ckd Date

SW (Process) Water Containment



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Project REnescience Northwich

Title Proposed Drainage Layout

10m	SCALE 1:500	St
		Fi
		Pr
		A

)	Site plan updated.	DW	GB	29.09.15	AS
					Document N
,	Minor drawing amendments.	CW	DW	25.09.15	
3	Drawing size amended to A1.	CW	DW	23.09.15	Project Number
\	Minor drawing amendments.	DW	GB	21.09.15	

Scale Date Created 1:500 @A1 18.09.2015

ect Leader Drawn By Checked by DW

Document Number Revision Suitability

Figure 8.C

Project Number Originator - Zone - Level - Type - Role - Drawing Number

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Surface Water Manhole Schedule								
Manhole Ref	Cover Level (m)	Manhole Depth (mm)	Manhole Ø (mm)	Pipe Out Invert Level (m)	Pipe Out Ø (mm)	Pipe In Invert Level (m)	Pipe In Ø (mm)	Comments
CP1	25.175	1350	1200	23.825	150	-	-	
CP2	25.175	1350	1200	23.825	150	-	-	
S1	25.215	1574	1200	23.641	150	23.715	150	
-	-	-	-	-	-	23.641	150	
-	-	-	-	-	-	-	150	
CP3	25.375	1350	1200	24.025	150	-	-	
CP4	25.090	1785	1200	23.305	225	-	-	
S2	25.250	2057	1200	23.193	225	23.268	225	
-	-	-	-	-	-	23.268	150	
-	-	-	-	-	-	23.808	150	
CP5	25.000	1300	1200	23.700	225	-	-	
CP6	25.250	1300	1200	23.950	225	-	-	
CP7	25.090	1300	1200	23.790	225	-	-	
S3	25.275	1625	1200	23.650	225	23.650	225	
-	-	-	-	-	-	-	150	
-	-	-	-	-	-	-	150	
S4	25.275	2472	1350	22.803	375	22.953	225	
-		-	-	-	-	23.784	225	
-	-	-	-	-	-	23.745	225	
-	-	-	-	-	-	23.390	225	
CP8	25.200	1300	1200	23.900	150	-	-	
S5	25.240	2525	1350	22.715	375	22.715	375	
-	-	-	-	-	-	23.870	150	
CP9	25.325	1350	1200	23.975	150	-	-	
CP10	25.250	1350	1200	-	-	23.900	150	
CP11	25.250	1600	1200	23.650	225	-	-	
S6	25.375	1818	1200	23.557	225	23.557	225	
-	-	-	-	-	-	-	150	
S7	25.390	2540	1200	22.850	225	23.350	225	
S8	25.460	3971	1350	21.489	375	22.620	375	
-	-	-	-	-	-	22.710	225	
CP12	25.025	3607	1200	21.418	225	-	-	
-	-	-	-	-	-	-	-	
S9	25.180	3828	1350	21.352	375	21.352	375	

-	-	-	-	-	-	21.352	225	
CP13	25.350	1350	1200	24.000	-	-	•	
CP14	25.000	1350	1200	23.650	•	-	•	
CP15	25.500	1350	1200	23.650	225	-	-	
CP16	25.225	1350	1200	23.875	•	-	•	
S10	25.400	3002	1200	22.398	225	-	225	
-	-	-	-	-	-	-	150	
-	-	-	-	-	-	-	150	
S11	25.180	3.892	1350	21.288	375	21.288	375	
-	-	-	-	-	-	21.288	225	
S13	25.435	1536	1200	23.899	225	-	150	Vented cover - siphonic discharge manhole
S14	25.375	1666	1200	23.709	300	23.784	225	Vented cover - siphonic discharge manhole
-	-	-		-	-	23.784	225	
-	-	-	-	-	1	-	150	
S15	25.350	1686	1200	23.664	300	23.664	300	Vented cover - siphonic discharge manhole
-	-	-	-	-	-	-	150	
S16	25.350	1726	1200	23.624	300	23.624	300	Vented cover - siphonic discharge manhole
-	-	-	-	-	-	-	150	
S17	25.375	1846	1200	23.529	300	23.529	300	Vented cover - siphonic discharge manhole
-	-	-	-	-	-	-	150	
S18	25.325	1924	1200	23.401	300	23.401	300	Vented cover - siphonic discharge manhole
-	-	-	-	-	-	-	150	
S19	25.325	2908	1200	22.417	300	23.284	300	Vented cover - siphonic discharge manhole
-	-	-	•	-	-	23.437	225	
-	-	-	-	-	-	-	150	
S20	25.350	1425	1200	23.925	225	-	150	Vented cover - siphonic discharge manhole
S21	25.350	1552	1200	23.798	225	23.798	150	
-	-	-	-	-	-	-	150	
S22	25.260	1605	1200	23.655	225	23.655	225	Vented cover - siphonic discharge manhole
-	-	-	-	-	-	-	150	
S23	25.100	1602	1200	23.498	225	23.498	225	
S25	25.300	4094	1200	21.206	300	22.206	300	
-	-	-	-	-	-	22.206	225	
-	-	-	-	-	-	-	150	
S26	23.000(Ex)	3900	1350	19.100	450	21.100	375	
-	-	-	-	-	-	21.100	300	

Notes

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Rev	Description	Date	Initial	Checked



6–7 Lovers Walk, Brighton, BN3 3BE T: 01273 546 800 E: rpsbn@rpsgroup.com

Client DONG Energy Limited

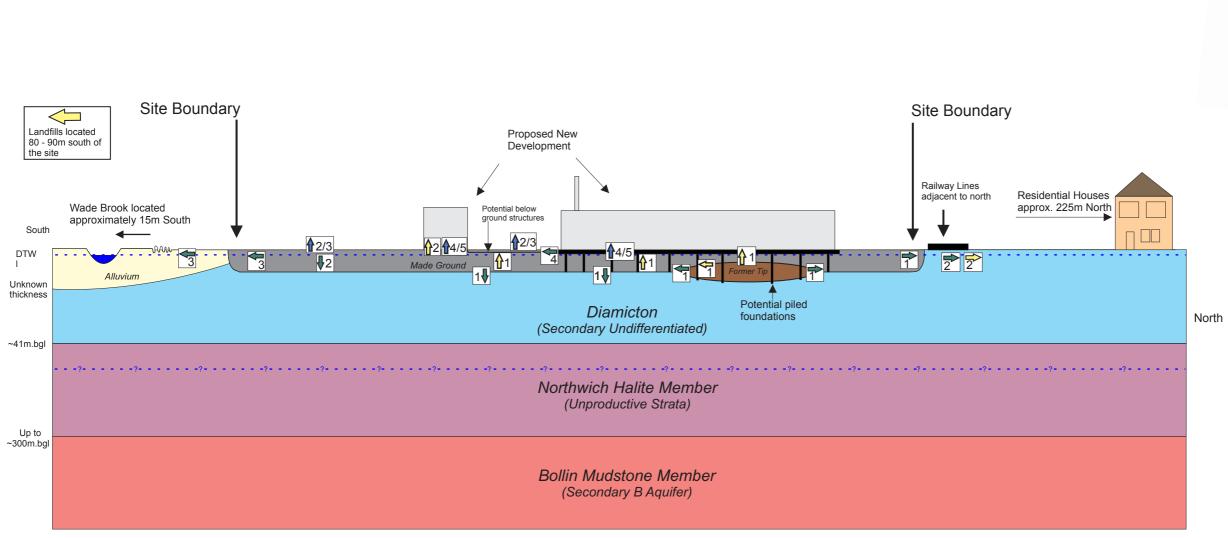
Project REnescience Northwich

Title Surface Water Manhole Schedule

Date Created Drawn By PM/Checked By September 2015 DW GB

Job Ref. NK018157

Figure Number Rev



Potential Sources - Onsite:

Soil/ Groundwater Contamination and Ground Gas associated with:

- Former Bleach Works; organometallics, PAHs, cresols, phenols, chlorinated organic compounds, halogenated organics, solvents (non-chlorinated), dioxins, inorganic metals and metalloids, other inorganic ions including chlorides, chlorates, fluorides and ammonium bisulphate, acids, alkalis, asbestos, PCBs and fuels i.e. coke.
- Former Chlorine Works; chlorides, sulphates, sulphides, metals, alkalis (including calcium oxide, sodium hydroxide and sodium carbonate), hydrochloric and sulphuric acid, hydrocarbons, PAHs, chlorinated solvents, inorganics, PCBs and asbestos
- Made Ground Infilling of Reservoirs/ Former Tip (landfill);
 Metals, PAHs, hydrocarbons, chlorinated solvents, asbestos, and ground gas.

Potential Sources - Offsite:

Soil/ Groundwater Contamination and Ground Gas associated with:

- Chemical Works (located adjacent to the east); Metals, PAHs, hydrocarbons, chlorinated solvents, asbestos
- Salt Works (150m Southwest); Metals, PAHs, hydrocarbons, and asbestos.
- Railways (adjacent to north and 100m to the south); Metals, PAHs. hydrocarbons, asbestos
- Landfills (three landfills 80m 90m south); Ground gas

Potential Pathways - Human Health

1. Dermal Contact

2. Inhalation of Soil Dust

3.Ingestion of Soil Dust

4. Inhalation of Soil Vapours

5. Inhalation of Ground Gas vapours

Potential Pathways - Controlled Waters

- 1. Leaching of mobile contaminants from Made Ground.
- 2. Vertical migration of mobile contaminants in permeable strata.
- 3. Lateral migration of mobile contaminants in permeable strata.
- 4. Migration along subsurface structures.

Potential Pathways - Infrastructure

1. Direct contact with fill or contaminated soils.

2. Migration of ground gas

Potential Receptors - Human Health:

Future Site Users (workers at the proposed development)

Construction/Maintanence Personnel.

Off-site Receptors (Residential Houses located approx. 225m north)

Potential Receptors - Controlled Waters:

Shallow Groundwater (Made Ground)

Superficial Deposits (Alluvium - Secondary A Aquifer and Diamicton - Secondary (Undifferentiated).

Bedrock Aquifer (Sidmouth Mudstone - Unproductive Strata up to 300m in thickness in the vicinity of the site).

Wade Brook 15m to the south of the site.

Potential Receptors - Infrastructure:

Future Building structures

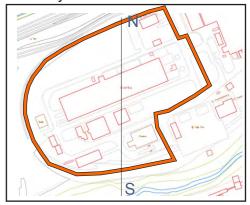
Underground utility services

Off-site structures

Note:

Conceptual cross section is not to scale

Site Layout Plan



Approximate section line

Complete Pollutant Linkages:

Human Health

Future Site Users - Potential for exposure to soil/ground water contamination via dermal contact, inhalation and ingestion

Future Site Users - Potential for inhalation of soil vapours

Controlled Waters

Potential for lateral migration of soil/groundwater contamination via Made Ground/ Alluvium to Wade Brook

Low permeability Diamicton will prevent vertical migration to

Potential for migration along subsurface structures

Infrastructure

Potential for generation of ground gas from Made Ground/ onsite tip/offsite landfill into building structures.

Potential for concrete aggressive contamination to attack subsurface structures.



Unit 12, Watersedge Business Park Modwen Road, Salford Quays T+44 (0)161 874 3737 F+44 (0)161 877 3959 W rpsgroup.com

Client: DONG Energy

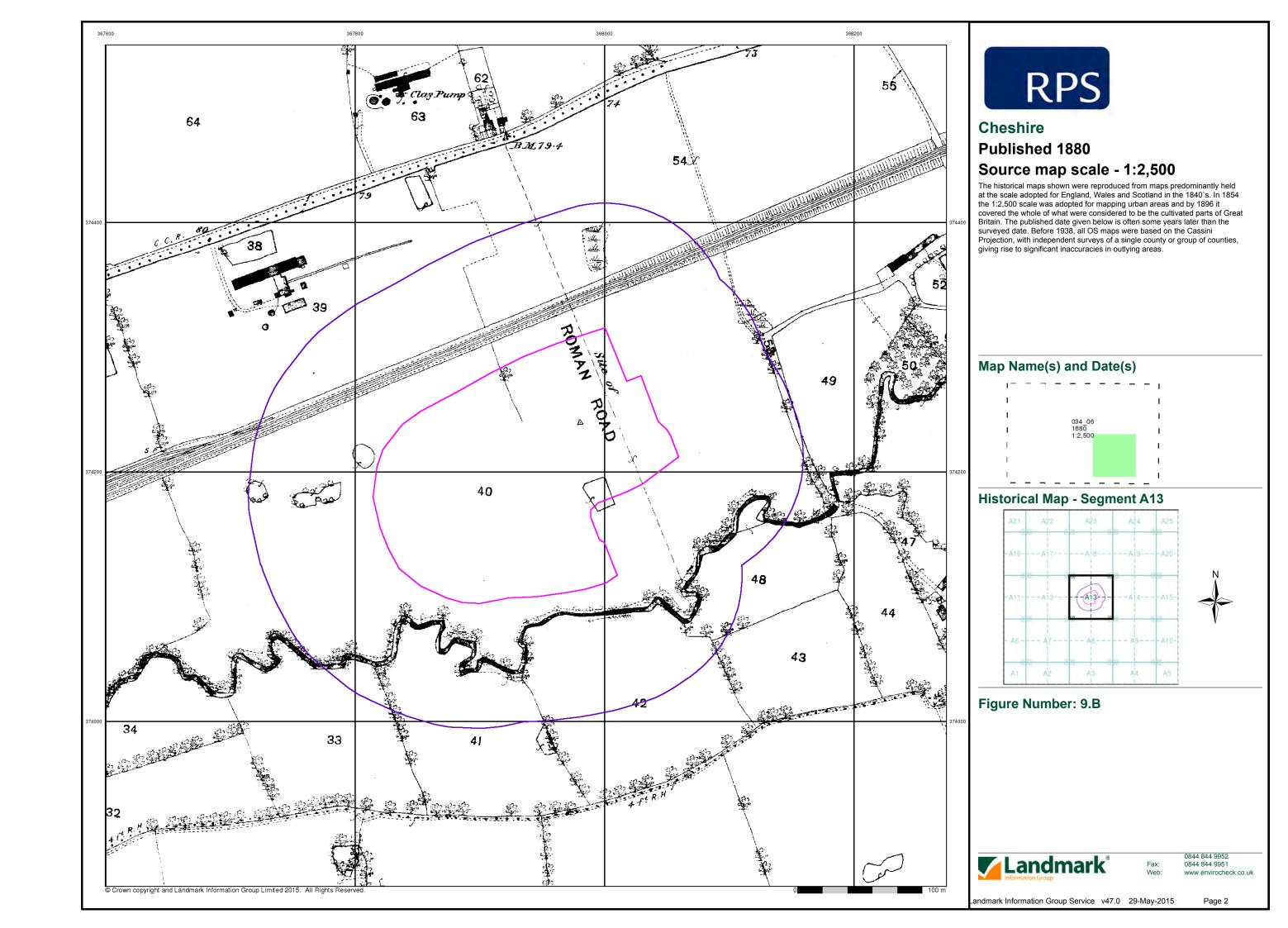
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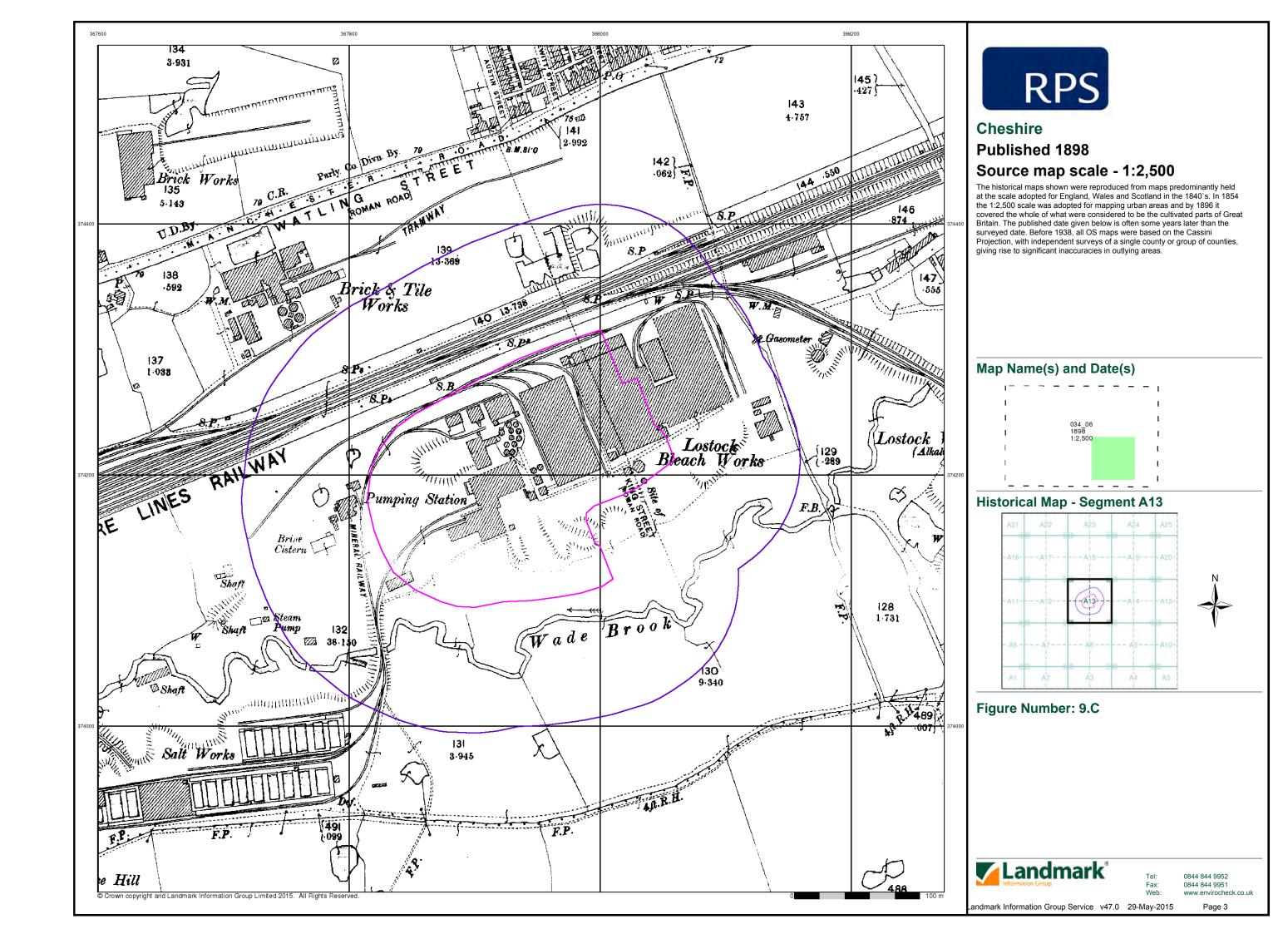
Site: REnescience Northwich

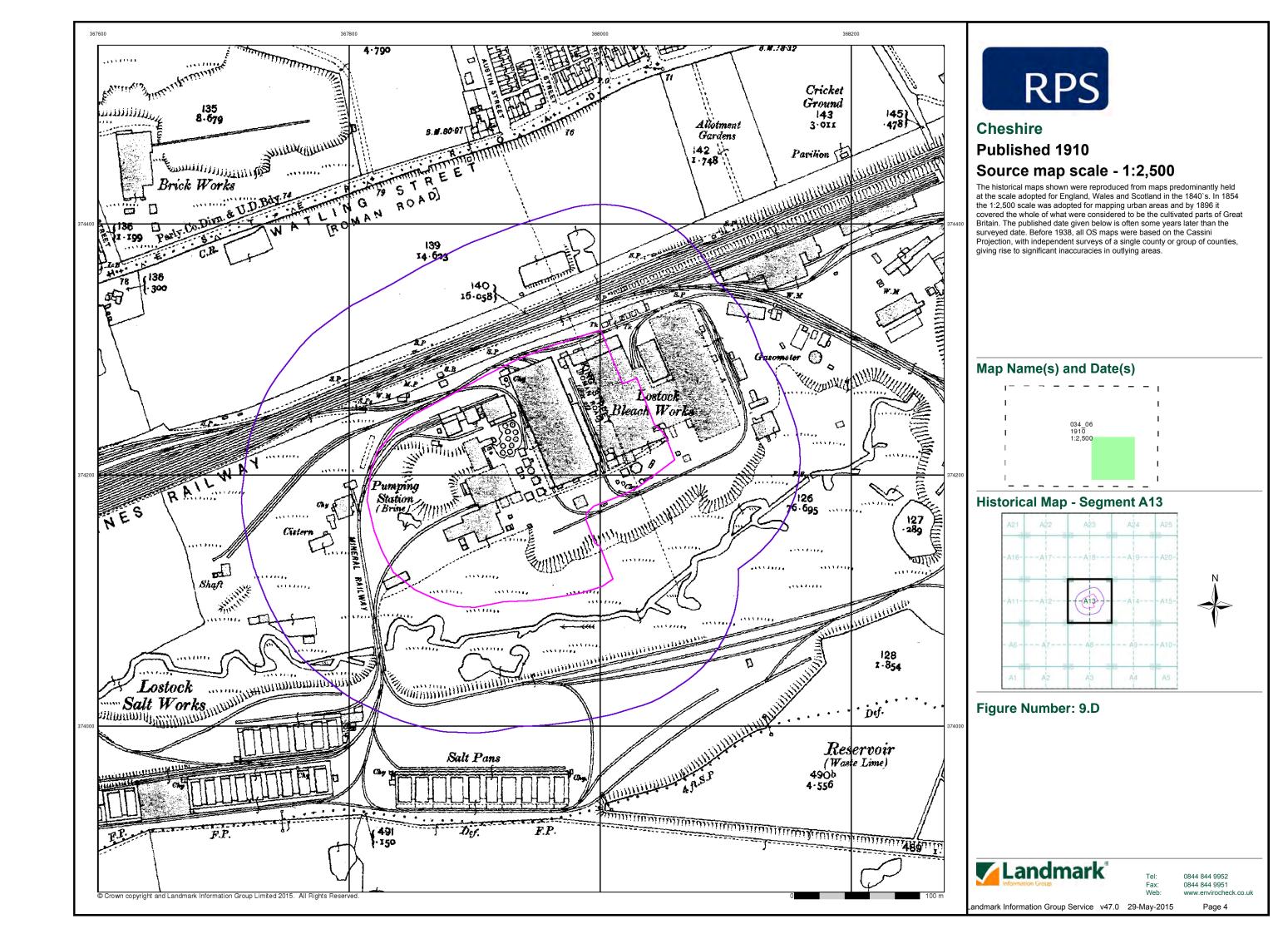
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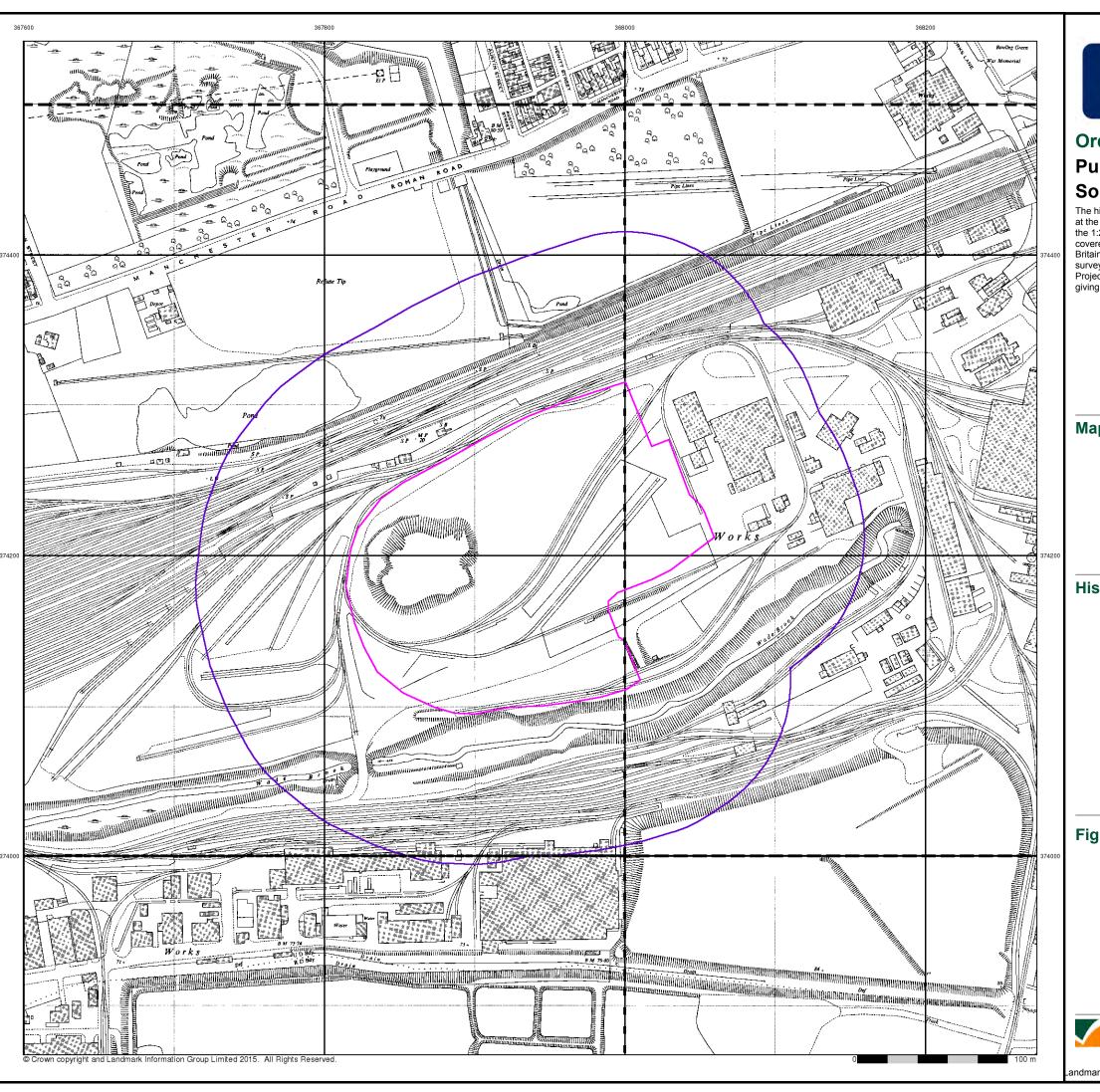
Scale: NTS Size: A3

Job Number: RCEl36418 Fig: 9.A Rev: 00











Ordnance Survey Plan

Published 1963 - 1964 Source map scale - 1:1,250

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)

\$J6774 1963 1:1,250	NE\$J6874N 1963 1:1,250	W
SJ6774 1963 1:1,250	SESJ6874S 1963 1:1,250	W
SJ6773 1964 1:1,250	NESJ6873N 1964 1:1,250	W

Historical Map - Segment A13

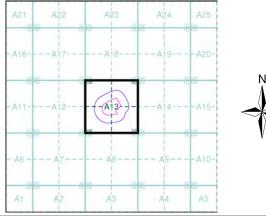


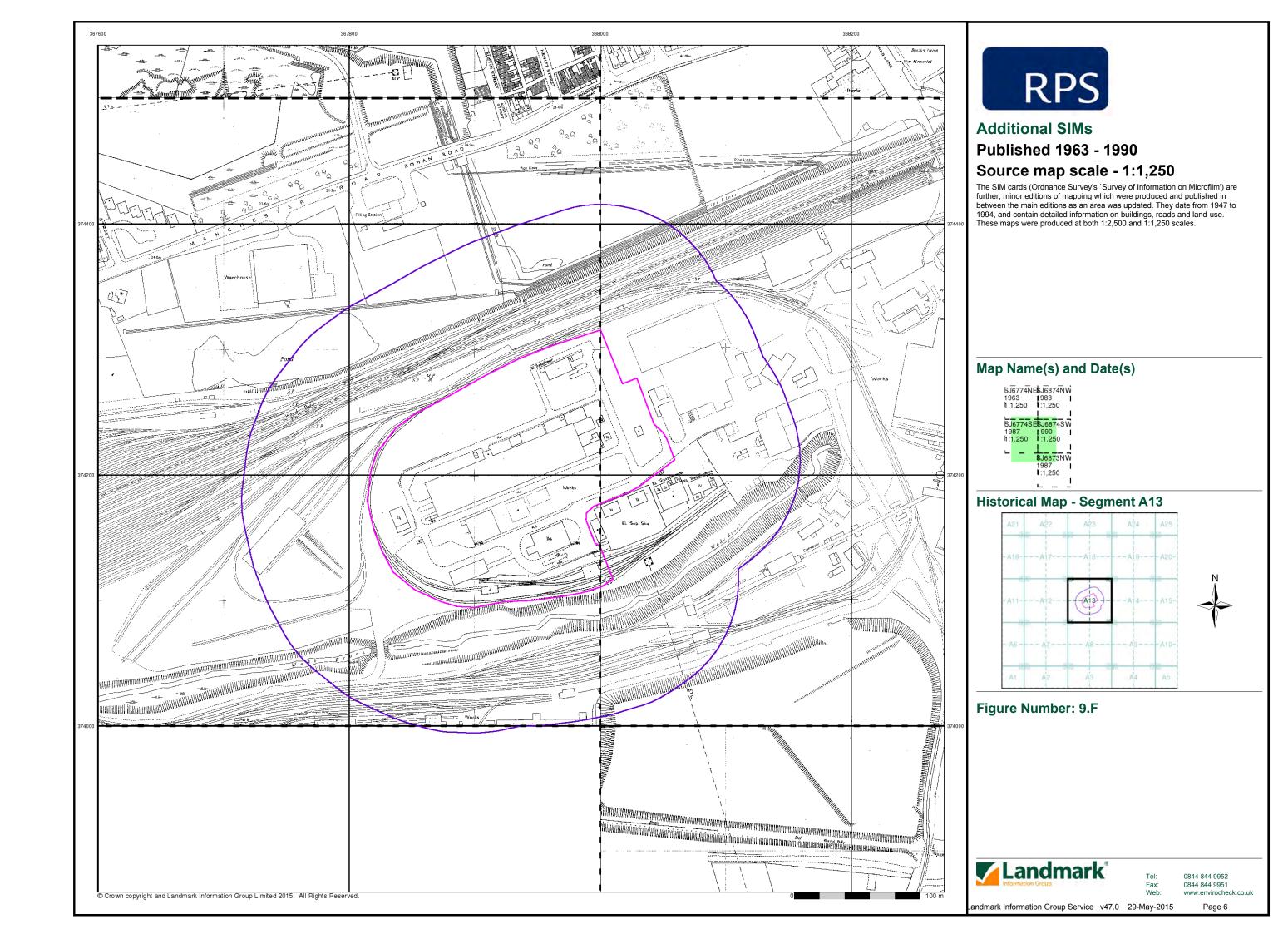
Figure Number: 9.E

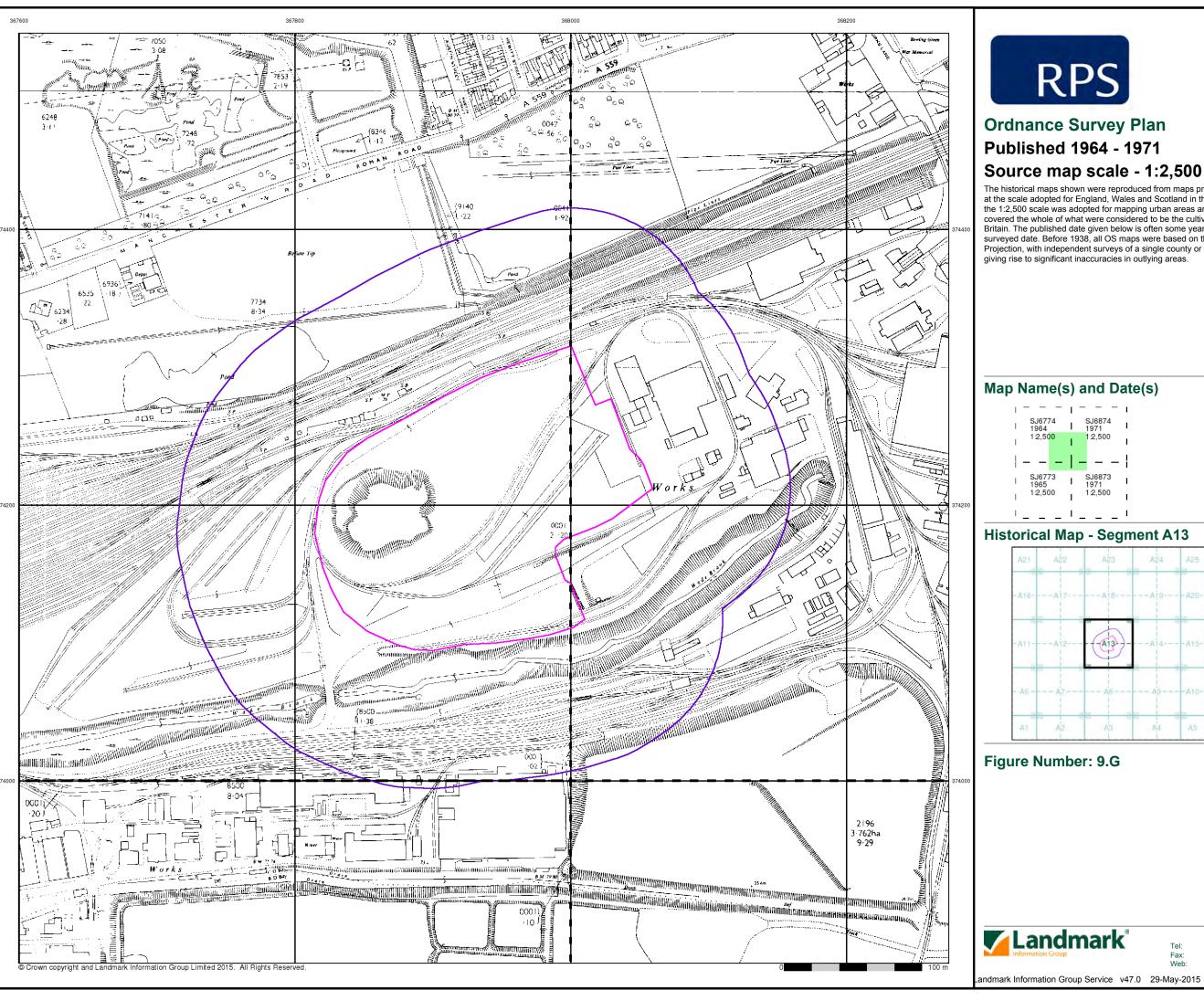


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andmark Information Group Service v47.0 29-May-2015

Page 5





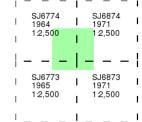


Ordnance Survey Plan

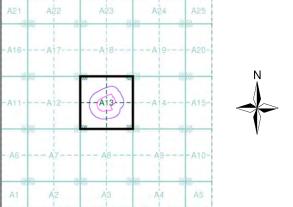
Published 1964 - 1971

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



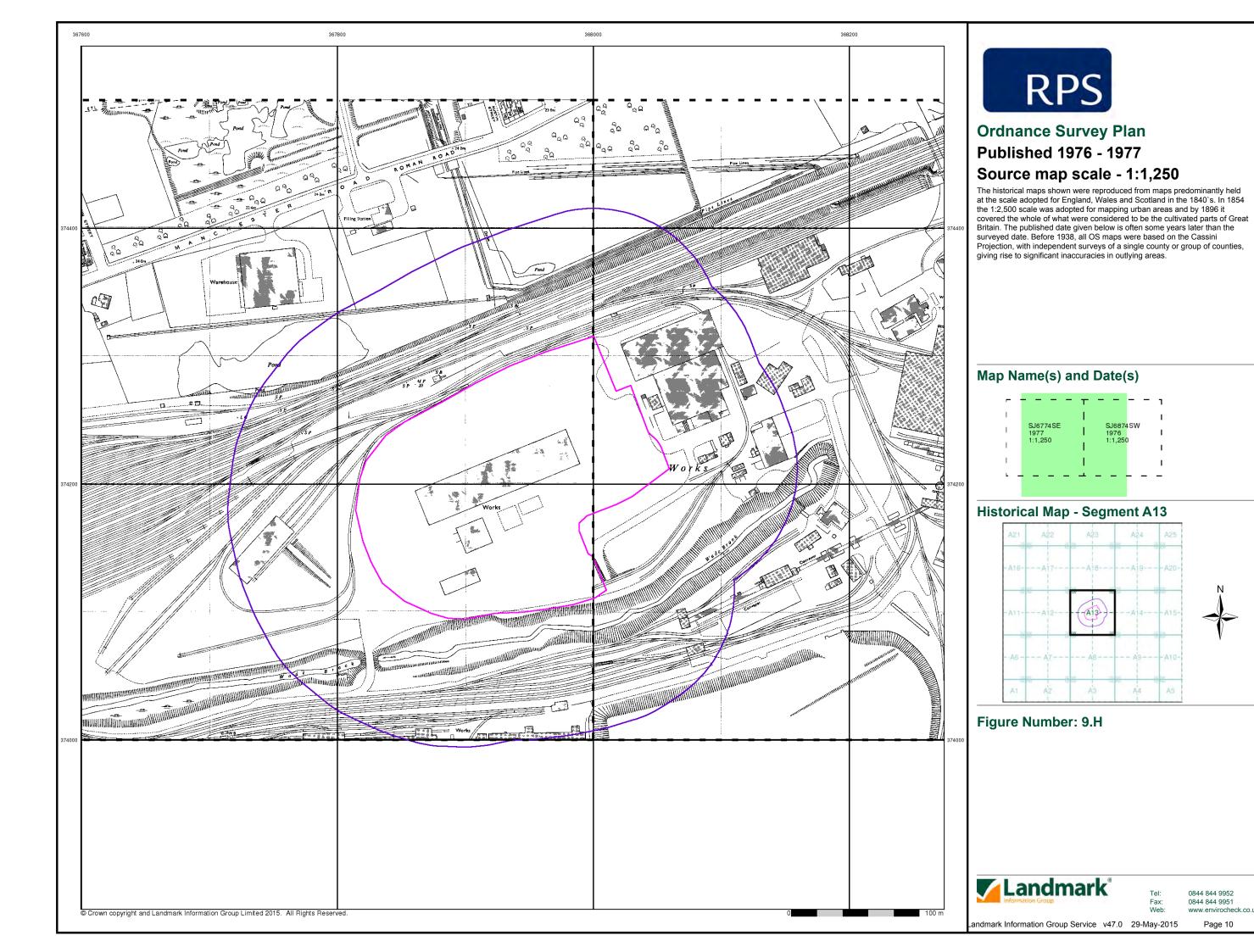
Historical Map - Segment A13

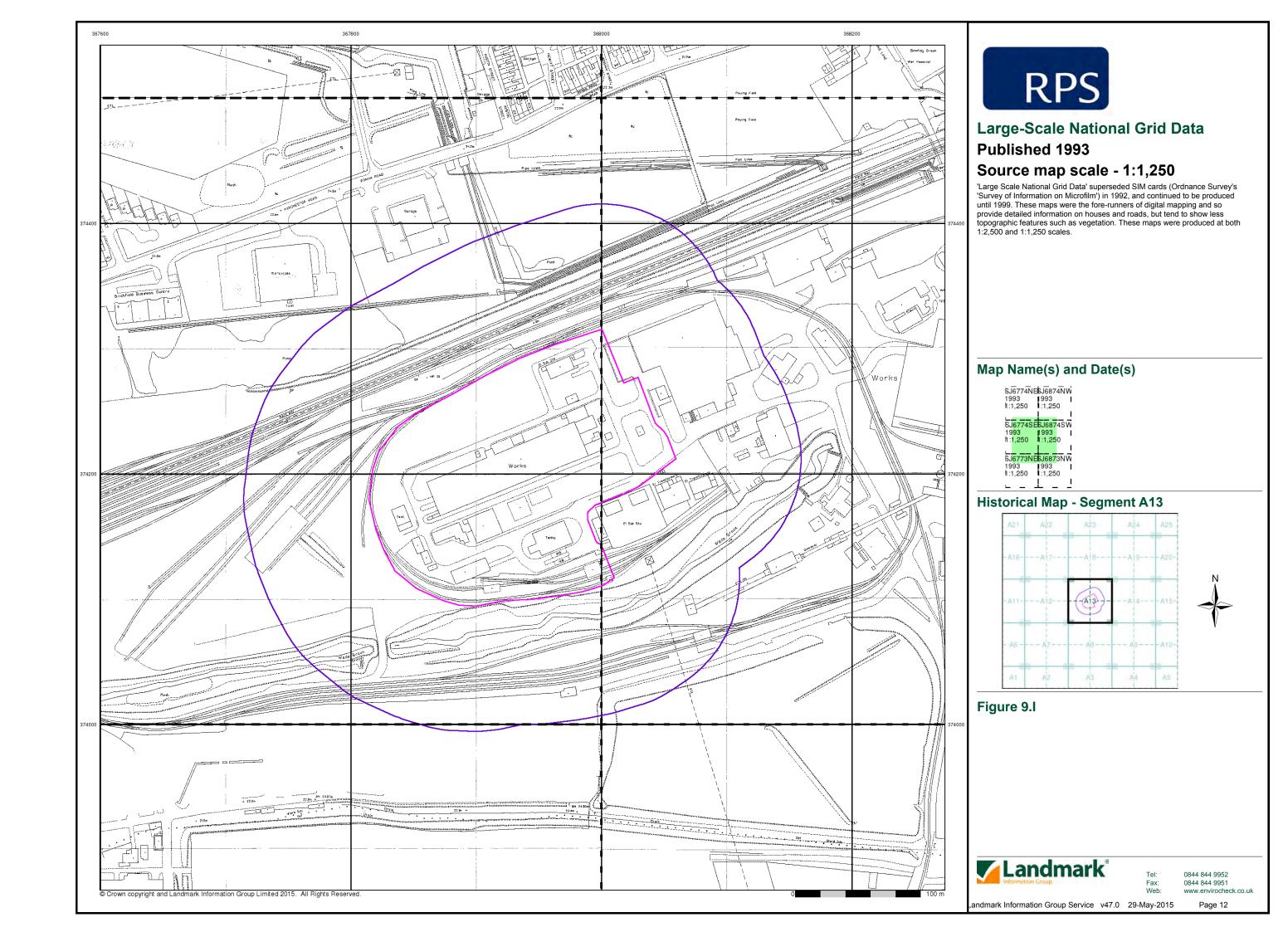




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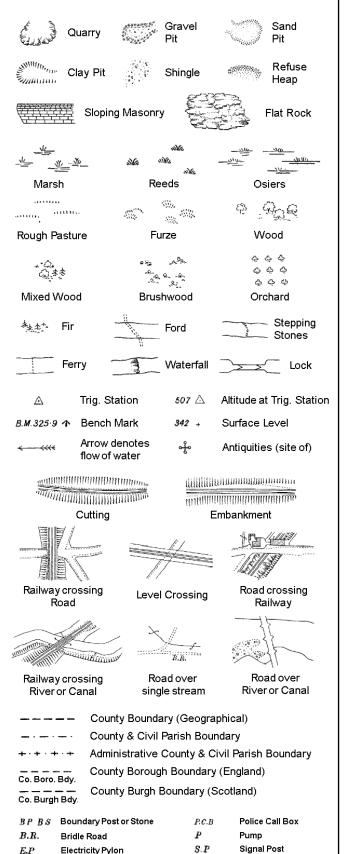
andmark Information Group Service v47.0 29-May-2015





Historical Mapping Legends

Ordnance Survey County Series and Ordnance Survey Plan 1:2,500



Sl.

Tr

T.C.B

Sluice

Spring

Trough

Well

Telephone Call Box

Foot Bridge

Mile Stone

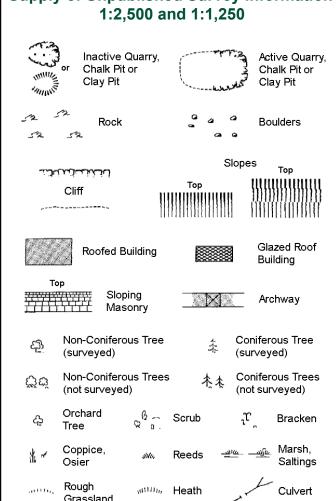
M.P.M.R Mooring Post or Ring

Guide Post or Board

F.B.

M.S

Supply of Unpublished Survey Information



Triangulation Cave ÷ Entrance ETL **Electricity Transmission Line**

Direction

of water flow

County Boundary (Geographical) County & Civil Parish Boundary Civil Parish Boundary Admin. County or County Bor. Boundary L B Bdy London Borough Boundary Symbol marking point where boundary mereing changes

Bench

Antiquity

(site of)

Electricity

FΒ

GVC

MP, MS

Fn/DFn

Filter Bed

Gas Governer

Guide Post

Manhole

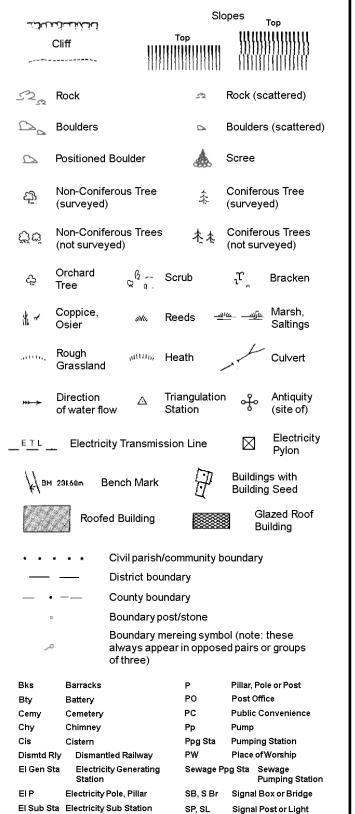
Fountain / Drinking Ftn.

Gas Valve Compound

Mile Post or Mile Stone

., .	_	-	
вн	Beer House	Р	Pillar, Pole or Post
BP, BS	Boundary Post or Stone	PO	Post Office
Cn, C	Capstan, Crane	PC	Public Convenience
Chy	Chimney	PH	Public House
D Fn	Drinking Fountain	Pp	Pump
EIP	Electricity Pillar or Post	SB, S Br	Signal Box or Bridge
FAP	Fire Alarm Pillar	SP, SL	Signal Post or Light
FB	Foot Bridge	Spr	Spring
GP	Guide Post	Tk	Tank or Track
Н	Hydrant or Hydraulic	TCB	Telephone Call Box
LC	Level Crossing	TCP	Telephone Call Post
MH	Manhole	Tr	Trough
MP	Mile Post or Mooring Post	WrPt,WrT	Water Point, Water Tap
MS	Mile Stone	W	Well
NTL	Normal Tidal Limit	Wd Pp	Wind Pump

Ordnance Survey Plan, Additional SIMs and Large-Scale National Grid Data 1:2,500 and 1:1,250



Spr

Tr

Wd Pp

Wks

Spring

Trough

Wind Pump

Wr Pt. Wr T Water Point, Water Tap

Works (building or area)

Tank or Track



Historical Map - Segment A13

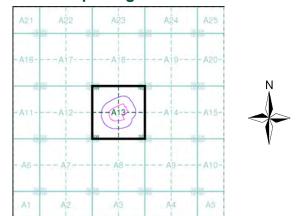
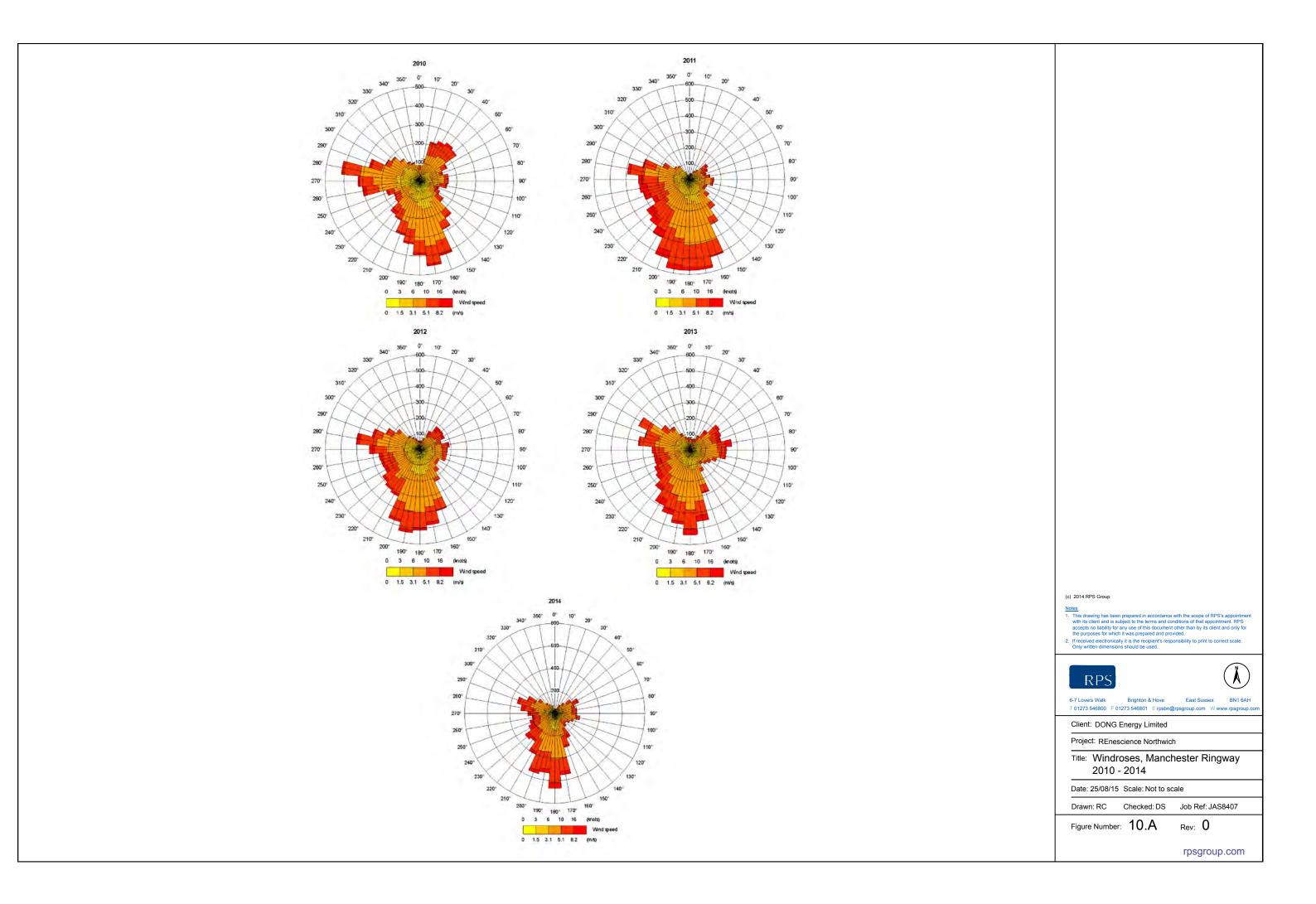


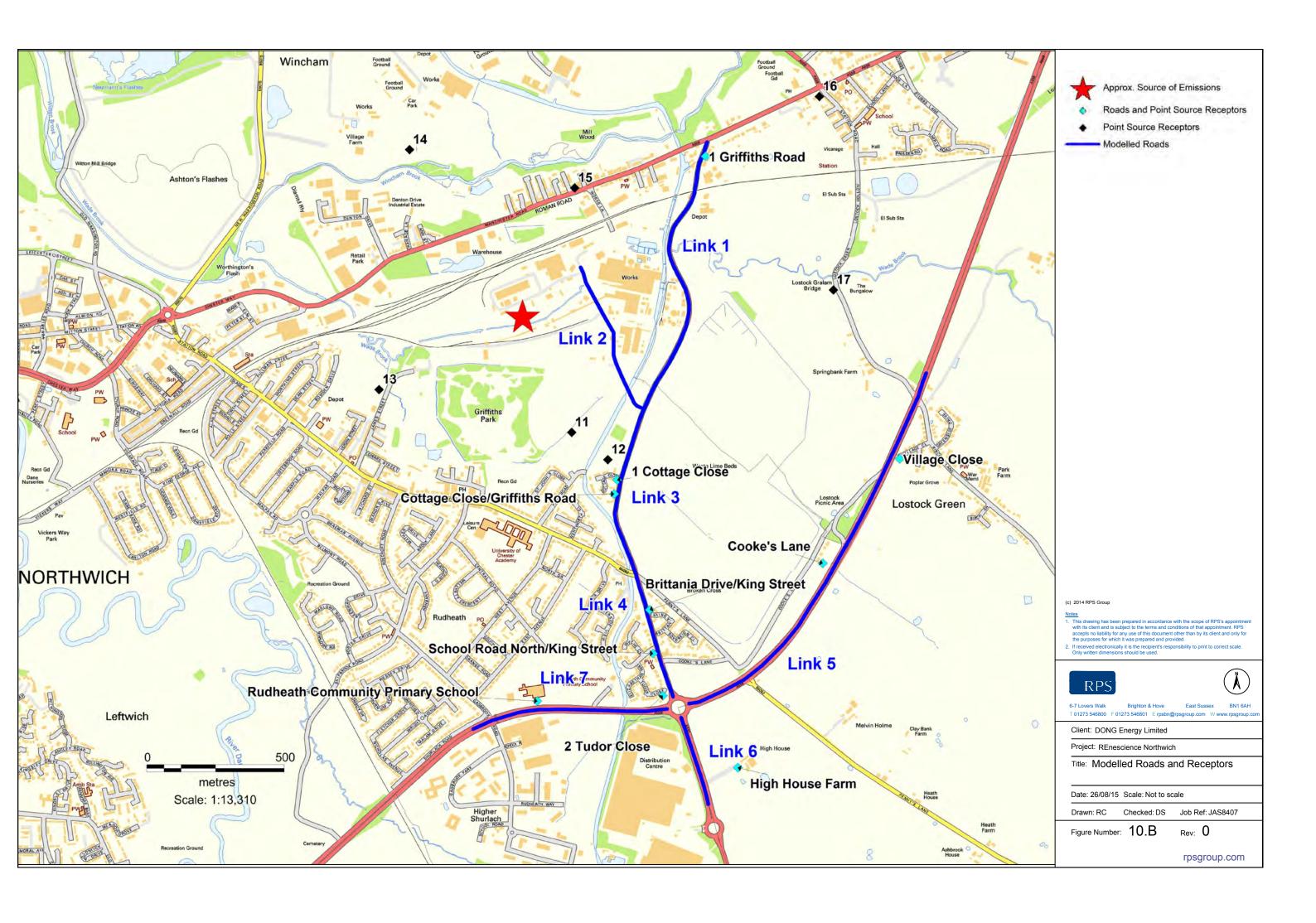
Figure Number: 9.J

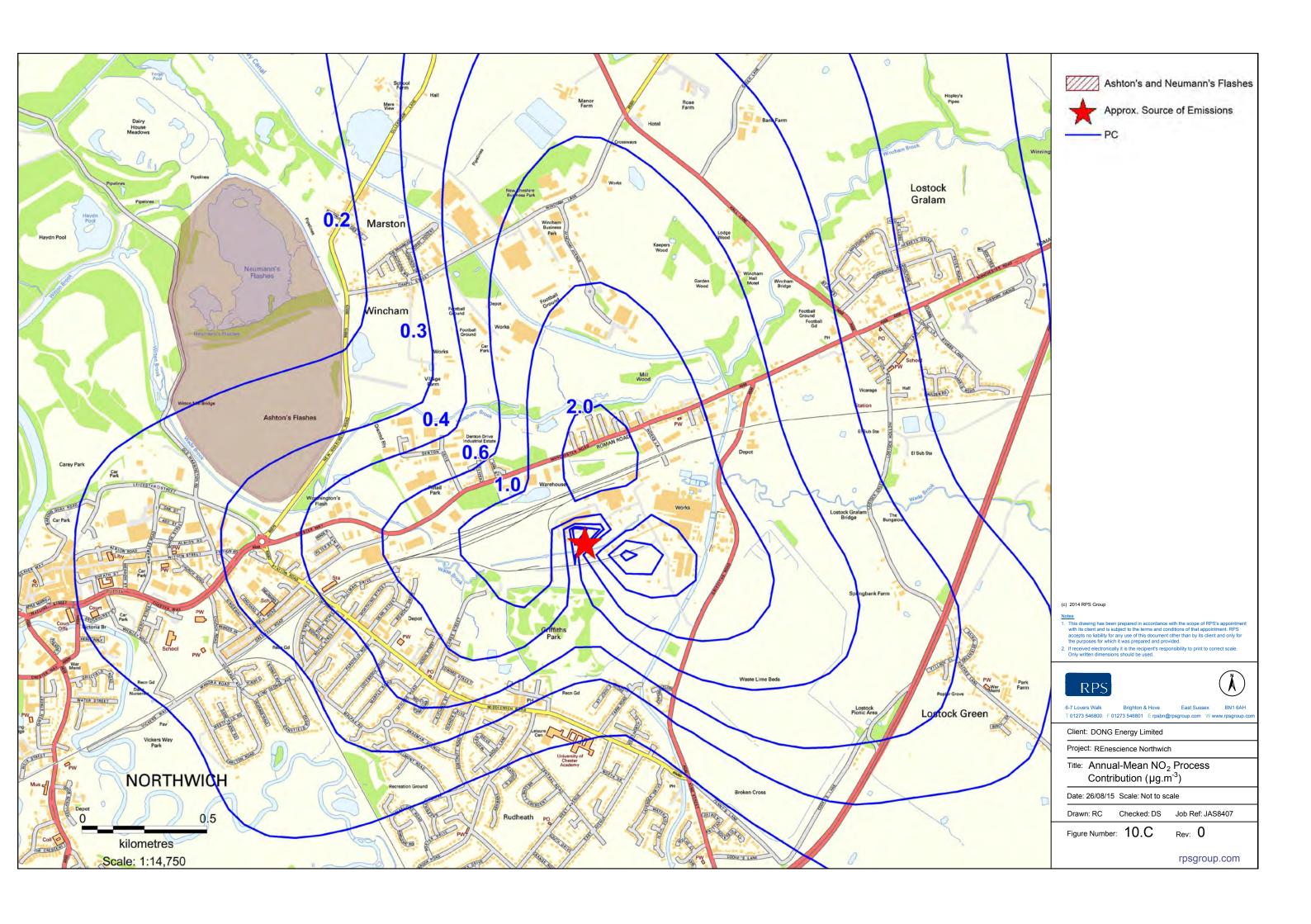


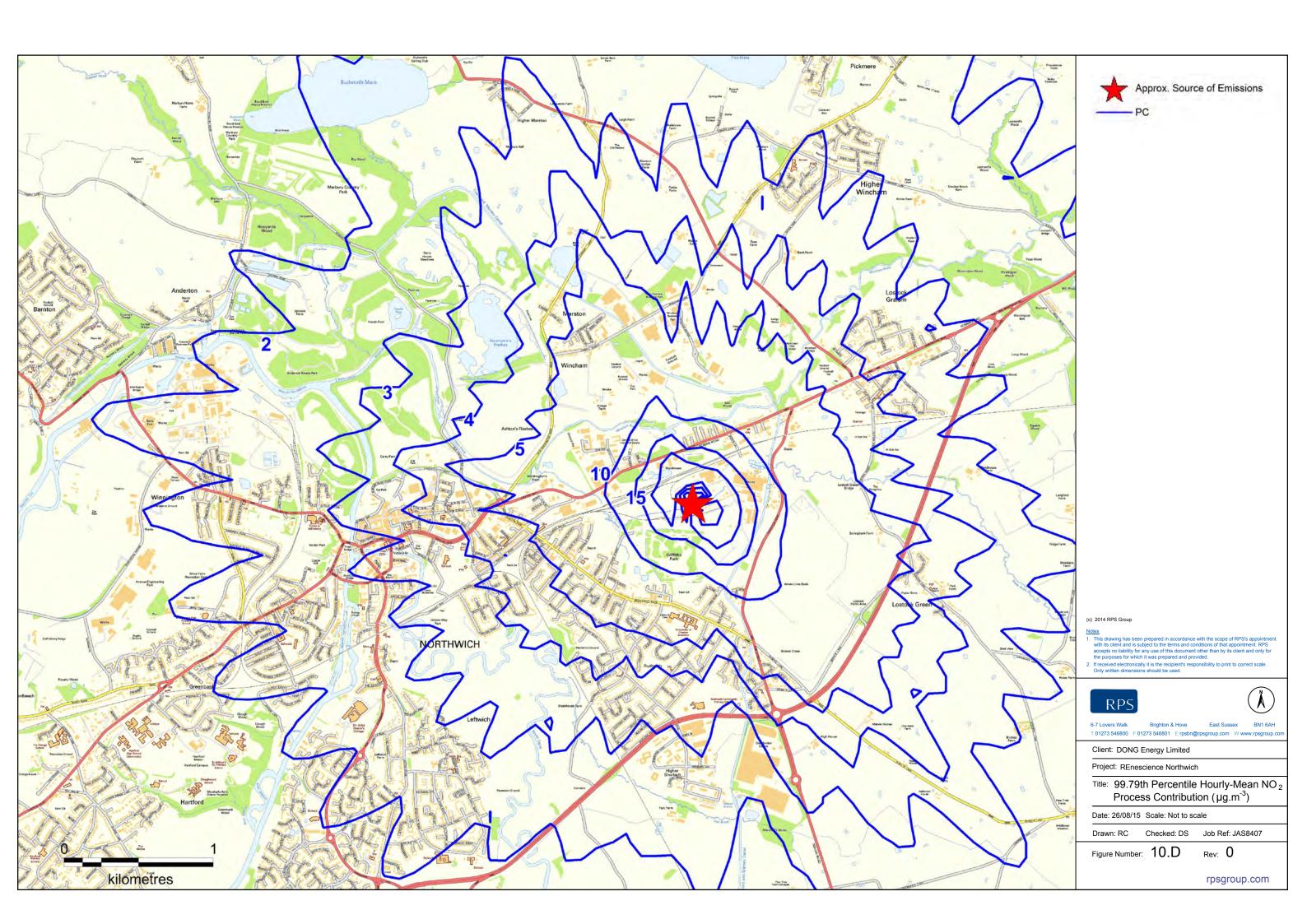
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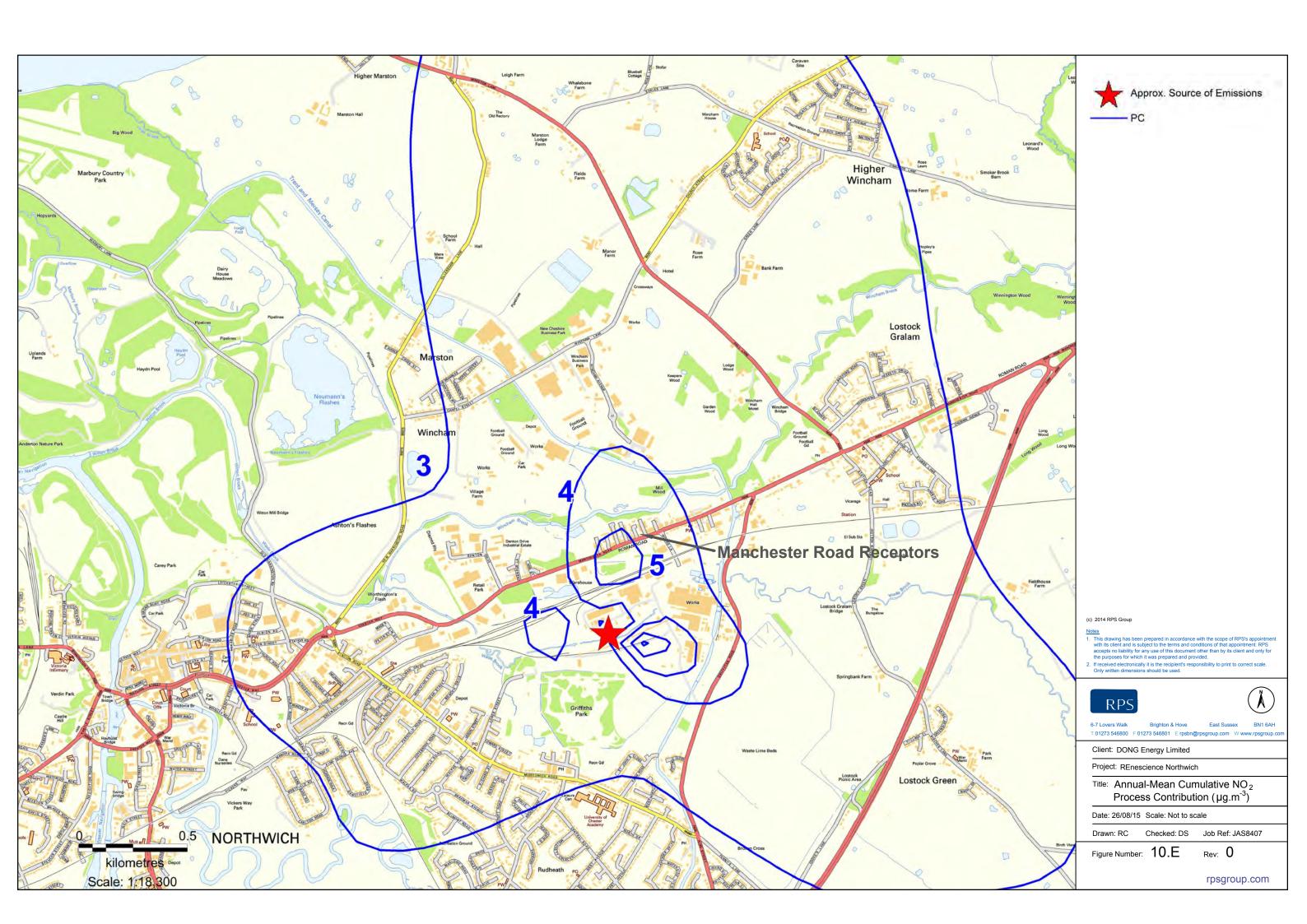
Page 1

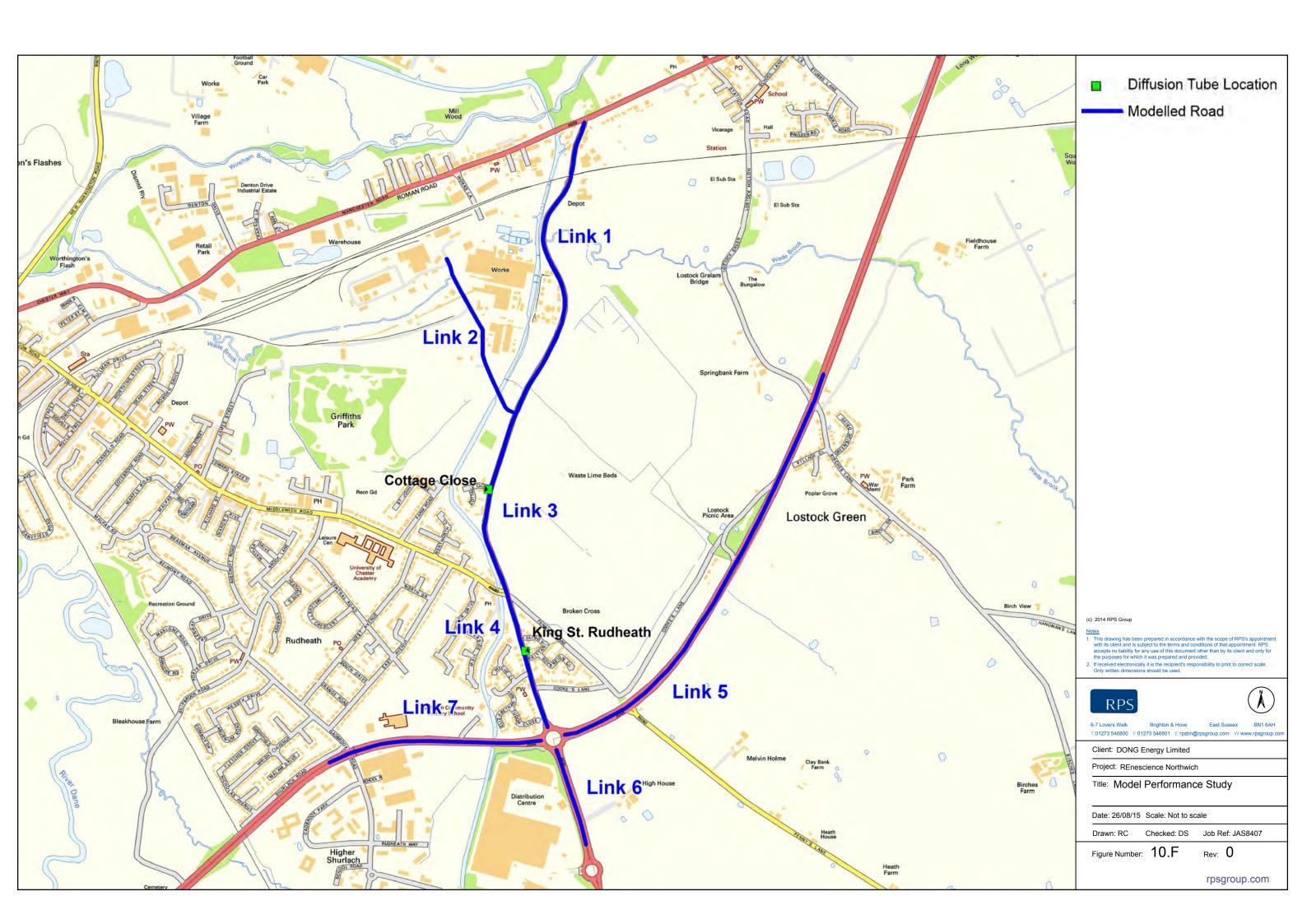


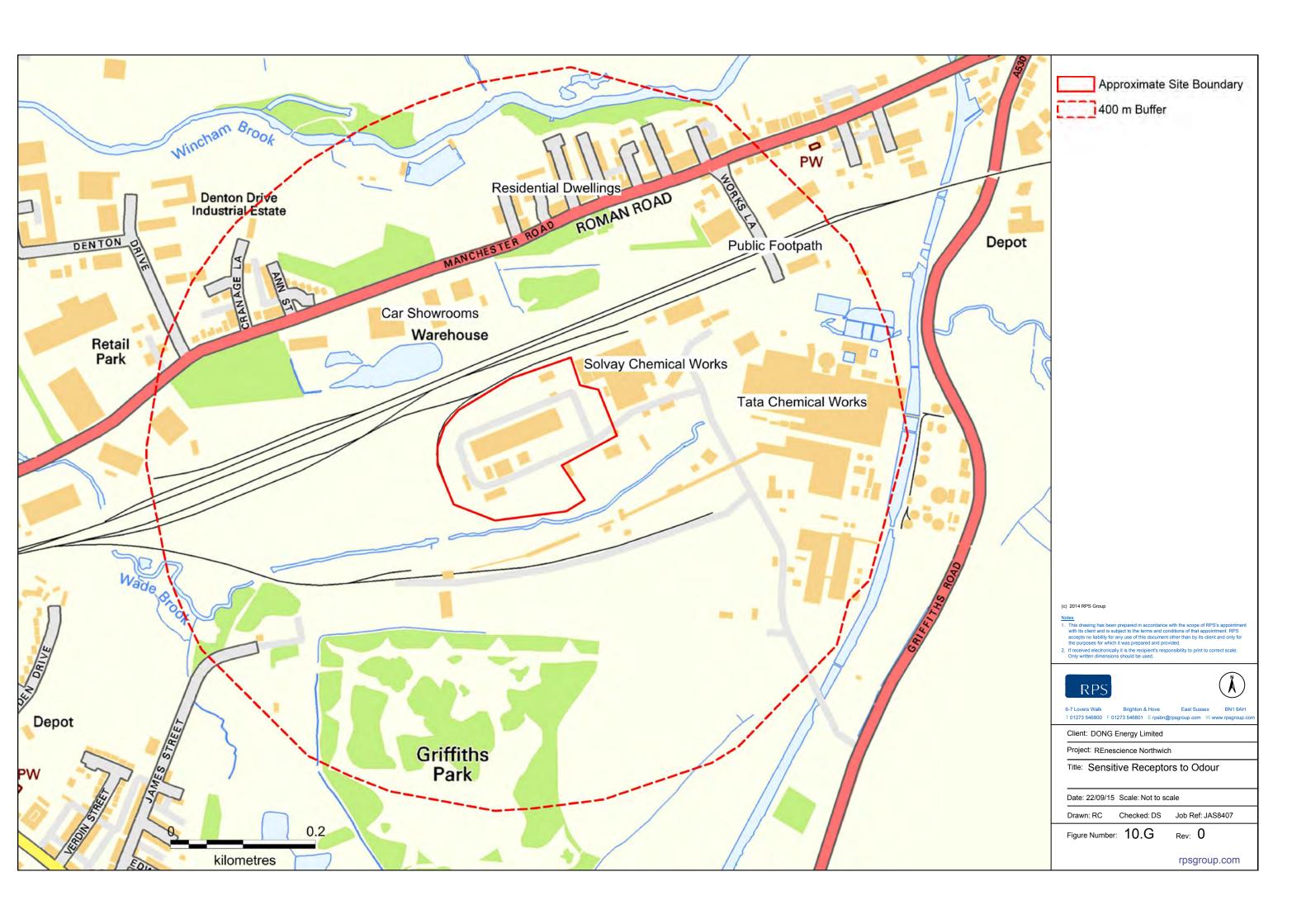


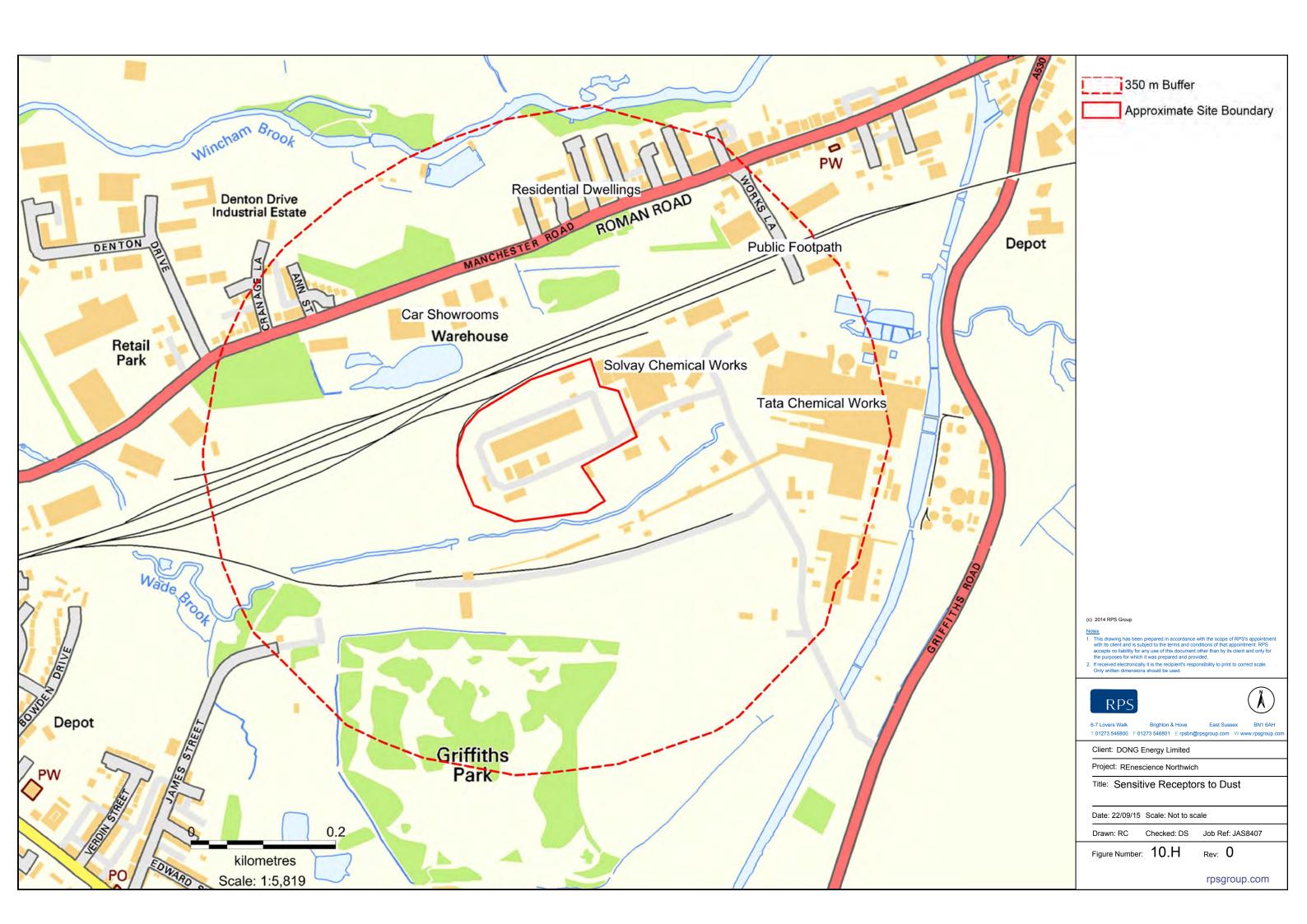


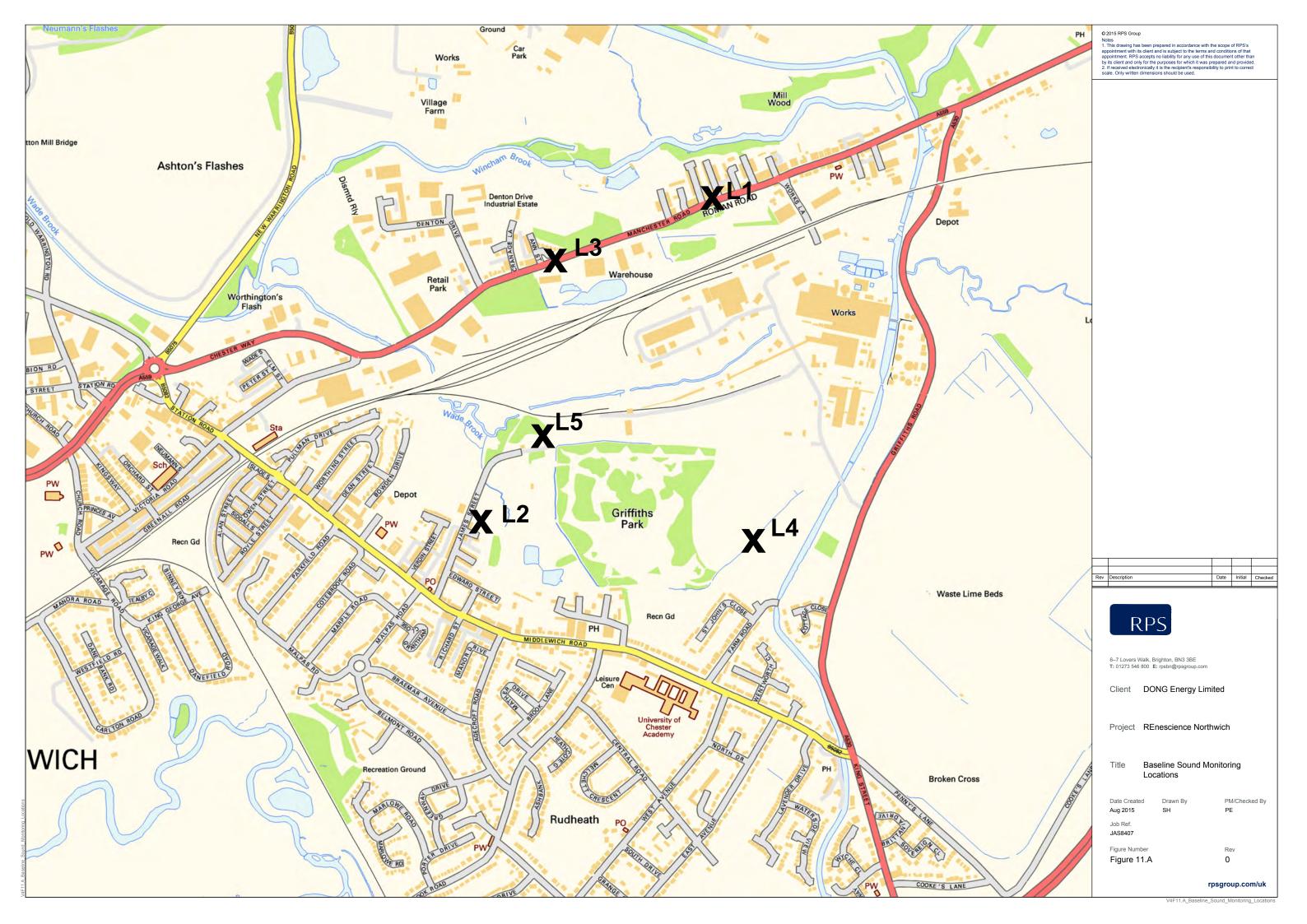








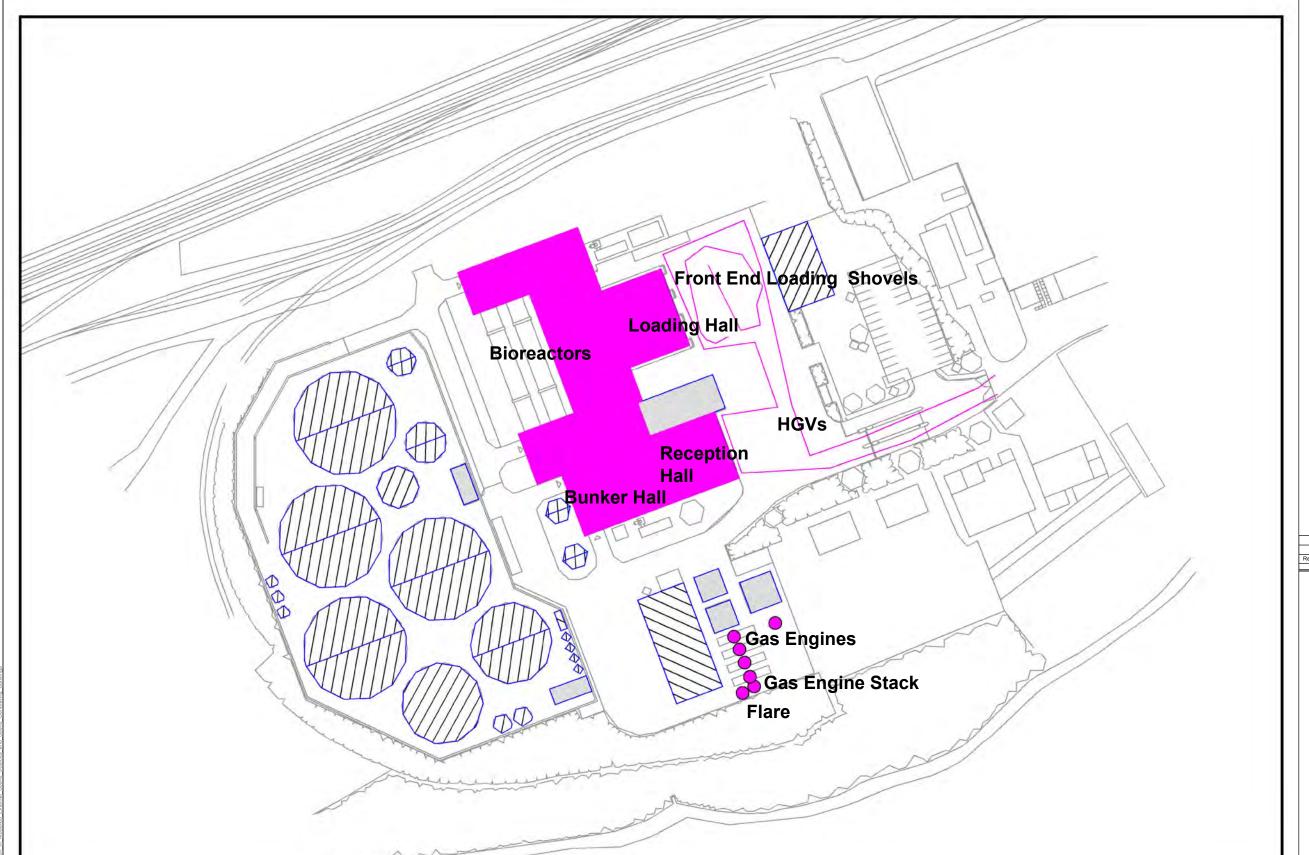




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Rev	Description	Date	Initial	Checked



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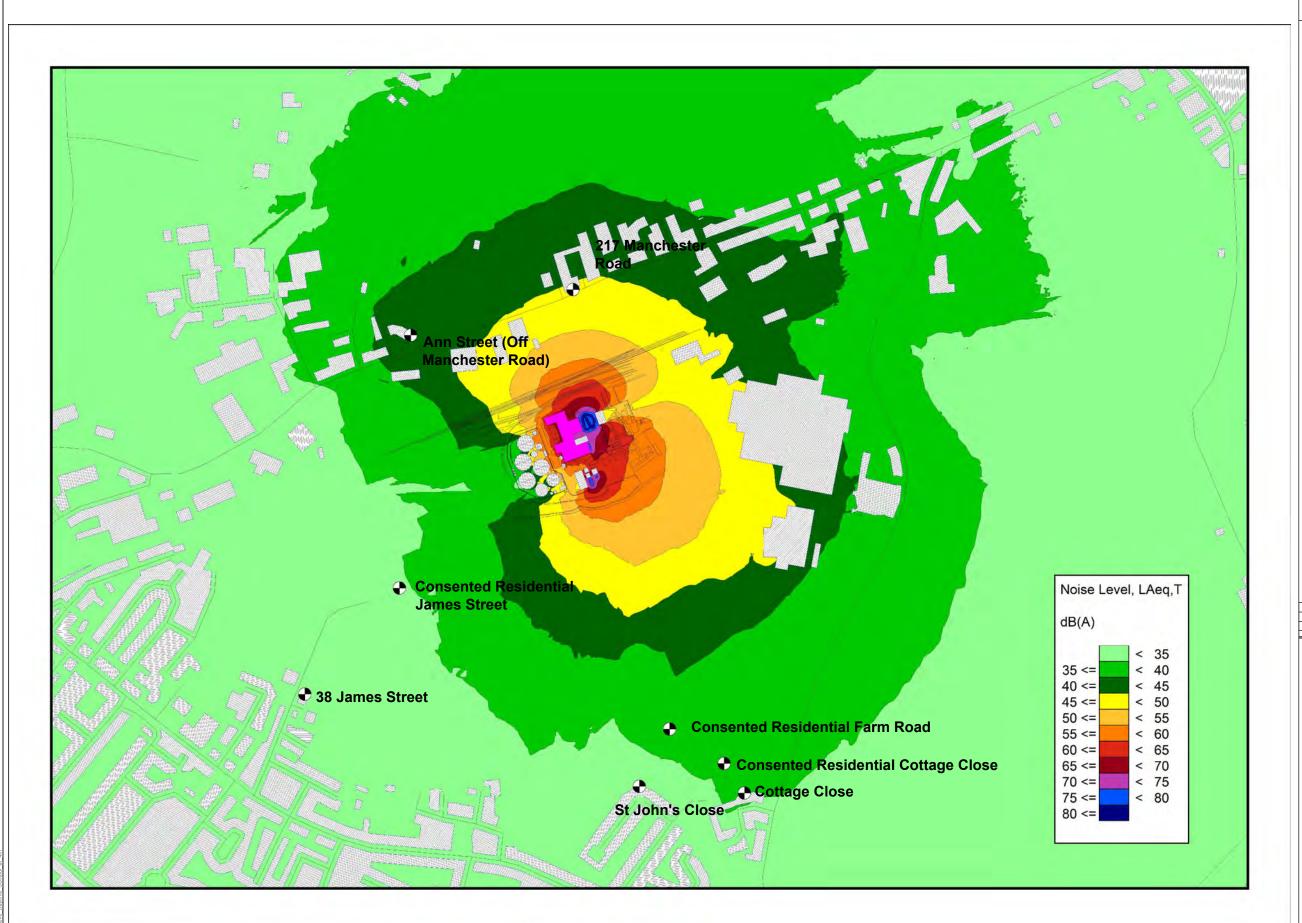
Project REnescience Northwich

Site Plan Indicating Location of Modelled External Sound Sources and Sound Generating Buildings

Job Ref.

JAS8407

Figure Number Figure 11.B



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Project REnescience Northwich

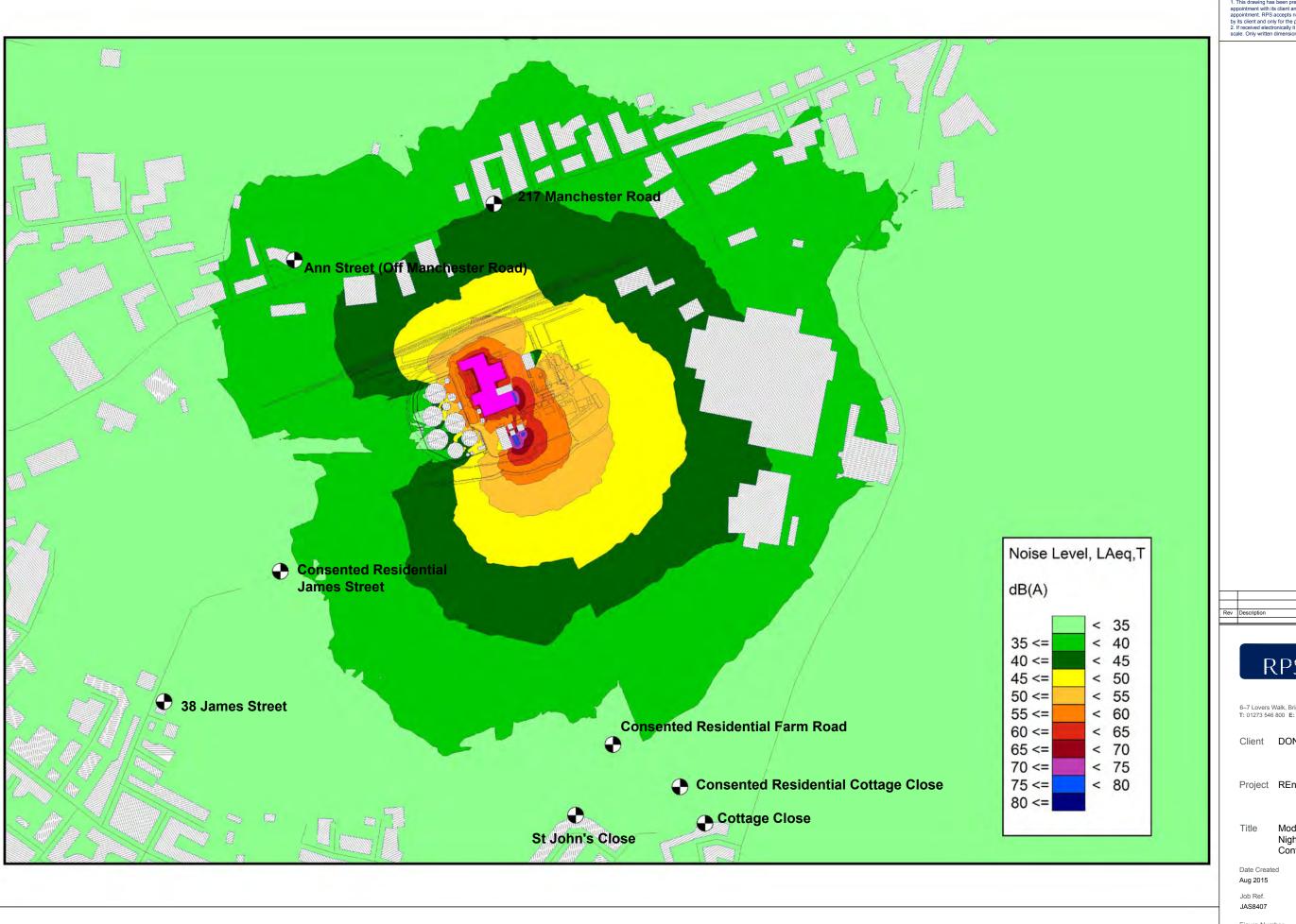
Modelled Specific Sound Level-Daytime (07:00 - 23:00) Contour Title

Aug 2015

Job Ref.

JA8407

Figure Number Figure 11.C



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Client DONG Energy Limited

Project REnescience Northwich

Modelled Specific Sound Level -Night-time (23:00 - 07:00) Contour at 4 m

Figure Number Figure 11.D