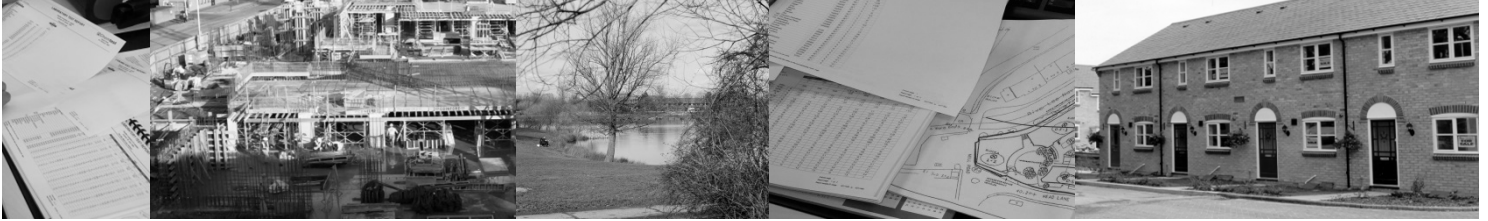


Anglia Square, Norwich Contamination Report

Dated March 2022

**Weston
Homes**





PHASE I DESK STUDY AND PRELIMINARY RISK ASSESSMENT

Anglia Square, Norwich, NR3 1DT

Project Reference:

CON01-NORW-045

Weston Homes Reference:

WH179

Site Address:

Anglia Square
Norwich
NR3 1DT

Report Date:

25 March 2022

Version Number:

Version 3.0

Customer:

Weston Homes plc
Weston Group Business Centre
Parsonage Road
Takeley
Essex
CM22 6PU

Prepared By:

Stansted Environmental Services Limited
The Stansted Centre
Parsonage Road
Takeley
Essex
CM22 6PU

This document has been prepared in accordance with the scope of Stansted Environmental Services Ltd appointment with its client and is subject to the terms of the appointment. It is addressed to and for the sole use and reliance of Stansted Environmental Services client.

Stansted Environmental Services Ltd accepts no liability for any use of this document other than by its client and only for the purposes, stated in the document, for which it was prepared and provided. No person other the client may copy (in whole or part) use or rely on the contents of this document, without the prior written permission of Stansted Environmental Services Ltd.

Any advice, opinions, or recommendations within this document should be read and relied upon only in the context of the document as a whole.

The contents of this document are not to be construed as providing legal, business or tax advice or opinion

DOCUMENT CONTROL

Publication Title Phase I Desk Study and Preliminary Risk Assessment
Anglia Square, Norwich, NR3 1DT

Volume Number Volume 1 of 1

Version 3.0

Date 25 March 2022

Project Reference CON01-NORW-045

Prepared By:



Gavin Greenwood BSc (Hons) MSc (Eng) FGS
Associate Director (Geoenvironmental)

Gavin Greenwood has over 30 years' experience as a GeoEnvironmental Engineer working for a variety of consultants and contractors within the contaminated land and geotechnical fields.

Reviewed & Approved By:



Silvio Petrasso BSc (Hons)
CMIOSH, MIOA, IMAPS, ACIEH
Managing Director

Silvio Petrasso has been undertaking contaminated land investigations as part of brownfield land redevelopments for 16 years, as well as offering other construction related consultancy services.

Issue Status Version 3.0

Date 25 March 2022

TABLE OF CONTENTS

EXECUTIVE SUMMARY	5
1. INTRODUCTION	7
2. SOURCES OF INFORMATION	11
3. SITE DESCRIPTION AND SETTING	12
4. HISTORICAL MAP SURVEY	14
5. ENVIRONMENTAL SETTING	16
6. ASSESSMENT OF GEOTECHNICAL RISK	18
7. ENVIRONMENTAL SEARCHES	20
8. PRELIMINARY RISK ASSESSMENT	22
9. RECOMMENDATIONS	26
10. CONCLUSIONS	27
APPENDICES	29
A. PLANS & FIGURES	
B. SITE PHOTOGRAPHS	
C. ENVIROCHECK DATA – HISTORICAL MAPS	
D. ENVIROCHECK DATA – ENVIRONMENTAL SETTING	
E. ENVIROCHECK DATA - DATASHEETS	
F. PROPOSED PHASE II GROUND INVESTIGATION	

EXECUTIVE SUMMARY

Stansted Environmental Services Ltd has been commissioned by Weston Homes PLC, to undertake a Phase I Preliminary Risk Assessment (PRA) of a study site located at Anglia Square, Norwich, NR3 1DT. The site may be located by National Grid Reference TL 560218.

The proposed development is subject to a hybrid (Part Full/ Part Outline) application for the comprehensive redevelopment of Anglia Square, and car parks fronting Pitt Street and Edward Street for up to 1,100 dwellings and up to 8,000sqm (NIA) flexible retail, commercial and other non-residential floorspace including Community Hub, up to 450 car parking spaces (at least 95% spaces for class C3 use, and up to 5% for class E/F1/F2/Sui Generis uses), car club spaces and associated works to the highway and public realm areas'

Anglia Square is situated within the northern part of Norwich City Centre, and is surrounded by a range of different uses including residential dwellings, commercial properties and community facilities. The built form of the surrounding area varies widely in terms of its age, scale and architectural style but reflects medieval and later street patterns. The site measures approximately 4.65 hectares and currently comprises previously developed land broadly defined by St Crispins Road to the south, Pitt Street and New Botolph Street to the west, Edward Street to the north, Magdalen Street to the east and the remainder of Anglia Square Shopping Centre to the southeast. An additional parcel of vacant land on the northwestern side of New Botolph Street which is currently used for surface level car parking is also included within the proposed development site, as well as an area of land immediately to the north of Edward Street and west of Beckham Place, also currently used for surface level car parking. The site includes a number of existing buildings and structures in addition to those above including a vacant former office building Sovereign House, a vacant and condemned multistorey car park fronting Edward Street, Gildengate House, the current Hollywood Cinema at first floor level, and two vacant nightclubs at first floor level under part of the cinema, with additional commercial uses along Pitt Street and surface level car parking on the northwestern part of the site.

The site has been put to a residential and commercial use since at least the Middle Ages. More specifically, since 1880 the site was used as a mixed use development that included industrial buildings that manufactured crêpe fabrics and materials for clothing, tannery, shoe & bootmakers, an oilskin manufacturing clothing company, printers, timber merchants, fruit and vegetable wholesale warehouse and residential housing. The site was bombed during World War II. The land was redeveloped in the mid-1960s and the Anglia Square shopping centre and commercial buildings were constructed. The site layout has not changed since 1968 to the present day.

The site is underlain by the superficial deposits of Alluvium and River Terrace Gravels overlying the White Chalk Subgroup. The superficial deposits have been identified as a Secondary A Aquifer while the underlying White Chalk Subgroup has been classified as a Principal Aquifer by the Environment Agency.

The closest surface water feature is the River Wensum approximately 300m to the southeast which is tidal at this locality.

The research has identified evidence of potential geohazards associated with the underlying ground conditions, either natural or man-made, and, therefore, it is recommended that further work be carried out to confirm the presence, nature or extent of those hazards anticipated to impact on the site.

The research has identified the following potential sources of contamination which may form a pollutant linkage:

- Contamination associated with possible Made Ground from demolition of the previous structures and construction of the current development.
- Possible ground gases associated with the Made Ground.

- Fuel oils within the car parking area from spillages from vehicles.

The research has identified evidence of potential sources of contamination on or which may impact on the site, with plausible pathways to the likely receptors, and therefore potential pollution linkages have been suggested. As such, further intrusive works will be required.

1. INTRODUCTION

1.1 General

This Phase I Desk Study & Preliminary Risk Assessment Report (PRA) has been prepared by Stansted Environmental services Limited (SES) on behalf of Weston Homes Plc (the Applicant) in support of a hybrid (part full/part outline) planning application, (the Application), submitted to Norwich City Council (NCC) for the comprehensive redevelopment of Anglia Square and various parcels of mostly open surrounding land, (the Site), as shown within a red line on drawing 'ZZ-00-DR-A-01-0200' (presented within Appendix A).

The Site is located in a highly accessible position within the northern part of Norwich City Centre and comprises a significant element of the Anglia Square/Magdalen Street/St Augustines Large District Centre, (the LDC). It is thus of strategic importance to the City, and accordingly has been identified for redevelopment for many years within various local planning policy documents, including the Northern City Centre Area Action Plan 2010, (NCCAAP), (now expired), the Joint Core Strategy for Broadland, Norwich and South Norfolk 2014, (JCS), and NCC's Anglia Square and Surrounding Area Policy Guidance Note 2017, (PGN). The Site forms the principal part of an allocation (GNLP 0506) in the emerging Greater Norwich Local Plan (GNLP).

This application follows a previous application on a somewhat smaller development parcel, (NCC Ref. 18/00330/F) made jointly by Weston Homes Plc as development partner and Columbia Threadneedle Investments, (CTI), the Site's owner, for a residential-led mixed use scheme consisting of up to 1,250 dwellings with decked parking, and 11,000 sqm GEA flexible ground floor retail/commercial/non-residential institution floorspace, hotel, cinema, multi-storey public car park, place of worship, and associated public realm and highway works. This was subject to a Call-in by the Secretary of State (PINS Ref. APP/G2625/V/19/3225505) who refused planning permission on 12th November 2020, (the 'Call in Scheme').

In April 2021, following new negotiations with Site owner CTI, Weston Homes decided to explore the potential for securing planning permission for an alternative scheme via an extensive programme of public and stakeholder engagement, from the earliest concepts to a fully worked up application. The negotiations with CTI have secured a "Subject to Planning" contract to purchase the Site, (enlarged to include the southeastern part of Anglia Square fronting Magdalen Street and St Crispins Road), which has enabled a completely fresh approach to establishing a redevelopment scheme for Anglia Square. This has resulted in a different development brief for the scheme, being to create a replacement part of the larger LDC suited to the flexible needs of a wide range of retail, service, business and community uses, reflective of trends in town centre character, integrated with the introduction of homes across the Site, within a highly permeable layout, well connected to its surroundings.

The new development proposal seeks to comprehensively redevelop the Site to provide up to 1,100 dwellings and up to 8,000sqm (NIA) flexible retail, commercial and other non-residential floorspace including Community Hub, up to 450 car parking spaces (at least 95% spaces for class C3 use, and up to 5% for class E/F1/F2/Sui Generis uses), car club spaces and associated works to the highway and public realm areas (the Proposed Development). These figures are maxima in view of the hybrid nature of the application. This proposes part of the scheme designed in full, to accommodate 367 dwellings, 5,757 sqm non-residential floorspace, and 146 car parking spaces (at least 95% spaces for residential use, and up to 5% for non-residential use), with the remaining large part of the Site for later detailed design as a "Reserved Matters" application, up to those maxima figures.

This Phase I Desk Study & Preliminary Risk Assessment was prepared to evaluate the contamination status at the site and to develop a risk assessment based on the past uses of the site and the proposed end use.

Assessment of the risks that may be associated with potentially contaminated land are generally undertaken on a phased or tiered basis, in accordance with current UK policy and technical guidance given in the Land Contamination: Risk Management (LCRM) procedures published by the Environment Agency (2019) and British Standard BS10175 "Investigation of Potentially Contaminated Sites – Code of Practice" (2011 + A2:2017) as well as other relevant documents. The LCRM procedures have been produced after the withdrawal of the former CLR11 report and generally follow the procedures in CLR11.

There are three stages presented in the LCRM as follows:

- Stage 1: Risk Assessment
- Stage 2: Options Appraisal
- Stage 3: Remediation

The relevant phases of risk assessment are as follows:

- Development of a Conceptual Model that identifies potential source-pathway-receptor linkages (pollutant linkages) based initially on a consideration of desk-based and site reconnaissance information on the characteristics of the site and its environmental setting;
- Risk estimation and evaluation using generic assessment criteria. This allows refinement of the Conceptual Model on the basis of factual information on the condition of the land (site investigation data) and involves comparison between observed concentrations of contaminants in environmental media against relevant and applicable generic assessment (or screening) criteria; and
- Risk estimation and evaluation using site specific assessment criteria. This involves further refinement of the Conceptual Model on the basis of more detailed, site specific information on the condition of the land, and the use of relevant and applicable exposure models and site specific assumptions to estimate risks.

The Preliminary Risk Assessment is a qualitative judgement about the potential human health and environmental risks that may be associated with a site, and represents the first of the three phases outlined above.

This PRA report is based upon a defined programme of work and terms and conditions agreed with the Client. In preparing this report, all reasonable skill and care has been taken, accounting for project objectives, agreed scope of work and prevailing site conditions. SES accepts no liability to any parties whatsoever, following the issue of this report, for any matters arising outside the agreed scope of the work. It should be noted that this report is issued in confidence to the Client and that SES has no responsibility to any third parties to whom this report may be circulated, in part or in full, and any such parties cannot rely on the contents of the report. Unless specifically assigned or transferred within the terms of the agreement, SES asserts and retains all Copyright, and other Intellectual Property Rights, in and over the report and its contents.

1.2 Planning Status

There is currently no planning consent for the site. However, a planning application is being submitted for a 'hybrid' (part full/part outline) application on site of 4.65ha for demolition and clearance of all buildings and structures and the phased, comprehensive redevelopment of the site with 14 buildings ranging in height from 1 to 8 storeys, for a maximum of 1,100 residential dwellings, (houses, duplexes and flats) (Use Class C3); a maximum of 8,000 sqm flexible retail, commercial and

other non-residential floorspace (retail, business, services, food and drink premises, offices, workshops, non-residential institutions, community hub, local community uses, and other floorspace (Use Classes E/F1/F2/Sui Generis (public conveniences, drinking establishments with expanded food provision, bookmakers and/or nail bars (up to 550sqm), and dry cleaner (up to 150sqm))); service yard, cycle and refuse stores, plant rooms, car parking and other ancillary space; with associated new and amended means of access on Edward Street and Pitt Street, closure of existing means of access on Edward Street, New Botolph Street, Pitt Street and St Crispins Road flyover, formation of cycle path between Edward Street and St Crispins Road, formation of wider footways, laybys and other associated highway works on all boundaries, formation of car club parking area off New Botolph Street, up to 450 car parking spaces (at least 95% spaces for class C3 use, and up to 5% for class E/F1/F2/Sui Generis uses), hard and soft landscaping of public open spaces comprising streets and squares/courtyards for pedestrians and cyclists, other landscape works within existing streets surrounding the site, service infrastructure and other associated work (all floor areas given as maximum Net Internal Area).

Comprising:

- Full planning permission on 2.25ha of the site for demolition and clearance of all buildings and structures, erection of 8 buildings ranging in height from 1 to 8 storeys for 367 residential dwellings (Use Class C3) (149 dwellings in Block A, 25 dwellings in Block B, 21 dwellings in Block C, 34 dwellings in Block D, 8 dwellings in Block J3, 81 dwellings in Block K/L, and 49 dwellings in Block M) with associated cycle and refuse stores), and, for 5,757 sqm flexible retail, commercial and other non-residential floorspace (retail, business, services, food and drink premises, offices, workshops, non-residential institutions, community hub, local community uses, and other floorspace (Use Classes E/F1/F2/Sui Generis (public conveniences, drinking establishments with expanded food provision, bookmakers and/or nail bars (up to 550sqm), and dry cleaner (up to 150sqm))), service yard, cycle and refuse stores, plant rooms, car parking and other ancillary space, with associated new and amended means of access on Edward Street, closure of existing means of access on Edward Street and New Botolph Street, formation of cycle path from Edward Street to St Crispins Road, formation of wider footways, laybys and other associated highway works on Edward Street, New Botolph Street, and Magdalen Street, formation of car club parking area off New Botolph Street, 146 car parking spaces (at least 95% spaces for class C3 use, and up to 5% for class E/F1/F2/Sui Generis uses) within Blocks A and B, hard and soft landscape works to public open spaces comprising streets and squares for pedestrians and cyclists, other landscape works, service infrastructure and other associated works; (All floor areas given as maximum Net Internal Areas); and
- Outline planning permission on 2.4ha of the site, with landscaping and appearance as reserved matters, for demolition and clearance of all buildings and structures, erection of 6 buildings (Blocks E – H and J) ranging in height from 3 to 8 stories for up to 733 residential dwellings, (houses, duplexes, and flats) (Use Class C3), a maximum of 2,243 sqm flexible retail, commercial and other non-residential floorspace (retail, business, services, food and drink premises, offices, non-residential institutions, local community uses and other floorspace (Use Classes E/F1/F2/Sui Generis (drinking establishments with expanded food provision, bookmakers and/or nail bars (up to 550sqm), and dry cleaner (up to 150sqm))); cycle and refuse stores, plant rooms, car parking and other ancillary space; with associated new and altered means of access on Pitt Street and St Crispins Road, closure of means of access on Pitt Street and St Crispins Road flyover, formation of wider footways, laybys and other associated highway works on Pitt Street and St Crispins Road, a maximum of 304 car parking spaces (at least 95% spaces for class C3 use, and up to 5% for class E/F1/F2/Sui Generis uses), service infrastructure and other associated works (landscaping and appearance are reserved matters); (All floor areas given as maximum Net Internal Areas)."

It is anticipated that, if the Application were approved, a contaminated land condition will be included within any future planning consent issued by Norwich City Council.

1.3 Project Objectives

The objectives of this study were to:

- Establish the historical and current uses of the subject site and adjacent land, including any areas located within a 500m radius of the subject site that have been used for landfill disposal purposes;
- Determine the environmental setting of the land as characterised by:
 - i. Geology;
 - ii. Hydrogeology;
 - iii. Hydrology;
 - iv. Licensed waste management activities;
 - v. Pollution controls and authorisations;
 - vi. Historical pollution incidents;
 - vii. Radon hazards; and
 - viii. Ecosystem designations.
- Comment on the potential for contamination of the soil and water environment in contact with the subject site, arising from the use of the site or surrounding land for particular purposes or as the result of other factors; and
- Identify the potential human health and environmental risks that may be associated with the subject site, taking into account past, current and planned future uses of the land and its environmental setting.

2. SOURCES OF INFORMATION

In preparing this report, SES has relied upon the sources of information set out below:

TABLE 1: Sources of Information

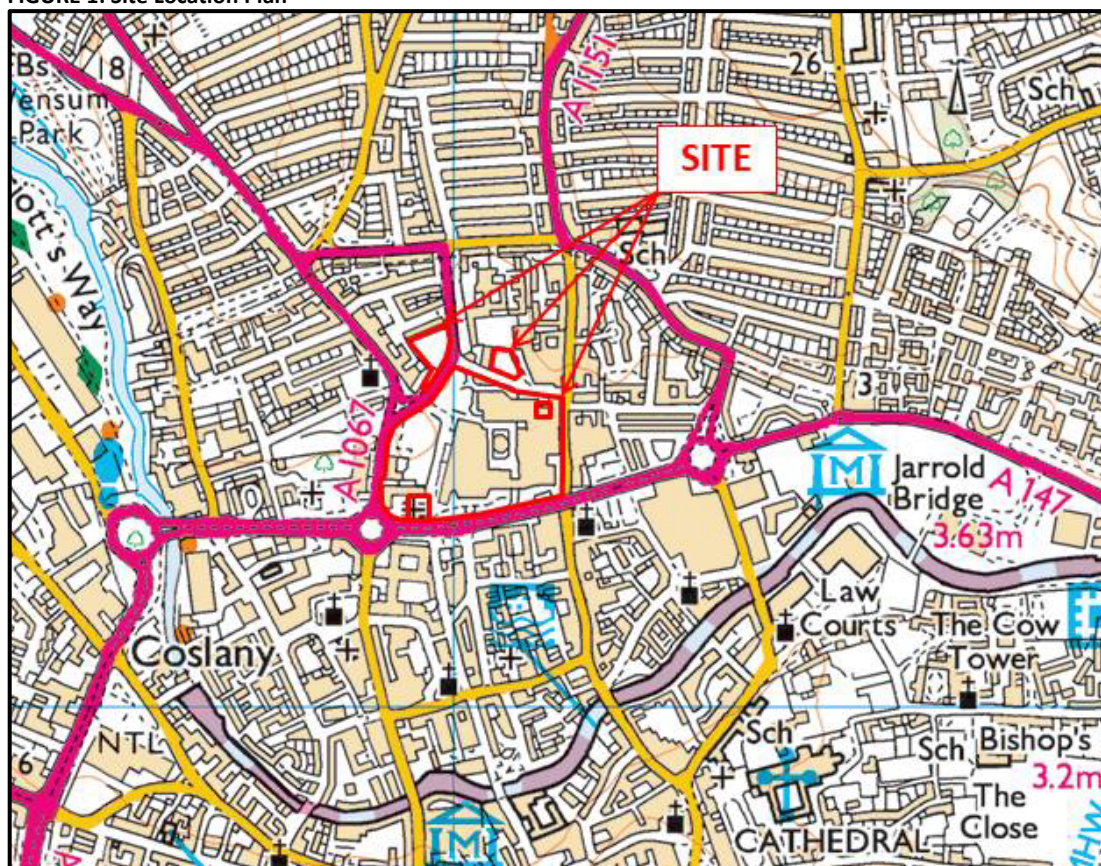
Report Ref	Document Ref	Prepared by
1	Envirocheck Report (Ref: 91738664_1_1) comprising: <ul style="list-style-type: none"> • Envirocheck Main Legend Maps • Ordnance Survey Historical Maps • Envirocheck Report • Envirocheck Flood Map • Envirocheck Groundwater Vulnerability Map • Envirocheck Sensitivity Land Uses Map 	Landmark Information Group
2	Geology of Britain Viewer	British Geological Survey
3	Aquifer designation data available via the EA website	Environment Agency
4	Site reconnaissance carried out on 08/08/2016	Malcolm Hughes, SES

3. SITE DESCRIPTION AND SETTING

3.1 Site Location

The site is located at Anglia Square, Norwich, NR3 1DT, about 800m north of the centre of Norwich, and maybe located by TG230093. The site location is shown in Figure 1

FIGURE 1: Site Location Plan



3.2 Site Description

Anglia Square is situated within the northern part of Norwich City Centre, and is surrounded by a range of different uses including residential dwellings, commercial properties and community facilities. The built form of the surrounding area varies widely in terms of its age, scale and architectural style but reflects medieval and later street patterns.

The site measures approximately 4.65 hectares and currently comprises previously developed land broadly defined by St Crispins Road to the south, Pitt Street and New Botolph Street to the west, Edward Street to the north, Magdalen Street to the east and the remainder of Anglia Square Shopping Centre to the southeast. An additional parcel of vacant land on the northwestern side of New Botolph Street which is currently used for surface level car parking is also included within the proposed development site, as well as an area of land immediately to the north of Edward Street and west of Beckham Place, also currently used for surface level car parking.

3.3 Walkover Survey

The walkover survey was undertaken on 8th August 2016 by Malcolm Hughes and updated by George Booth on 17th January 2018; both from Stansted Environmental Services Limited.

The eastern half of the site includes the majority of the existing Anglia Square Shopping Centre, including the central open space element to the existing retail facility and Gildengate House.

The site is broadly defined by the following boundaries:

- St Crispins Road to the south;
- Pitt Street and New Botolph Street to the west;
- Edward Street to the north;
- Magdalen Street to the east;
- The remainder of Anglia Square Shopping Centre to the southeast corner;
- An additional parcel of vacant land on the northwestern side of New Botolph Street, bounded by the rear of the houses on Augustine Street to the northwest and Rose Yard to the southwest currently used for surface level car parking; and
- An area of land immediately to the north of Edward Street and west of Beckham Place, also currently used for surface level car parking.

The site includes a number of existing buildings and structures in addition to those above including a vacant former office building Sovereign House, a vacant and condemned multistorey car park fronting Edward Street, Gildengate House, the current Hollywood Cinema at first floor level, and two vacant nightclubs at first floor level under part of the cinema, with additional commercial uses along Pitt Street and surface level car parking on the northwestern part of the site.

Site photographs are given in Appendix B.

4. HISTORICAL MAP SURVEY

4.1 Maps

An archaeology report has been prepared for the site by CgMs Consulting which included an overview of the site history.

- CgMs Consulting: Archaeological Impact Assessment, Anglia Square, Norwich, Norfolk. Ref: AB/DH/21854, dated April 2016, revised February 2018.

A review of relevant historical maps dated from about 1750 for the area surrounding the subject site has been undertaken and is summarised below. Reference should be made to the CgMs report for the site history prior to this date. The historical maps are included in this report within Appendix C.

TABLE 2: Historical Maps

Map, Date & Scale	Details
1746	The plan shows the late Medieval layout of the area around the site with Pitt Street, St Augustines Street, Magdalen Street and Botolph Street all present. A church is present at the location of the present day Surrey Chapel.
1783	No significant change to the layout of the site or surrounding area.
1789	No significant change to the layout of the site or surrounding area. The 1789 map shows building locations in more detail.
1830	No significant change to the layout of the site or surrounding area.
Norfolk 1886 1:2500 1885 – 1886 1:10560	The site still reflects the late Medieval street layout. Botolph Street bisects the site into a northern and southern portion with a ' <i>Crape Manufactory</i> ' on the northern boundary. A small orchard is present in the southern portion and a Methodist Chapel on the southern boundary. The remainder of the site appears to be occupied by residential dwellings. Middle Street and Calvert Street run south-north through the site. St Botolph Church is identified on the east of the site and St Olave in the southwest corner of the site. The surrounding area is similar in composition to the main site with a mix of residential and commercial buildings.
Norfolk 1907 1:2500 1908 1:10560	No significant changes to the site or surrounding area.
Norfolk 1919 – 1920 1:10560	No significant changes to the site or surrounding area.
Norfolk 1928 1:2500 1929 1:10560	The ' <i>Crape Manufactory</i> ' is now a ' <i>Boot & Shoe Manufactory</i> '.
Norfolk 1938 1:2500 1938 1:10560	The ' <i>Shoe Manufactory</i> ' and a number of other buildings to the north of the site have now been demolished and have now been replaced by a cinema.
Norfolk 1950 – 1951 1:10560	The 1950 edition of the Ordnance Survey generally shows the pre-war layout of the site and surrounding area. However, a number of buildings appear to have been demolished in the intervening period.

Map, Date & Scale	Details
Ordnance Survey 1956 – 1957 1962 - 1973 1:2500 1957 – 1958 1:10560	Significant redevelopment took place across the site between 1938 and 1956. East of Calvert Street a number of small buildings were demolished and two new buildings were constructed to the south of the clothing factory. To the west of Calvert Street a couple of small buildings were erected within the backyard spaces. North of the original Botolph Street, the Cinema appears to have been extended southwards. Two new buildings, identified as dry cleaning works, were built fronting onto St George's Street (present day Botolph Street). A number of buildings have also been demolished along Pitt Street. Additional buildings have also been built in the eastern part of the site, south of the shoe factory.
Ordnance Survey 1971 – 1974 1976 1978 1:2500	Major redevelopment of the area has seen the restructuring of the road layout with the truncation and removal of Calvert Road and Botolph Road in part, and the construction of new access roads in the north and south. Widespread demolition has taken place across the site, with the removal of all domestic buildings as well the cinema, the shoe factory, printing works and public house. A shopping centre focused on the new Anglia Square has been built, along with a multi-storey carpark to the north, and Sovereign House occupying a large area in the south. Two large areas in the north and west of the site were established as open car parks and remain in this form today.
Additional SIMS 1978 - 1983 1984 – 1992 1994 1:2500 1979 1987 - 1989 1:10560	Major redevelopment of the area has seen the restructuring of the road layout with the truncation and removal of Calvert Road and Botolph Road in part, and the construction of new access roads in the north and south. Widespread demolition has taken place across the site, with the removal of all domestic buildings as well the cinema, the shoe factory, printing works and public house. A shopping centre focused on the new Anglia Square has been built, along with a multi-storey carpark to the north, and Sovereign House occupying a large area in the south. Two large areas in the north and west of the site were established as open car parks and remain in this form today.
Historical Aerial Photography 1999	The aerial photograph generally shows the present day layout of the site and surrounding area.
Ordnance Survey Raster Mapping 2000 & 2006 1:10000	No apparent changes to the site or surrounding area.
VectorMap Local 2016 1:10000	The map shows the site and surrounding area to be generally in agreement with its current setting.

4.2 Anecdotal Evidence

Norwich was subject to heavy bombing as part of the 'Baedeker Blitz' on 27th/28th April and 8th/9th May 1942 and then sporadically throughout 1942 and 1943. It is thought that the missing structures identified on the 1950 Ordnance Survey maybe as a result of the air raids.

4.3 Summary of Site History

The site has been put to a residential and commercial use since at least the Middle Ages. More specifically, since 1880 the site was used as a mixed use development that included industrial buildings that manufactured crêpe fabrics and materials for clothing, tannery, shoe & bootmakers, an oilskin manufacturing clothing company, printers, timber merchants, fruit and vegetable wholesale warehouse and residential housing. The site was bombed during World War II.

The land was redeveloped in the mid-1960s and the Anglia Square shopping centre and commercial buildings were constructed. The site layout has not changed since 1968 to the present day.

5. ENVIRONMENTAL SETTING

5.1 General

Data contained within the Envirocheck report has been used to assess the environmental setting of the site. The relevant data is presented in Appendix D.

5.2 Geology

Reference to the British Geological Survey website (www.bgs.ac.uk) indicates that the site is underlain by the White Chalk Subgroup comprising the Lewes Nodular Chalk, Seaford Chalk, Newhaven Chalk, Culver Chalk and Portsdown Chalk Formations (undifferentiated).

Superficial deposits are generally represented by the Alluvium (clays, silts, sands and gravels). However, River Terrace Deposits (sands and gravels) are shown to be present in the north of the site.

Borehole logs contained within the CgMs report indicates the following geological sequence across the site.

TABLE 3: Anticipated Ground Conditions

Strata Encountered	Depth Encountered (m bgl)		Maximum Measured Strata Thickness m
	From	To	
Made Ground	Ground Level	1.90 – 3.20	3.20
Alluvium	1.90 – 3.20	3.00 – 8.60	5.40
River Terrace Deposits	5.20 – 8.60	8.90 – 12.30	5.10
Chalk	7.20 – >20.00	>15.30 - >23.80	>14.80

5.3 Hydrogeology

The White Chalk Subgroup is a Principal Aquifer while the superficial deposits are classified as a Secondary A Aquifer by the Environment Agency. The site is shown to be within a Groundwater Source Protection Zone II (SPZ).

There is a single revoked groundwater abstraction located on the site which was operated by Comdoran Properties Limited for miscellaneous industrial processing. There are a further twenty abstractions located within 500m of the study; the closest active abstraction is located 269m to the southwest for the Sunlight Service Group for industrial services.

There are no licensed discharges to land within 500m of the site.

5.4 Hydrology

The closest surface water feature is the River Wensum approximately 230m to the southeast of the site. The river is tidal at this point and flows from east to west.

There are nine licensed surface water abstractions within 500m of the study site; the closest is situated about 353m to the east for Jerrold & Sons Limited for use as cooling water. There are nineteen discharge consents to surface waters within 500m. The closest is for storm water overflow, operated by Anglian Water Services Limited, situated about 95m to the east.

The closest pollution incident relating to controlled waters is recorded some 49m to the southeast of the site in October 1996. This incident relates to 'fire water/foam' and was classified as a 'Category 3

– Minor Incident’. There are a further ninety-seven incidents within 500m of the site ranging from Category 2 (significant incidents) to Category 3

5.5 Radon

The British Geological Survey, in conjunction with the Radiation Protection Division of the Health Protection Agency, indicates the site to lie within an area where there is a probability of <1% of present or future homes being above action the level of 200Bq/m³. As such, the site is not classified as a Radon Affected Area. Therefore, no radon protection measures are deemed necessary for the proposed development. This is confirmed by the Building Research Establishment Report BR211.

5.6 Soil Geochemistry

The British Geological Survey data indicates the following concentrations of naturally occurring metals to be representative of background levels in natural soil underlying the site. The levels are based on those present in rural soils and are not necessarily representative of levels within Made Ground which may be encountered on-site.

TABLE 4: Soil Geochemistry

Element	Concentration mg/kg
Arsenic	<15
Cadmium	<1.8
Chromium	20 – 40
Lead	200 – 300
Nickel	<15

6. ASSESSMENT OF GEOTECHNICAL RISK

6.1 Geological Constraints

The following are brief findings relating to factors identified during the research from the EnviroCheck data that may have a potential impact upon the engineering of the proposed design.

TABLE 5: Geohazards

Potential Hazard	Assessed Risk	Comment
BGS Recorded Mineral Sites	Low	A number of chalk mines are located within 500m of the site. However, historical mapping, dating back to c1300, has not indicated the presence of such mines onsite.
Man-Made or Natural Cavities	Moderate to High	The BGS website indicates that the site is within an area at moderate to significant risk from solution features. Solution features can be reactivated by the concentrated ingress of water from leaking drains or soakaways and subsequently cause surface collapse. There are a number of reports of cavities being activated within 500m of the site due to crown hole collapse.
Collapsible Ground	Low	Collapsible material may be present. Such material is prone to collapse when it is loaded (as by construction of a building) and then saturated by water (as by rising groundwater). Collapse may cause considerable damage to overlying property.
Compressible Ground	Moderate	The Alluvium maybe cohesive in nature and may exhibit shrinking/swelling characteristics. In addition, there may be a significant thickness of Made Ground which may settle under loading.
Ground Dissolution	High	The BGS website indicates that the site is within an area at moderate to significant risk from solution features. Solution features can be reactivated by the concentrated ingress of water from leaking drains or soakaways and subsequently cause surface collapse. There are a number of reports of cavities being activated within 500m of the site due to crown hole collapse.
Landslide	Very Low	The site is essentially level.
Running Sand	Very Low	Granular deposit could be present at shallow depth within the site area.
Shrinking or Swelling Clay	Low to Moderate	The Alluvium maybe cohesive in nature and may exhibit shrinking/swelling characteristics.
Unconsolidated Made Ground	Moderate	Made Ground may be present on site.
Bearing Pressure	Low to Moderate	Weak soils in the form of Made Ground are anticipated at shallow depth with potentially low bearing pressures.
Aggressive Conditions for Construction Materials	Low to Moderate	The Made Ground may contain sulphates and sulphides, and as such has been assigned a moderate risk. The remainder of the anticipated geological sequence is not thought to contain high levels of sulphates and sulphides, and therefore, has been assigned a very low risk.
Shallow or High Groundwater Table	Moderate	The site is within 300m of a river and a high water table maybe encountered.
Old Basements	Moderate	The site has been redeveloped on a number of occasions in the past and the presence of old foundations, including basements, cannot be ruled out.

6.2 Geotechnical Risk Assessment

An assessment of the main hazards associated with the site is detailed below. Unless stated otherwise, the presence of such hazards are based on information from the research or reconnaissance and have not been confirmed by an intrusive investigation.

- Soil Conditions

The presence of plastic cohesive soils represents a risk to structures. Volume changes brought about by shrinkage and swelling of the cohesive soil, exacerbated by the presence of trees, could result in structures supported on this stratum experiencing differential settlement. The associated risk is considered to be low to moderate, and may result in either deeper trench fill foundations or even piled foundations being employed.

The previous phases of development on the site are considered to represent a moderate risk due to the unknown nature of the material used to backfill potential excavations. Such material may be both highly compressible and variable, potentially leading to excessive total and differential settlements.

The presence of a significant thickness of granular Made Ground, particularly if they are water bearing, may cause instability in excavations for foundations or services trenches.

The location and anticipated geology of the site suggests there to be a moderate risk from high groundwater. Should this be the case, then pumping may be required from any excavations on site.

The chalk is well known to contain solution features and it is assessed that there is a moderate to high risk of such features being present.

- Topography

The EnviroCheck data provided indicates only a very low risk of landslip subsidence.

- Previous Use

Historical Mapping indicates previous development on the site including structural and infrastructure changes. Therefore, the presence of buried structures such as services, basements and old foundations is a potential risk.

6.3 Geological Constraints

The research has identified evidence of limited potential hazards associated with the underlying ground conditions, either natural or man-made. Therefore, it would be prudent to carry out further work to confirm the presence, nature or extent of those hazards anticipated to impact on the site.

7. ENVIRONMENTAL SEARCHES

7.1 Potential Sources of Contamination

Details of the relevant searches are given in Appendix E.

A search was made of records held by various regulatory authorities and other statutory bodies to determine the presence or otherwise of past and current activities on or within 500m of the site which may have the potential to give rise to the presence of contamination. Details of such records are given below:

TABLE 6: Environmental Searches

Activity	On Site	Off Site (distance/direction)	Details
Contaminated Land Register Entries	None	None within 500m	
Integrated & Local Authority Pollution Prevention & Controls	None	Six within 500m	The closest is for a revoked LAAPC for the burning of waste oil by PW Turner located 237m southwest. The closest active LAPPC is for the respraying of vehicles situated 479m to the west of the site.
Substantiated Pollution Incident Register	None	One within 500m	This is for a Category 2 – Significant Incident to water situated 391m southwest for pollution by mixed/waste oils.
Licensed Waste Management Facilities	None	One within 500m	This is located 343m west for End of Life Vehicles.
Registered Waste Treatment or Disposal Sites	None	One within 500m	This is for the Automotive Paint & Equipment Company located 219m north of the site and is authorised for cleaning solvents.

7.2 Landfills and Infilled Land

There are no historic landfills or areas of potentially infilled land within 500m of the site.

7.3 Green Belt Areas

There are no designated areas of Adopted Green Belt land within 500m of the site.

Green Belt Areas are generally areas that are designated as being under special consideration for development. Local Authorities may restrict the type of development, place particular planning constraints on proposed developments, or potentially restrict any development within a designated Green Belt Area.

7.4 Nitrate Vulnerable Zones

The site is located within an area designated as a nitrate vulnerable zone for groundwater.

The nitrates directive defines a nitrate vulnerable zone as:

- Surface freshwater which contains or could contain, if preventative action is not taken, nitrate concentrations greater than 50mg/l; or
- Groundwater which contains or could contain, if preventative action is not taken, nitrate concentrations greater than 50mg/l; or
- Natural freshwater lakes or other freshwater bodies, estuaries, coastal waters or marine waters, which are not eutrophic or may become so in the near future if protective action is not taken.

7.5 Designated Sites

A review of the MAGIC (MultiAgency Geographic Information for the Countryside) website, ref www.magic.gov.uk, was undertaken to assess whether there were any Sites of Special Scientific Interest (SSSI), National Nature Reserves (NNR) or Local Nature Reserves (LNR) which may be impacted by the development.

The enquiries indicated there are no such areas within 500m of the site.

7.6 Contemporary Trade Entries

There are seven contemporary trade entries recorded on the site with an additional 122 within 500m of the site.

The entries for the site are as follows:

- Anglia Square Cars Limited (car dealers) - active;
- Revised Ministry (printers) - inactive;
- Cash makers (electrical goods sales) – active;
- Morris Printing Company Ltd (printers) – inactive;
- Protonation Graphic Arts (printers) – inactive;
- Total Paper Management Ltd (printers) – inactive; and
- The Box & Packaging Company Ltd (printers) – active.

The closest off-site entry is for 'Leonards Norwich Limited' (office furniture & equipment) which is an active entry located about 17m west of the site.

The remainder relate to a wide range of commercial and retail activities commonplace in an urban setting.

8. PRELIMINARY RISK ASSESSMENT

8.1 General

The typical technical approach to assessing potential human health and environmental risks associated with the condition of land relies on the consideration of the relationship between contaminants, pathways and receptors, as defined below.

TABLE 7: Definitions

Contaminant	A hazardous substance or agent that has the capacity to cause harm or other damage to a receptor.
Receptor	An entity (e.g. human being, water environment, flora and fauna etc.) that is vulnerable to the adverse effects of the contaminant.
Pathway	The means by or through which a contaminant comes into contact with, or otherwise affects, the receptor.

In the UK, this relationship is termed a “pollutant linkage”. The Conceptual Site Model (CSM) is a representation of the inter-relationship of all potential contaminants, pathways and receptors in a given land use scenario. The CSM is therefore a screening tool that should clearly and transparently identify relevant pollutant linkages that may warrant further assessment, as well as providing justification for those that are considered unlikely to exist. It is important to recognise that for a health or environmental risk to exist, all three elements of the relationship or linkage must be present. Thus:

- No contaminant » There can be no adverse effect on a receptor; and
- Nothing adversely affected by the contaminant » No harm or damage can arise.

It should be noted that even where both a contaminant and a receptor are identified, no harm or damage will occur if there is no pathway by or through which contact between the two can be established. It is also important to recognise that since contaminants, pathways and receptors can all change over time, the assessor must be precise about the time frame to which the risk assessment refers.

Consideration has been given to the potential for the subject site to be determined as “contaminated land” under Part 2A of the Environmental Protection Act 1990. Under Part 2A, Local Authorities have a duty to inspect sites from time to time to identify land that falls within a statutory definition of contaminated land, as assessed in the context of its current use and setting. Part 2A inspections are intended to focus primarily on land that may present unacceptable health and environmental risks but which cannot be regulated by planning controls or other enforceable mechanisms. It should be noted that it is not possible for land whose condition is assessed as being ‘fit-for-purpose’ under the planning regime to be identified as “contaminated land” under Part 2A.

The primary purpose of this report is to assess the potential for ground contamination derived at the subject site. Reference has also been made to off-site sources of contamination, such that if ground contamination is encountered during a subsequent site investigation a reasonable judgement as to its origin either on or off the site may be undertaken.

8.2 Potential Sources of Contamination

The research has identified the following potential sources of contamination which may form a pollutant linkage:

- Contamination associated with possible Made Ground from demolition of the previous structures and construction of the current development.

- Possible ground gases associated with the Made Ground.
- Fuel oils within the car parking area from spillages from vehicles.
- Potential buried Unexploded Ordnance (UXO).

8.3 Potential Receptors and Exposure Pathways

The receptors normally considered in land contamination assessments are taken to include, but are not restricted to, those specified in the Statutory Guidance to Part 2A. In general, receptors may be grouped as follows:

- Humans (on-site and off-site);
- Controlled waters (surface and groundwater close to or beneath the site); and
- Buildings and materials of construction on or under the site, or in the vicinity.

8.4 Human Health

It is considered that there is the potential for Made Ground of unknown origin to be present across the site. Such material may contain a range of heavy metals, PolyAromatic Hydrocarbons (PAHs), Total Petroleum Hydrocarbons & fuel oils (TPHs) and asbestos. In addition, there is a risk that Volatile Organic and Semi-Volatile Organic Compounds (VOCs & SVOCs) will also be present as a result of the various activities which have occurred across the site.

Based on the findings of this assessment the risk from contamination being present is judged to be high.

Construction workers are potentially at greater short term risk as they are more likely to be exposed to any contaminated soils via the identified exposure pathways. However, it is considered that such risks could be effectively ameliorated by the use of appropriate personal protective equipment (PPE) and health and hygiene practices.

Off-site human receptors include the occupiers of neighbouring sites and visitors, utility maintenance workers and the general public. Relevant exposure pathways could include:

- Ingestion of liquid discharges or soils, and soil-derived airborne dusts migrating from the subject site;
- Inhalation of soil-derived dusts and gases/vapours from the subject site; and
- Dermal contact with liquid discharges, soils, and soil-derived dusts from the subject site.

It is judged that the risks to off-site human receptors could include dust generation during construction works. However, as good practice, appropriate dust suppression measures should be implemented at the site regardless of contamination.

8.5 Controlled Waters

The site is underlain by the White Chalk Subgroup which is a Principal Aquifer while the superficial deposits are a Secondary A Aquifer.

Based on the nature of the conceptual source of contamination identified by this assessment there is judged to be a moderate risk of the underlying soils being significantly impacted with soluble and mobile contaminants that could migrate significant distances from the study site and impact sensitive receptors. When considering the nature of the identified conceptual source of contamination, coupled with the relatively low sensitivity to the study site, the risks posed to controlled waters are judged to be significant.

8.6 Buildings and Services

The built environment is taken to include permanent and semi-permanent structures, such as houses, offices, commercial and industrial buildings etc. and associated services such as water supply pipes, drains, power and telecommunications cables. Buildings and service runs may also contain enclosed spaces where explosive, flammable or toxic gases and vapours may accumulate, presenting risks to both occupants and the buildings.

If significantly contaminated shallow soils are present beneath the study site aggressive chemical attack on building foundations and buried services is considered plausible. The composition of the Made Ground is not known at this stage and there could be the potential for ground gases to be developed.

8.7 Initial Conceptual Site Model

An initial Conceptual Site Model (CSM) has been developed on the basis of the desk study. The CSM is used to identify potential sources, pathways and receptors (i.e. potential pollutant linkages) on site and is summarised in the table below.

TABLE 8: Outline Initial Conceptual Site Model

Potential Source	Contaminants of Concern	Via	Potential Pathways	Linkage Potentially Active?	Receptors
On site – current and historical Commercial Units Industrial Units Car Parks Made Ground	Heavy Metals PAHs TPH SVOCs/VOCs PCBs Asbestos	Soil	Direct contact/ingestion	✓	Site users
			Inhalation of volatiles	✓	
			Airborne migration of soil or dust	✓	Off-site users
			Leaching of mobile contaminants	✓	Underlying aquifers
		Groundwater	Direct contact/ingestion	✓	Site users Off-site users
			Inhalation of volatiles	✓	Site users Off-site users
			Vertical and lateral migration in permeable strata	✓	Underlying aquifers
Off-site – current and historical Commercial Units Industrial Units Car Parks Made Ground	Heavy Metals PAHs TPH SVOCs/VOCs PCBs	Groundwater	Direct contact/ingestion	✓	Site users
			Inhalation of volatiles	✓	Site users
		Service conduits	Direct contact/ingestion	✓	Site users
			Inhalation of volatiles	✓	Site users
On and off-site Made Ground / natural strata or bio-degradation of contamination	Carbon dioxide and methane	Ground Gas	Inhalation of ground gas	✓ ✓	Site users Off-site users
			Explosive risks	✓ ✓	Site users Off-site users

The risk assessment is based upon the available information relating to the site. Should ground conditions inconsistent with those outlined in this report be encountered, SES should be contacted to

enable further assessment. The findings of the CSM should be confirmed upon finalisation of the proposed redevelopment plans.

8.8 Conclusions of Environmental Risk Assessment

The research has identified evidence of potential sources of contamination on or which may impact on the site, with plausible pathways to the likely receptors, and therefore potential pollution linkages have been suggested.

It is recommended that further work be carried out to confirm the presence, nature of extent of any contamination which is anticipated to impact on the site.

8.9 Consultation

During development, consultation may be required for a number of reasons with a number of regulatory authorities. The following provides an indication as to the most likely authorities with which consultation may be required:

- **Local Authority:** There may be a planning condition regarding contamination and consultation will be required with a designated Contaminated Land Officer within the Environmental Health Department. The Local Authority is generally concerned with human health risks.
- **Environment Agency:** Where a site is within a groundwater source protection zone or has been designated as a special site the Environment Agency is likely to be involved to ensure that controlled waters are protected.

Based on the results of any consultation, there may be specific investigation and/or remediation requirements imposed by one or more of the Authorities.

9. RECOMMENDATIONS

9.1 Further Work

An intrusive investigation should be undertaken to address the issues raised.

The following scope of works is suggested in order to collect the required data:

- Given the history of bombing onsite, there may be the possibility of undiscovered ordnance in the area. Therefore, it may be prudent to undertake an UXO survey of the site prior to development;
- The sinking of boreholes for the recovery of samples for geotechnical and chemical contamination;
- The installation and monitoring of gas and groundwater monitoring standpipes; and
- Given the history of chalk mining and the possibility of solution features present, a geophysical survey of the site should be made.

Further details of the Phase II Ground Investigation are given in Appendix F.

10. CONCLUSIONS

This Phase I Desk Study and Preliminary Risk Assessment has considered a variety of sources of information regarding the past land uses of the site known as Anglia Square, Norwich, NR3 1DT.

The report has been prepared to assess contamination in relation to the proposed re-development of the site.

The site has been put to a residential and commercial use since at least the Middle Ages. More specifically, since 1880 the site was used as a mixed use development that included industrial buildings that manufactured crêpe fabrics and materials for clothing, tannery, shoe & bootmakers, an oilskin manufacturing clothing company, printers, timber merchants, fruit and vegetable wholesale warehouse and residential housing. The site was bombed during World War II. The land was redeveloped in the mid-1960s and the Anglia Square shopping centre and commercial buildings were constructed. The site layout has not changed since 1968 to the present day.

The risk to human health from soil contamination is considered to be moderate at present. Therefore, it is recommended that a soil investigation and analysis is undertaken to assess the risk to human health, buildings/services and the environment. In addition, a geotechnical investigation should also be undertaken.

The risk to groundwater is considered to be moderate as the site is underlain by the Lower Chalk Group Principal Aquifer.

This Phase I study therefore concludes that the risk from potential contamination at the site is moderate, and as such further site investigation works are required, a copy of the proposed works are contained within Appendix F.

This page is intentionally blank

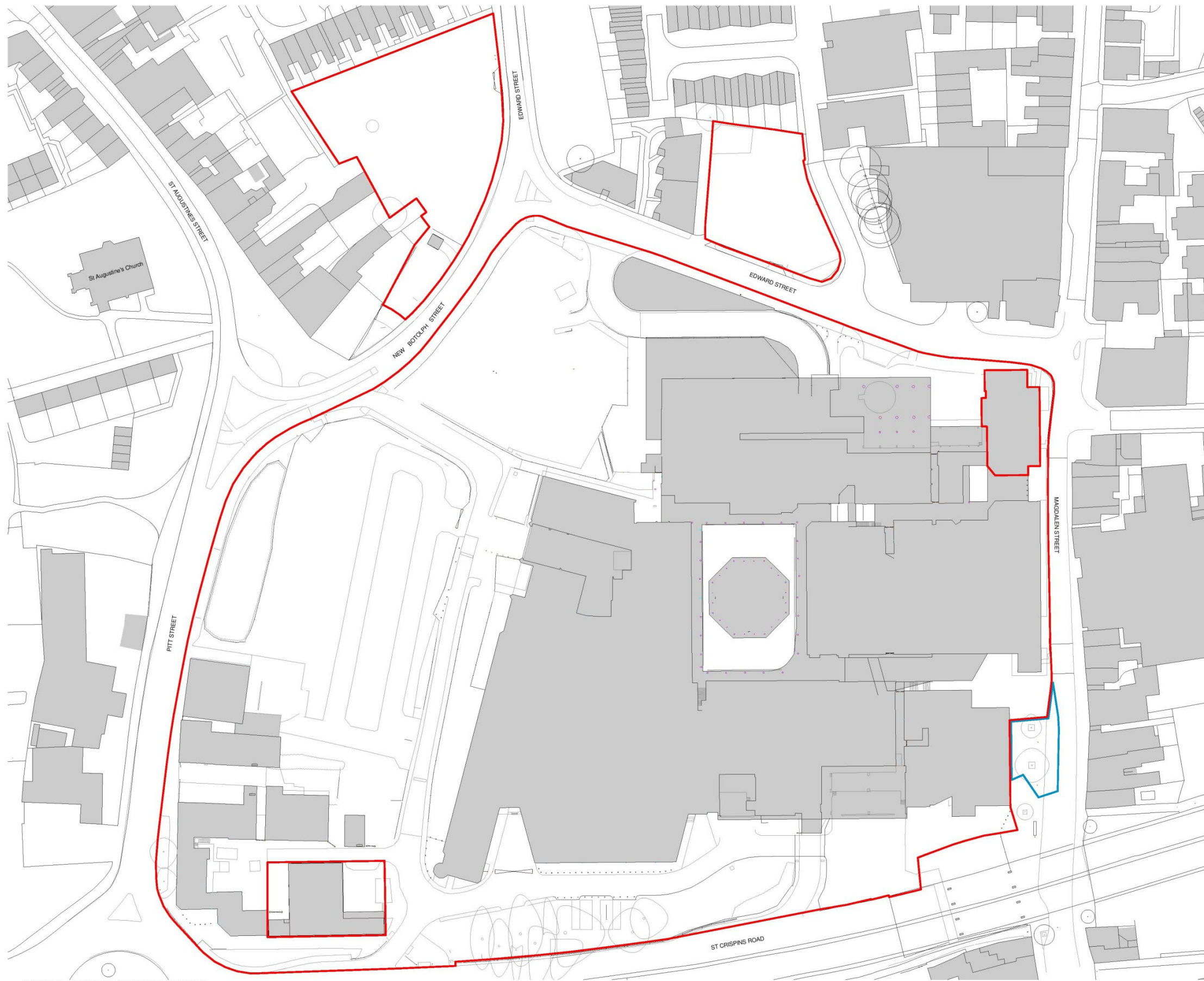
APPENDICES

- A. PLANS & FIGURES**
- B. PHOTOGRAPHIC LOG & SITE PHOTOGRAPHS**
- C. ENVIROCHECK DATA – HISTORICAL MAPS**
- D. ENVIROCHECK DATA – ENVIRONMENTAL SETTING**
- E. ENVIROCHECK DATA – ENVIRONMENTAL DATA**
- F. PROPOSED PHASE II GROUND INVESTIGATIONS**

This page is intentionally blank

A. PLANS & FIGURES

This page is intentionally blank



24/03/2022 18:44:28 Autodesk Docs://5301 Anglia Square BM5301-ZZ-RA22-A-C-Site.rvt

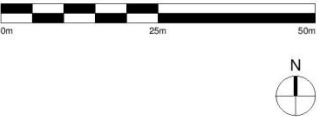
Contractors and consultants are not to scale dimensions from this drawing

Reproduced by permission of Ordnance Survey on behalf of HMSO © CROWN COPYRIGHT and database right 2008 All rights reserved Ordnance Survey Licence number AL 1000 22452 Broadway Malyan Limited

The survey information shown on this drawing is based on a topographical survey prepared by a third party and Broadway Malyan Limited accept no responsibility for the accuracy or completeness of the survey.

Drawings to be read in conjunction with the associated Design & Access Statement, associated consultant design team documents & reports and landscape information

Landscape shown is for illustrative purposes only. For detailed landscape information, please refer to the landscape information & documents.



General Notes

All figures and areas are approximate only and subject to statutory constraints, detail design & design development

Structural Design: Subject to structural input & coordination

Services Design: Subject to services input & coordination

Fire Strategy: Subject to fire input & coordination

- Application Boundary
- Land Owned by CT to be subject to separate application for part of the Mobility Hub

D0-1	31.03.22	Issued For Planning
Revision	Date	Drawn By / Description

BroadwayMalyan^{BM}

4 Pear Place
London
SE1 8BT

T: +44 (0)20 7261 4200
F: +44 (0)20 7261 4300
E: Lon@BroadwayMalyan.com

www.BroadwayMalyan.com

Client
Weston Homes

Project
**Anglia Square
Norwich**

Description
**Hybrid Application Site Plan
Block Plan on Existing OS Base**

Status
For Planning

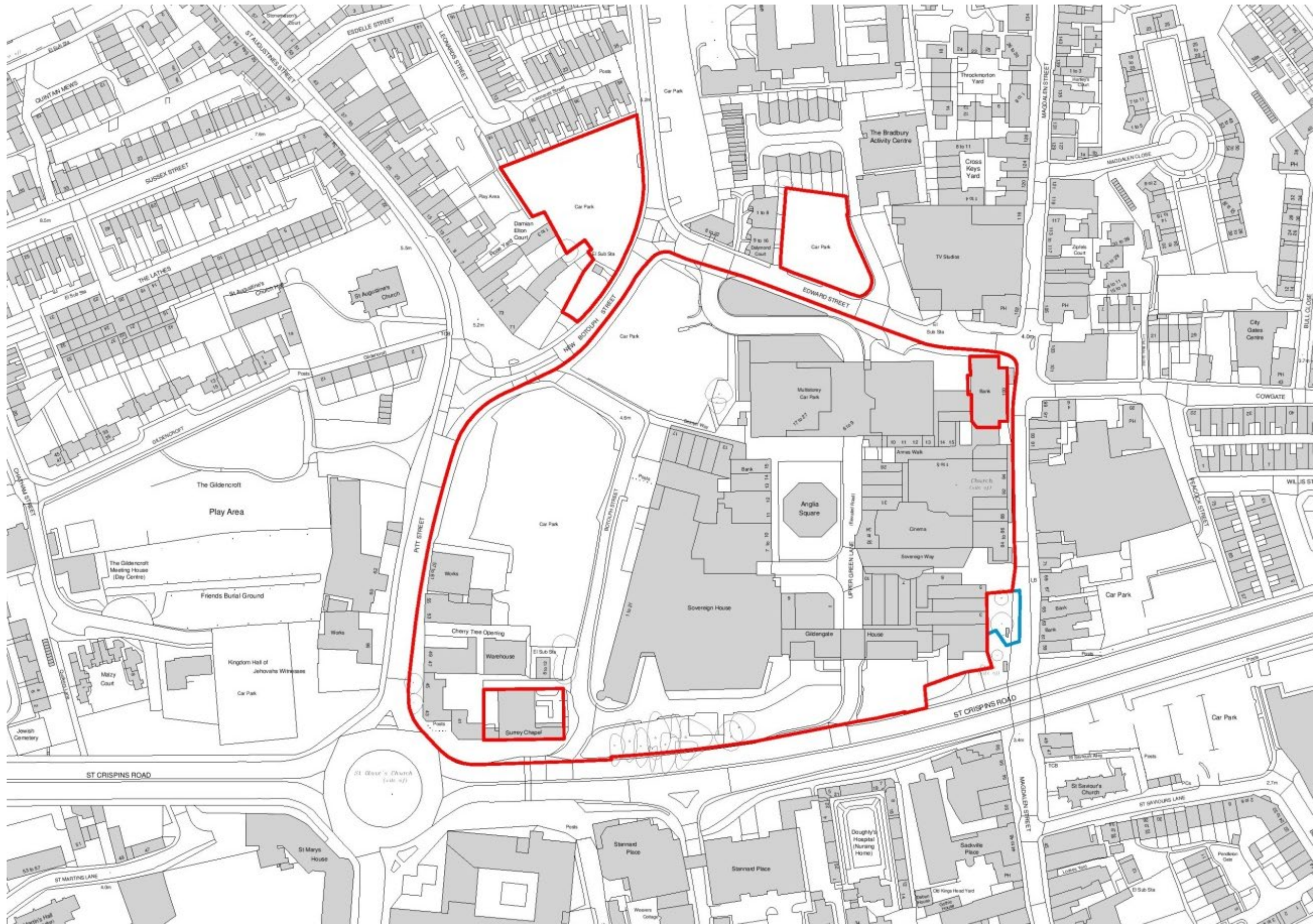
Scale	Drawn By	Date
	BM	31.03.22
Job Number	Drawing Number	Revision
35301	ZZ-00-DR-A-01-0200	D0-1

Original size 100mm @ A1 Copyright Broadway Malyan Limited

Originator	GB	ANGLIA SQUARE CON01-NORW-045
Checked & Approved	WGG	
		DRAWING ZZ-00-DR-A-01-200 Provided by Broadway Malyan



07/07/2017



Originator	GB	ANGLIA SQUARE CON01-NORW-045
Checked & Approved	WGG	
		EXISTING SITE LAYOUT





24/03/2022 16:44:33 Autodesk Docs://35301 Anglia Square/BA0301-ZZ-RA22-A-C-Site.rvt

Originator	GB	ANGLIA SQUARE CON01-NORW-045
Checked & Approved	WGG	



This page is intentionally blank

B. SITE PHOTOGRAPHS


This page is intentionally blank



Northeast Boundary of Site Looking Along Edward Street



Multistorey Car Park and Northern Car Park

Originator	GB	<p style="text-align: center;">ANGLIA SQUARE, NORWICH CON01-NORW-045</p>	
Checked & Approved	WGG		

30/08/2017



Northern Access Road



Northern Car Park

ANGLIA SQUARE, NORWICH
CON01-NORW-045

SITE PHOTOGRAPHS

Originator

GB

Checked
&
Approved

WGG





Northern Access to Botolph Street



Stockpile in West of the Site

Originator	GB	ANGLIA SQUARE, NORWICH CON01-NORW-045
Checked & Approved	WGG	



30/08/2017



Pitt Street



Southern Part of the Site

ANGLIA SQUARE, NORWICH
CON01-NORW-045

SITE PHOTOGRAPHS

Originator

GB

Checked
&
Approved

WGG



30/08/2017



Car Park Entrance from Botolph Street



Anglia Square

ANGLIA SQUARE, NORWICH
CON01-NORW-045

SITE PHOTOGRAPHS



Originator

GB

Checked
&
Approved

WGG



Northwestern Pedestrian Access



Magdalen Street

ANGLIA SQUARE, NORWICH
CON01-NORW-045

SITE PHOTOGRAPHS

Originator

GB

Checked
&
Approved

WGG





Upper Level of Anglia Square



St Crispin's Road Flyover

ANGLIA SQUARE, NORWICH
CON01-NORW-045

SITE PHOTOGRAPHS

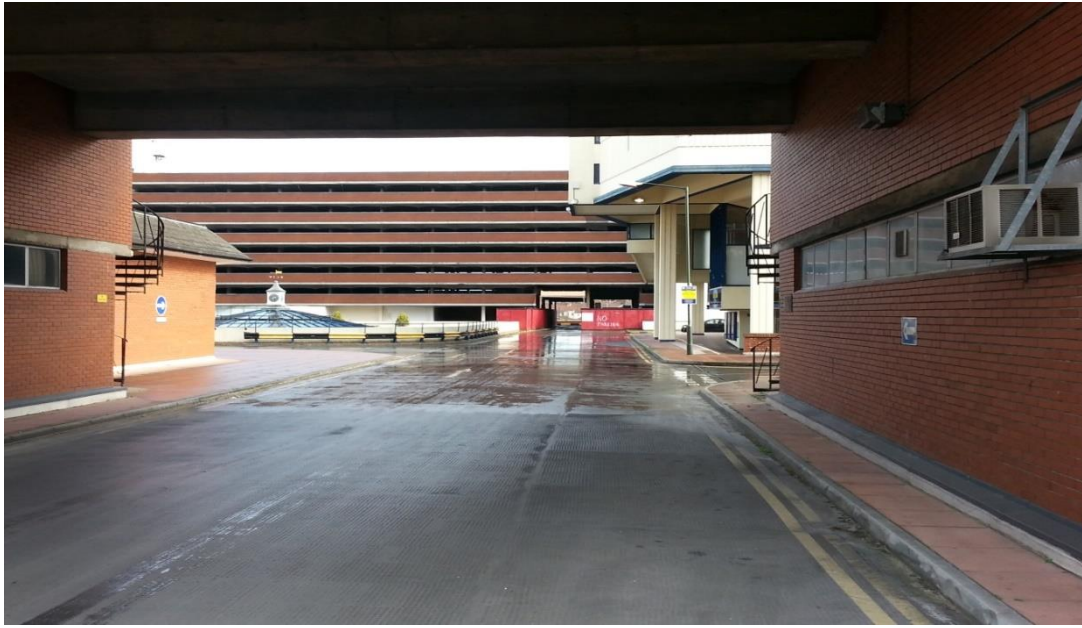
Originator

GB

Checked
&
Approved

WGG





Multistorey Car on Northern Boundary



Anglia Square Office Buildings

Originator	GB	ANGLIA SQUARE, NORWICH CON01-NORW-045
Checked & Approved	WGG	

SITE PHOTOGRAPHS






St Crispin's Road



Botolph Street

Originator	GB	ANGLIA SQUARE, NORWICH CON01-NORW-045	
Checked & Approved	WGG		



Botolph Street Car Park



Edward Street Car Park

ANGLIA SQUARE, NORWICH
CON01-NORW-045

SITE PHOTOGRAPHS

Originator

GB

Checked
&
Approved

WGG





Edward Street



Cactus Café Bar

ANGLIA SQUARE, NORWICH
CON01-NORW-045

SITE PHOTOGRAPHS

Originator

GB

Checked
&
Approved

WGG





Gildengate House



Anglia Square Multistorey Car Park

ANGLIA SQUARE, NORWICH
CON01-NORW-045

SITE PHOTOGRAPHS

Originator

GB

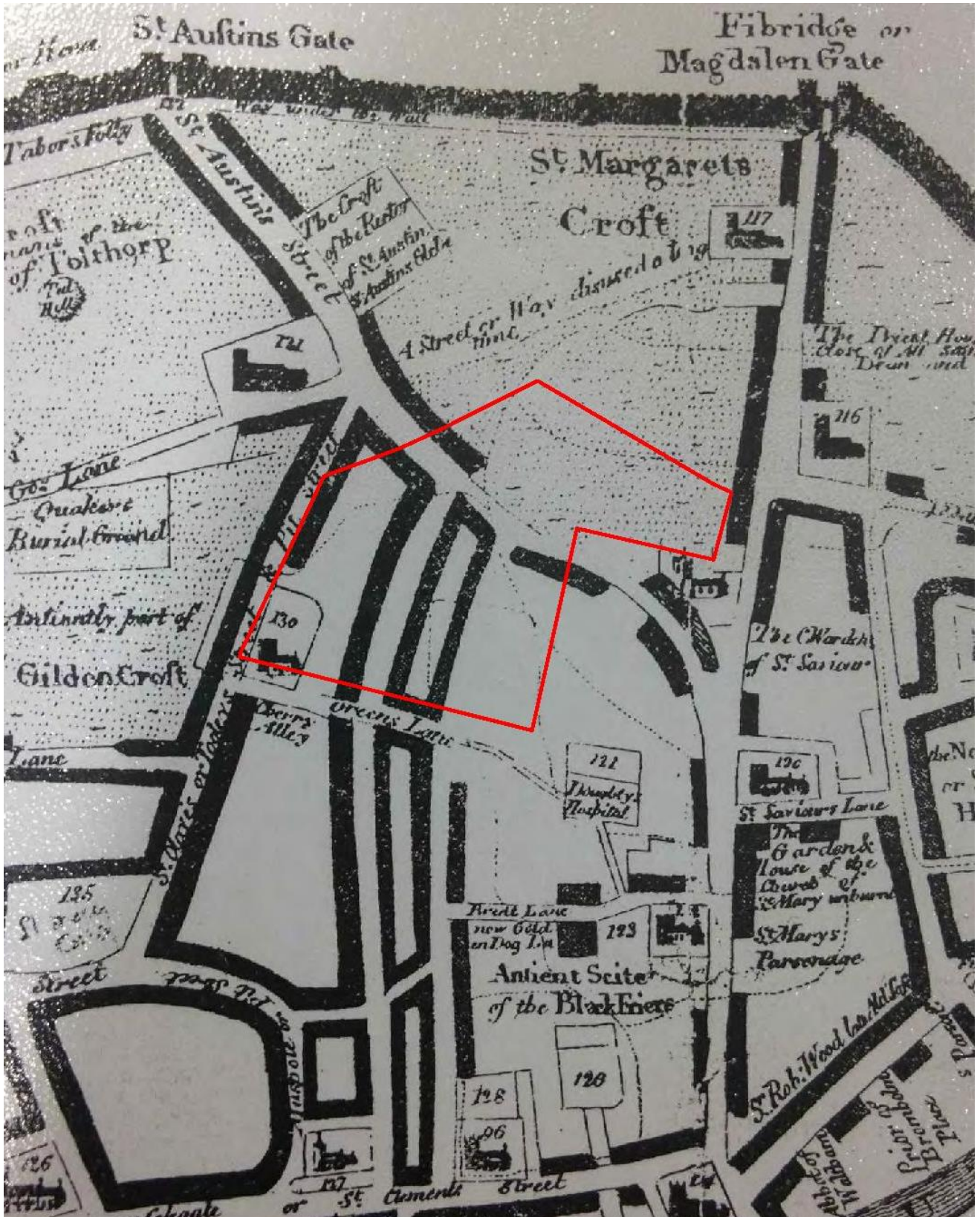
Checked
&
Approved

WGG



C. ENVIROCHECK DATA – HISTORICAL MAPS

This page is intentionally blank



**ANGLIA SQUARE
CON01-NORW-045**

HISTORICAL PLAN – 1746 MAP OF NORWICH

Originator

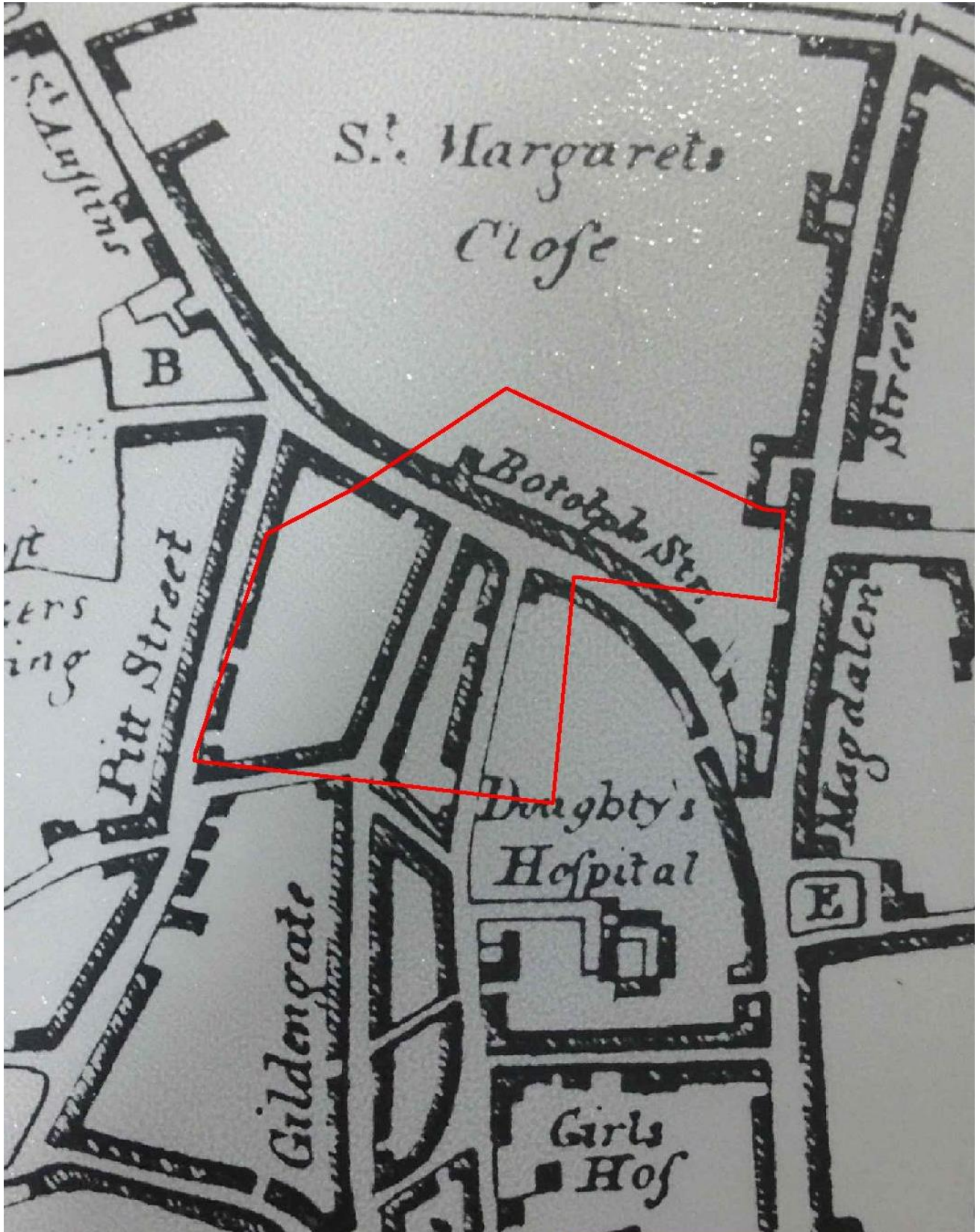
GB

Checked & Approved

WGG



30/08/2017



**ANGLIA SQUARE
CON01-NORW-045**

HISTORICAL PLAN – 1783 MAP OF NORWICH

Originator

GB

Checked
&
Approved

WGG





**ANGLIA SQUARE
CON01-NORW-045**

HISTORICAL PLAN – 1789 MAP OF NORWICH

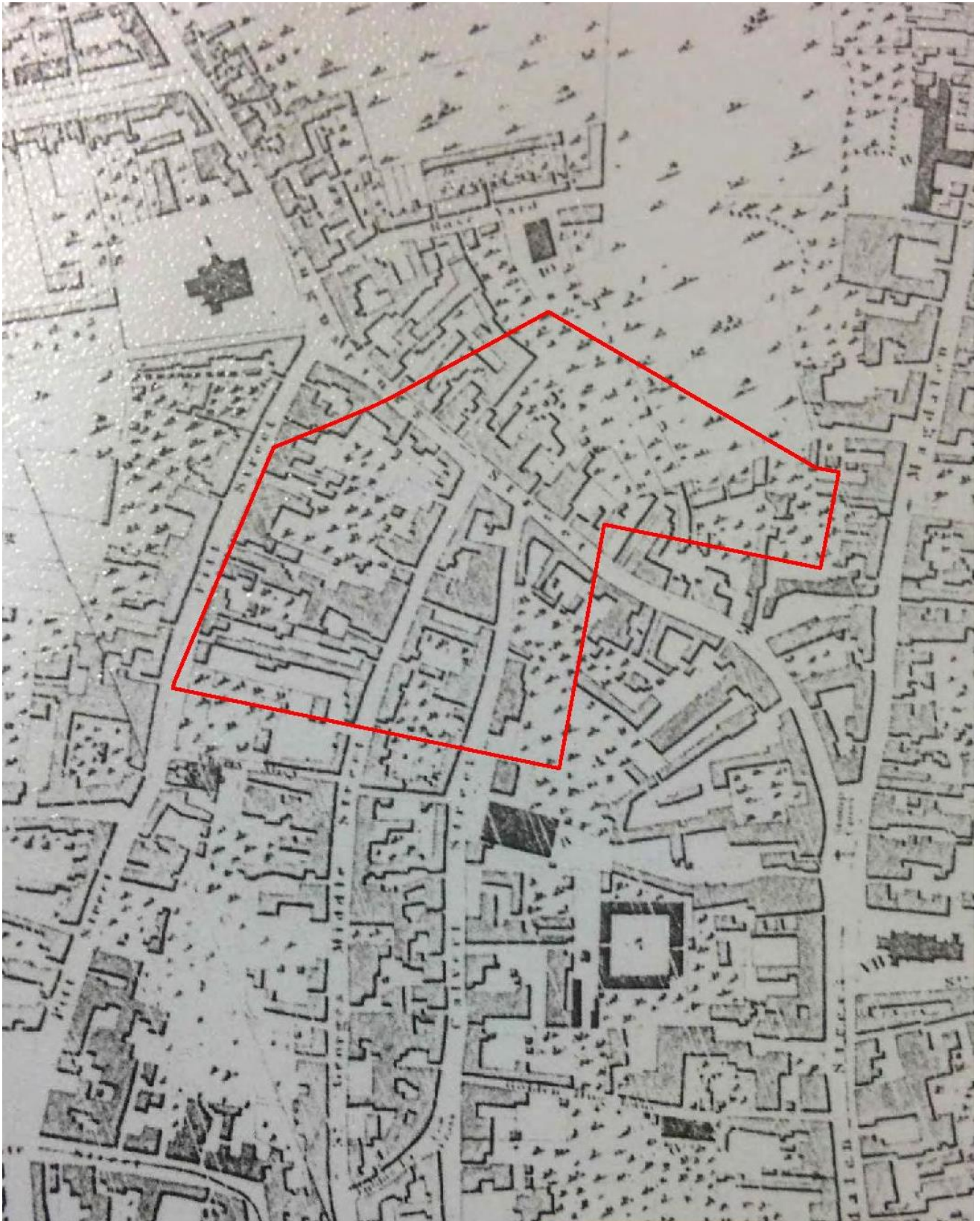
Originator

GB

Checked
&
Approved

WGG





**ANGLIA SQUARE
CON01-NORW-045**

HISTORICAL PLAN – 1830 MAP OF NORWICH

Originator

GB

Checked
&
Approved

WGG



CHAS. E. GOAD, LTD
CIVIL ENGINEERS

EXPLANATION OF SIGNS USED ON INSURANCE PLANS OF TOWNS & CITIES

56 CROUCH HILL
LONDON N. 4.

ABBREVIATIONS

- ASB. ASBESTOS
- CORR CORRUGATED IRON
- D.I.D. DOUBLE IRON DOORS
- DRA. DRAPERY
- D. DWELLING
- ELECT. ELECTRICIAN
- (E.M.) ELECTRIC MOTORS
- (ENG.) STEAM ENGINE
- FURNE. FURNITURE
- GAR. GARAGE
- (G.E.) GAS ENGINE
- H.W. HARDWARE
- I.COLS. IRON COLUMNS OR STEEL STANCHIONS
- JWLY. JEWELLERY
- M.CL. METAL CLAD
- M.W. MANCHESTER WAREHOUSE
- m.l. MATCH (OR WOOD) LINED
- OIL OIL & COLOR
- (O.E.) OIL ENGINE
- P.H. PUBLIC HOUSE
- S. SHOP
- S.I.D. SINGLE IRON DOORS
- S.I.S. SINGLE IRON SHUTTERS
- TAI. TAILORS
- TENS. TENEMENTS
- W.G. WIRED GLASS
- W.N. WIRE NETTING OVER GLASS.

COLORS

- BRICK, STONE OR CONCRETE
- WOOD
- AREAS CLEARED DUE TO ENEMY ACTION
- SKYLIGHTS ON 1 & 2 STORY BUILDINGS
- SKYLIGHTS ON HIGHER BUILDINGS
- METAL BUILDINGS.
- TIMBER PILED OR STACKED

WALLS

- PARTY WALL 2 STORIES OR OVER, A PROBABLE FIRE CUT OFF
- ENTIRE WALL, BUT DOUBTFUL AS FIRE CUT OFF
- DEFECTIVE WALL - IMPERFECT
- WALL ABOVE, IRON COLS. UNDER
- WALL SOME FLOORS ONLY (OR WOOD OR PLASTER PARTITION)
- ABOVE ROOF 6' TO 1'-6"
- D⁹ — 1'-6" TO 2'-6"
- m.l. MATCH OR WOOD LINED
- WOOD CLAD WITH CORRUGATED IRON

OPENINGS

- PASSAGE UNDER
- ON ALL FLOORS
- SOME FLOORS ONLY
- ALL FLOORS (PROTECTED)
- ALL FLOORS (SOME PROTECTED)
- SOME FLOORS ONLY (PROTECTED)
- ALL FLOORS (SOME PROTECTED)
- ALL FLOORS (PROTECTED)
- SOME FLOORS ONLY (PROTECTED)
- WOOD LOADING DOOR
- IRON LOADING DOOR

WINDOWS

- ON ALL OR MOST FLOORS
- MORE THAN USUAL
- OVERLOOKING
- NEARLY ALL GLASS
- OPENINGS THRO' & WINDOWS OVER
- ON SOME FLOORS ONLY
- PROTECTED BY WIRED GLASS
- PROTECTED BY SINGLE IRON SHUTTERS
- PROTECTED BY DOUBLE IRON SHUTTERS.
- WINDOWS IN FRONT & REAR OF BUILDINGS UNDERSTOOD
- UNLESS OTHERWISE SHOWN

FLOORS

- 1.2.3.3² 3² ON BUILDINGS ARE NUMBER OF STORIES ABOVE GROUND
- (3²=3 FLOORS & ATTIC)
- 2 & 2 B MEANS 2 STORIES & 2 BASEMENTS BAST & SUB-BASEMENT.

SKYLIGHTS

- A LESS THAN 50 SQUARE FEET (SAY 10'x5', OR 7'x7')
- OPENINGS THROUGH 2 FLOORS UNDER (EACH STROKE DENOTES AN OPENING.)
- WITH WELL HOLE THROUGH 3 FLOORS.
- LANT. LANTERN LIGHT, SIDES ONLY GLASS. } OVER 50 SQ. FT. TO SCALE
- OR VENT. OR RAISED VENTILATOR

HOISTS & LIFTS

- OPEN
- OPEN TO STREET
- OPEN (WOOD FLAPS TO FLOORS.)
- ENCLOSED BRICK OR FIRE RESISTING WIRED GLASS DOORS
- ENCLOSED WOOD OR PLASTER
- IRON DOORS SHOWN AS EXPLAINED UNDER "OPENINGS"

ROOFS

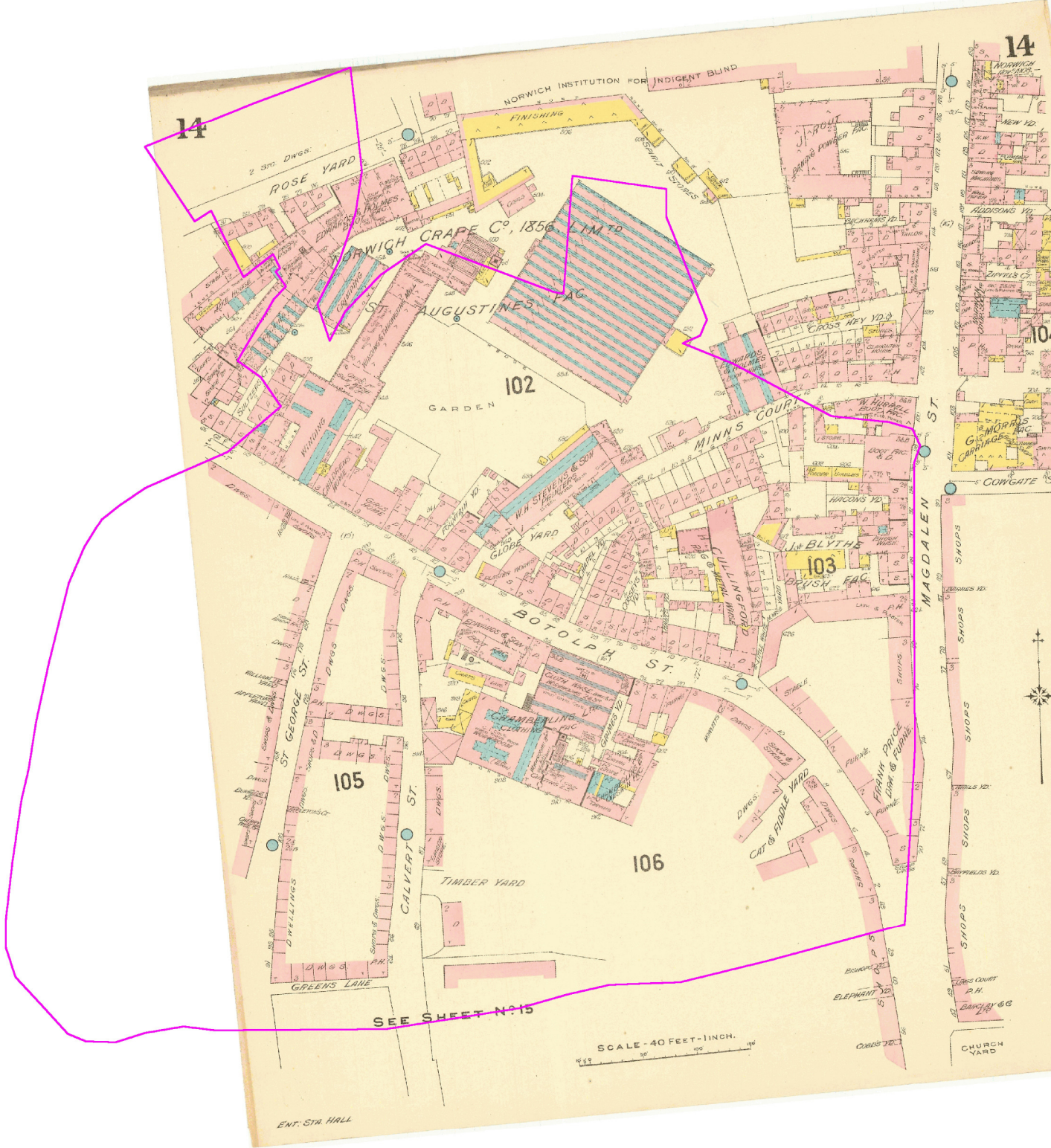
- ASB ASBESTOS
- C CONCRETE
- CORR CORRUGATED IRON
- 7 METAL
- P PATENT (FELT & C)
- O SLATE
- T TILE
- PROFILES
- WITH NORTH LIGHTS

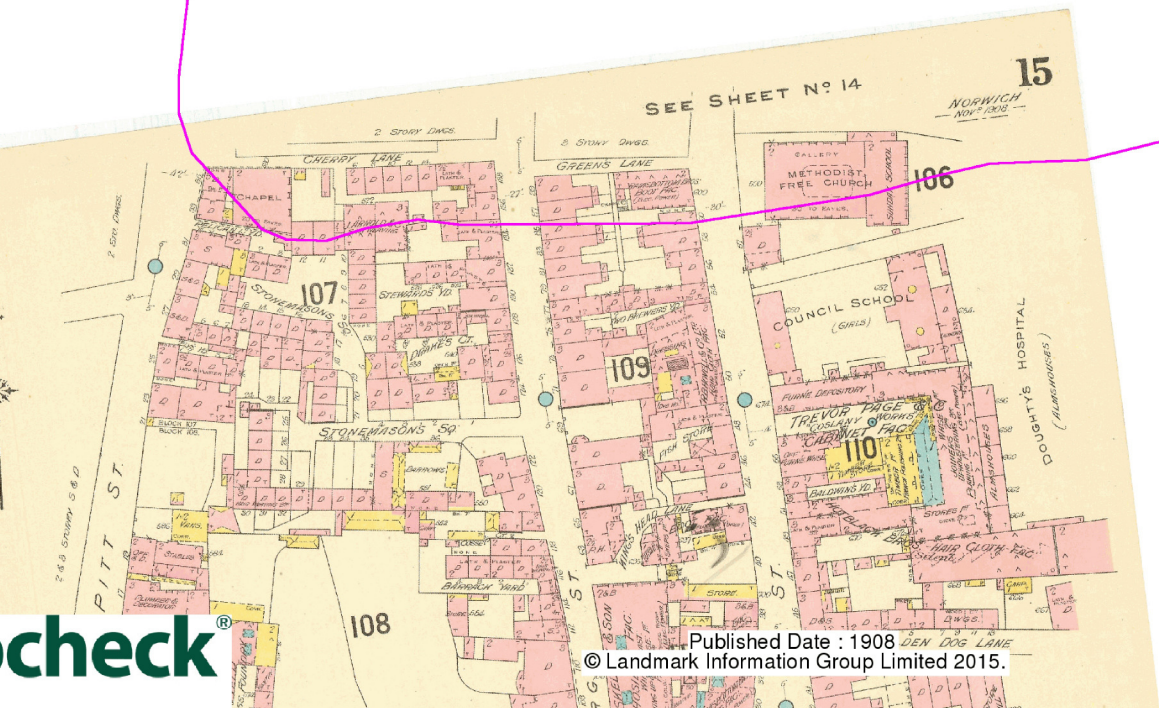
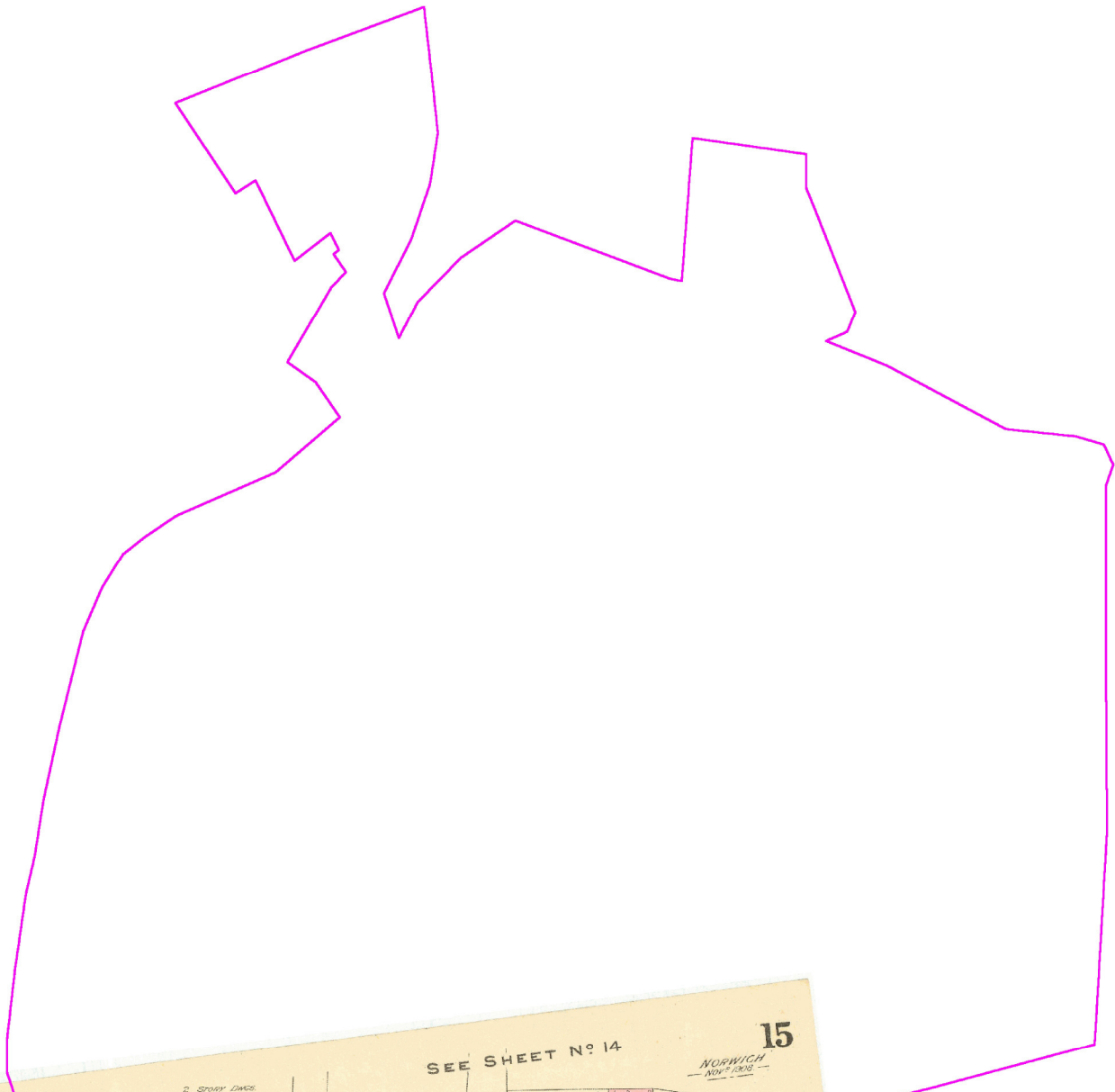
SUNDRIES

- STEAM BOILERS
- BOILER SET IN BRICK
- FACTORY CHIMNEYS
- STEAM ENGINE
- OVERHANGING WOOD CORNICE
- FIRE ALARM BOX
- D^o ON KEY PLAN
- HYDRANT
- HYDRAULIC HYDRANT
- PRIVATE HYDRANT OR STAND PIPE
- DOUBLE HYDRANT
- SALT WATER HYDRANT
- SPRINKLER OR AUTO ALARM BELL

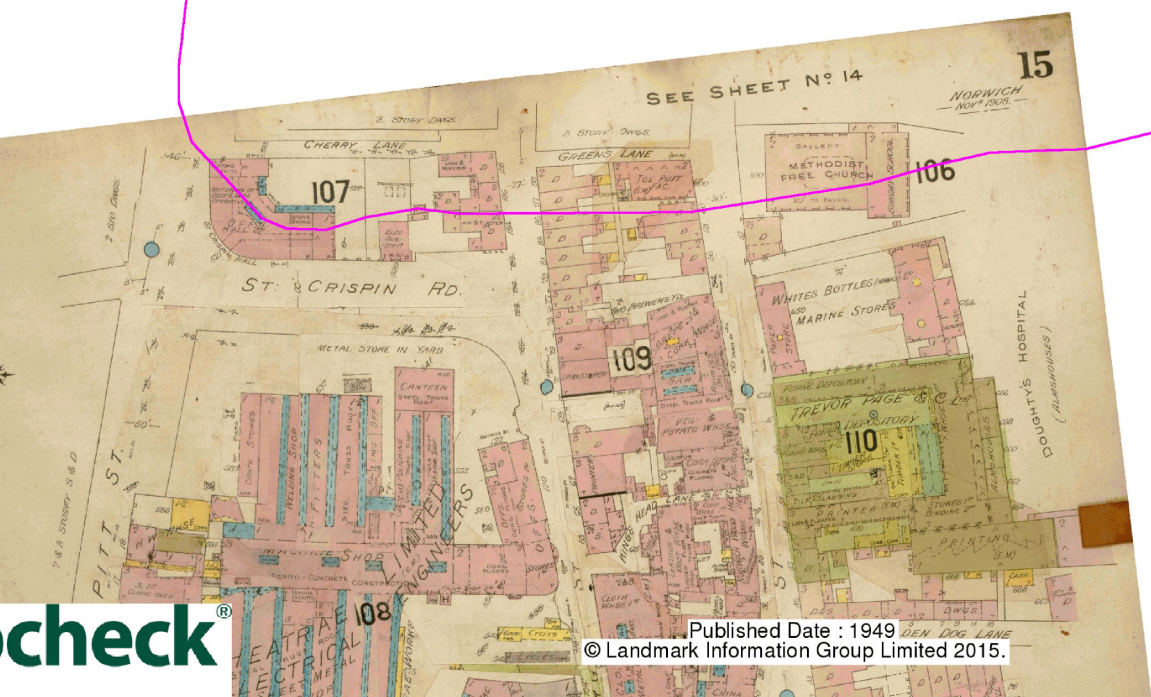
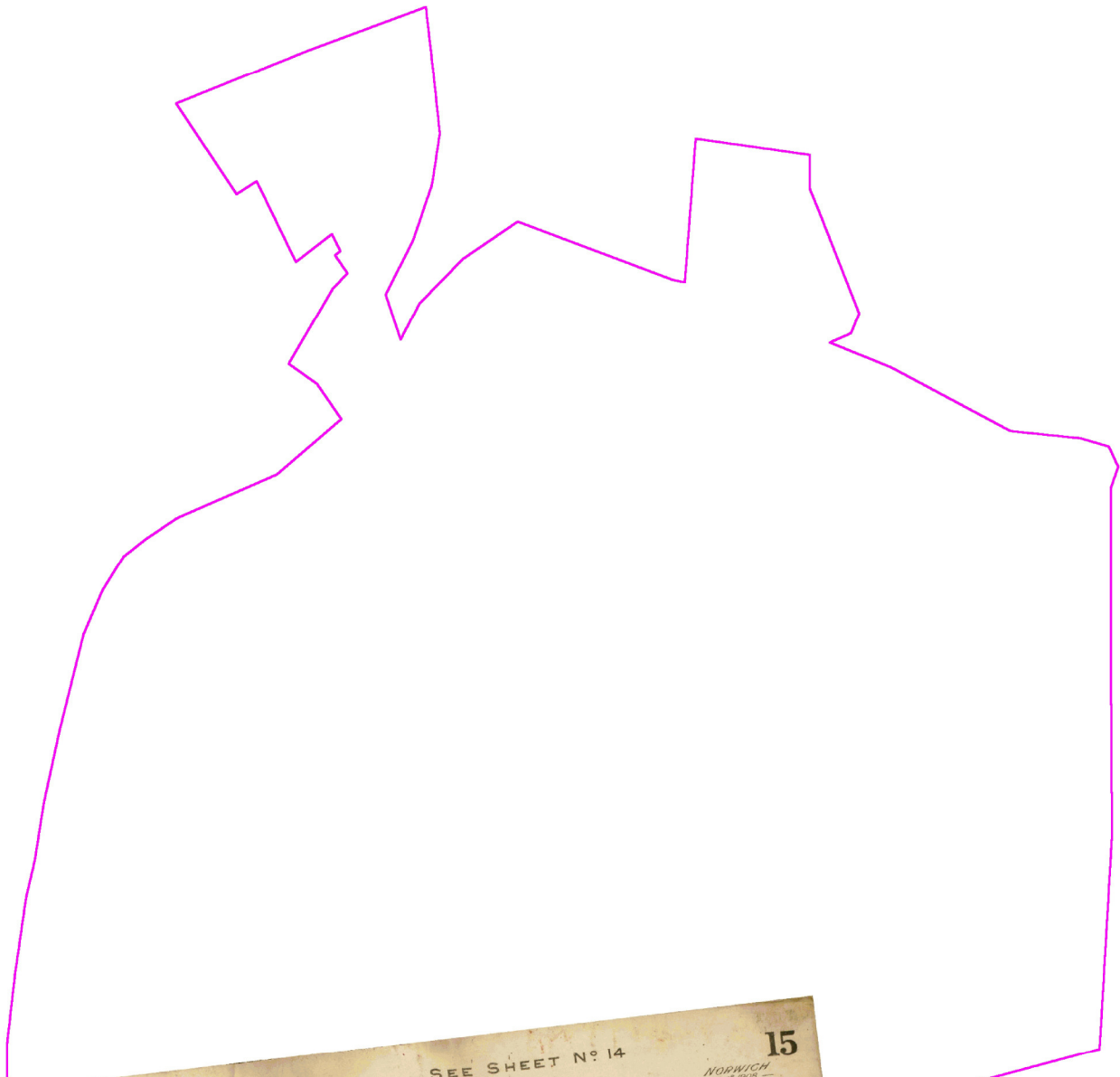
REFERENCE NUMBERS

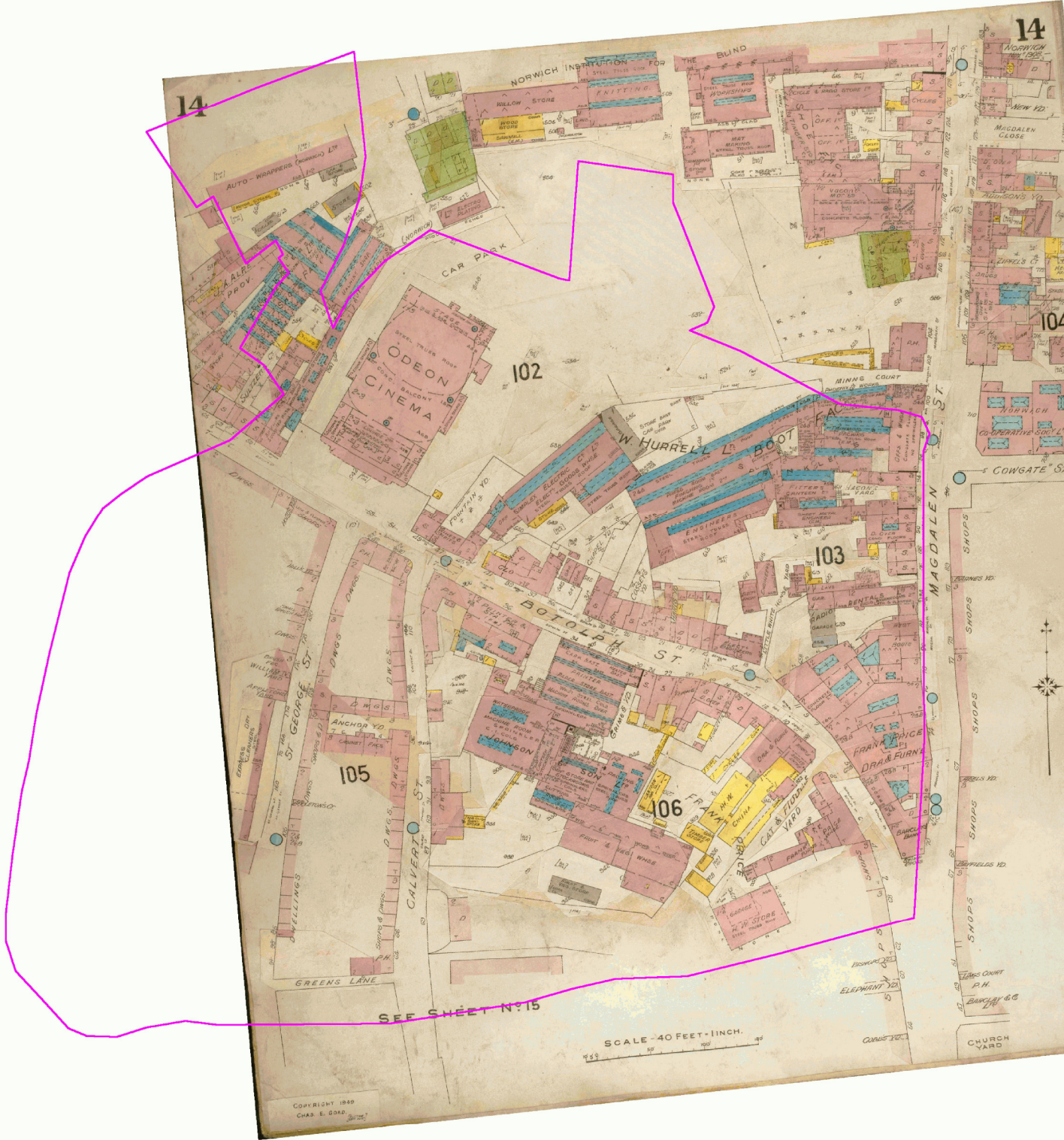
- NUMBERS PARALLEL WITH STREET ARE EXISTING STREET N^{os}
- WHERE TWO SETS OF STREET N^{os} IN SAME BLOCK COINCIDE, ADDITIONAL ARBITRARY N^{os} ARE GIVEN TO ONE SET (500 & UPWARDS)
- WHERE BUILDINGS TO WHICH THEY APPLIED ARE DEMOLISHED, STREET & ARBITRARY N^{os} ARE SHOWN & CROSSED THROUGH ON REVISION
- ARE STREET WIDTHS.
- ARE HEIGHTS OF GROUND ABOVE ORDNANCE DATUM
- HEIGHT IN FEET OF ADJOINING BUILDINGS WHERE STORIES DIFFER IN HEIGHT
- SIZES OF WATER MAINS SUPPLYING HYDRANTS

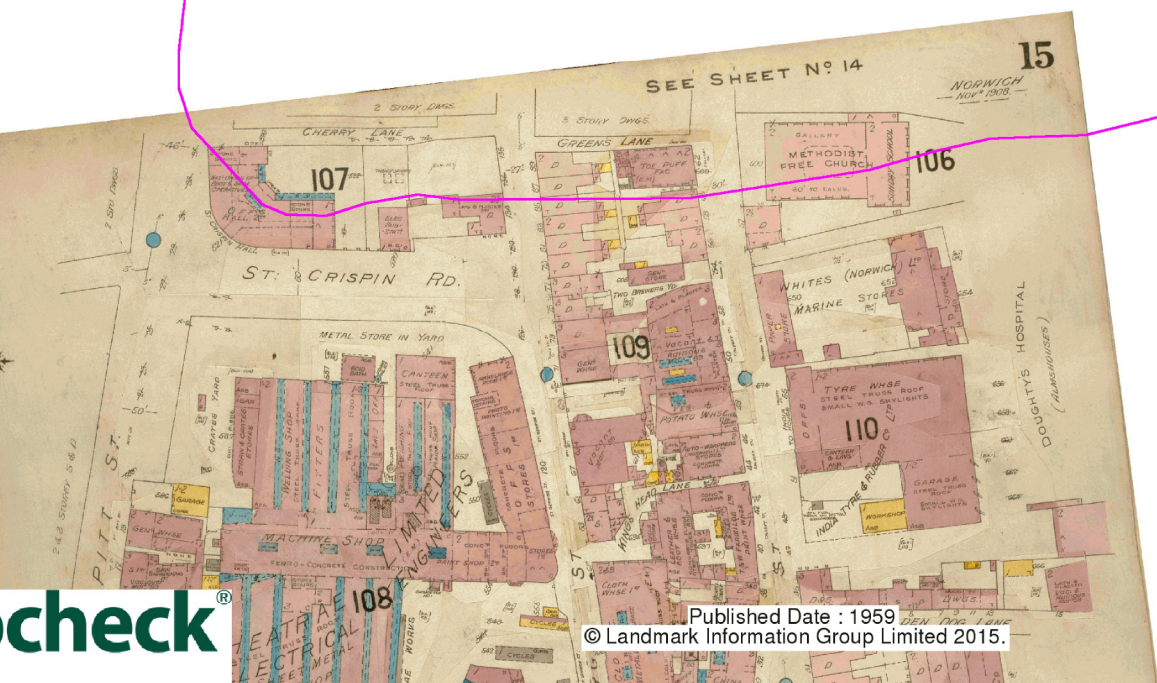
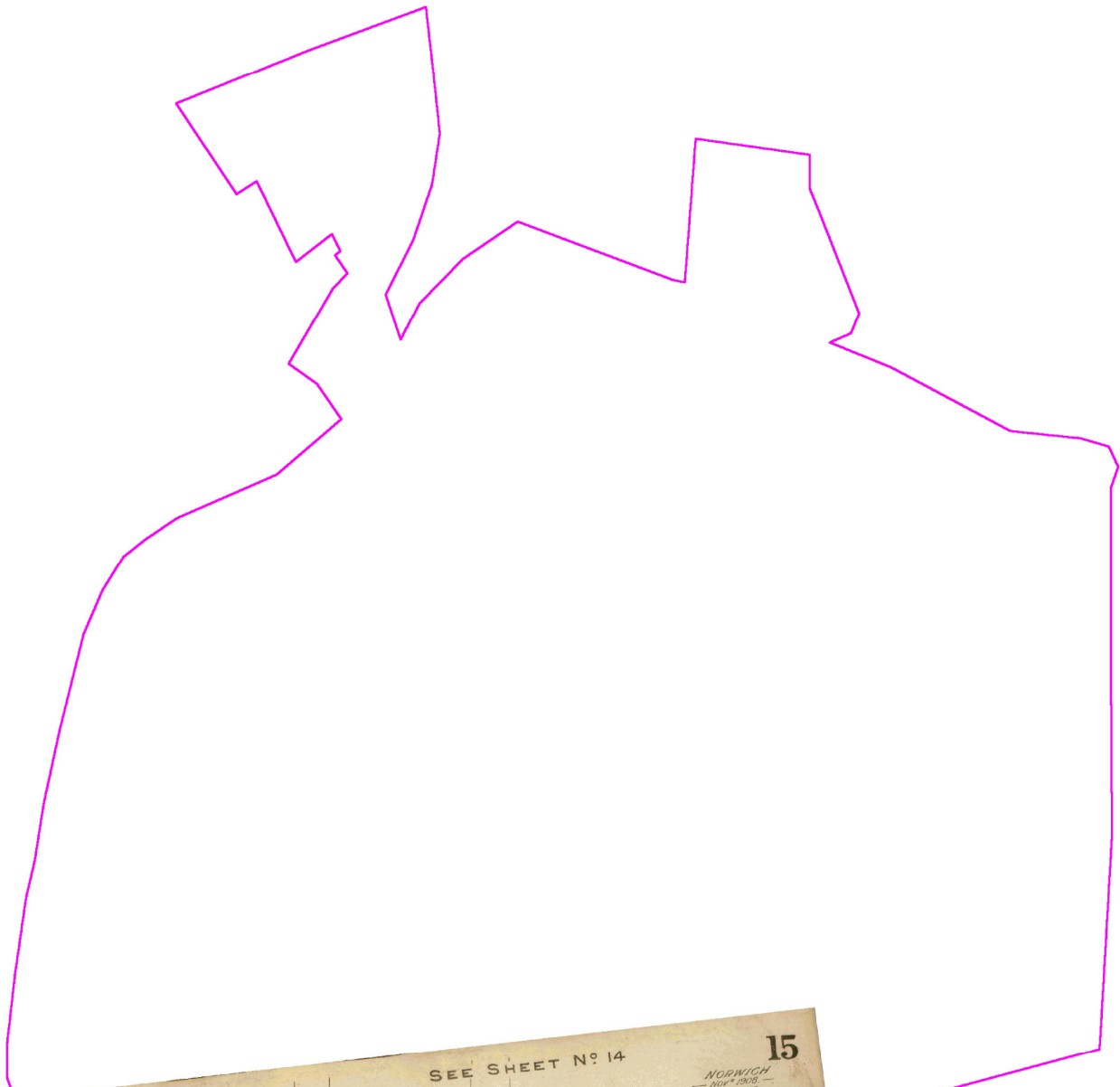












Historical Mapping Legends

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

Quarry **Gravel Pit** **Sand Pit**
Clay Pit **Shingle** **Refuse Heap**
Sloping Masonry **Flat Rock**
Marsh **Reeds** **Osiers**
Rough Pasture **Furze** **Wood**
Mixed Wood **Brushwood** **Orchard**
Fir **Ford** **Stepping Stones**
Ferry **Waterfall** **Lock**
Trig. Station **Altitude at Trig. Station**
B.M. 325.9 **Bench Mark** **Surface Level**
Arrow denotes flow of water **Antiquities (site of)**
Cutting **Embankment**
Railway crossing Road **Level Crossing** **Road crossing Railway**
Railway crossing River or Canal **Road over single stream** **Road over River or Canal**
County Boundary (Geographical)
County & Civil Parish Boundary
Administrative County & Civil Parish Boundary
County Borough Boundary (England)
County Burgh Boundary (Scotland)
Co. Boro. Bdy.
Co. Burgh Bdy.
BP BS Boundary Post or Stone **P.C.B** Police Call Box
B.R. Bridle Road **P** Pump
E.P Electricity Pylon **S.P** Signal Post
F.B. Foot Bridge **Sl** Sluice
F.P. Foot Path **Sp.** Spring
G.P Guide Post or Board **T.C.B** Telephone Call Box
M.S Mile Stone **Tr.** Trough
M.P M.R Mooring Post or Ring **W** Well

Ordnance Survey Plan, Additional SIMs and Supply of Unpublished Survey Information 1:2,500 and 1:1,250

Inactive Quarry, Chalk Pit or Clay Pit **Active Quarry, Chalk Pit or Clay Pit**
Rock **Boulders**
Cliff **Slopes** **Top**
Roofed Building **Glazed Roof Building**
Sloping Masonry **Archway**
Non-Coniferous Tree (surveyed) **Coniferous Tree (surveyed)**
Non-Coniferous Trees (not surveyed) **Coniferous Trees (not surveyed)**
Orchard Tree **Scrub** **Bracken**
Coppice, Osier **Reeds** **Marsh, Saltings**
Rough Grassland **Heath** **Culvert**
Direction of water flow **Bench Mark** **Antiquity (site of)**
Cave Entrance **Triangulation Station** **Electricity Pylon**
Electricity Transmission Line
County Boundary (Geographical)
County & Civil Parish Boundary
Civil Parish Boundary
Admin. County or County Bor. Boundary
London Borough Boundary
Symbol marking point where boundary mereing changes
BH Beer House **P** 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
EI P 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
H Hydrant or Hydraulic **TCB** Telephone Call Box
LC Level Crossing **TCP** Telephone Call Post
MH Manhole **Tr** Trough
MP Mile Post or Mooring Post **Wr Pt, Wr T** Water Point, Water Tap
MS Mile Stone **W** Well
NTL Normal Tidal Limit **Wd Pp** Wind Pump

Large-Scale National Grid Data 1:2,500 and 1:1,250

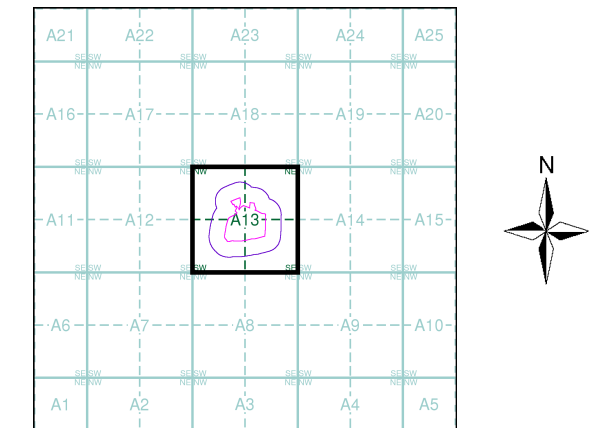
Cliff **Slopes** **Top**
Rock **Rock (scattered)**
Boulders **Boulders (scattered)**
Positioned Boulder **Scree**
Non-Coniferous Tree (surveyed) **Coniferous Tree (surveyed)**
Non-Coniferous Trees (not surveyed) **Coniferous Trees (not surveyed)**
Orchard Tree **Scrub** **Bracken**
Coppice, Osier **Reeds** **Marsh, Saltings**
Rough Grassland **Heath** **Culvert**
Direction of water flow **Triangulation Station** **Antiquity (site of)**
Electricity Transmission Line **Electricity Pylon**
B.M. 231.60m Bench Mark **Buildings with Building Seed**
Roofed Building **Glazed Roof Building**
Civil parish/community boundary
District boundary
County boundary
Boundary post/stone
Boundary mereing symbol (note: these always appear in opposed pairs or groups of three)
Bks Barracks **P** Pillar, Pole or Post
Bty Battery **PO** Post Office
Cemy Cemetery **PC** Public Convenience
Chy Chimney **Pp** Pump
Cis Cistern **Ppg Sta** Pumping Station
Dismtd Rly Dismantled Railway **PW** Place of Worship
EI Gen Sta Electricity Generating Station **Sewage Ppg Sta** Sewage Pumping Station
EI P Electricity Pole, Pillar **SB, S Br** Signal Box or Bridge
EI Sub Sta Electricity Sub Station **SP, SL** Signal Post or Light
FB Filter Bed **Spr** Spring
Fn / D Fn Fountain / Drinking Ftn. **Tk** Tank or Track
Gas Gov Gas Valve Compound **Tr** Trough
GVC Gas Governor **Wd Pp** Wind Pump
GP Guide Post **Wr Pt, Wr T** Water Point, Water Tap
MH Manhole **Wks** Works (building or area)
MP, MS Mile Post or Mile Stone **W** Well



Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Norfolk	1:2,500	1886	2
Norfolk	1:2,500	1907	3
Norfolk	1:2,500	1928	4
Norfolk	1:2,500	1938	5
Ordnance Survey Plan	1:2,500	1956 - 1957	6
Ordnance Survey Plan	1:1,250	1956	7
Ordnance Survey Plan	1:1,250	1962 - 1973	8
Ordnance Survey Plan	1:1,250	1971 - 1974	9
Ordnance Survey Plan	1:1,250	1974	10
Supply of Unpublished Survey Information	1:1,250	1976	11
Additional SIMs	1:1,250	1978 - 1983	12
Additional SIMs	1:1,250	1984 - 1992	13
Large-Scale National Grid Data	1:1,250	1994	14

Historical Map - Segment A13



Order Details

Order Number: 91738664_1_1
 Customer Ref: SES 2185
 National Grid Reference: 623020, 309390
 Slice: A
 Site Area (Ha): 4.97
 Search Buffer (m): 100

Site Details

P M T House of Rock, 71-73 New Botolph Street, NORWICH, NR3 1DT



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

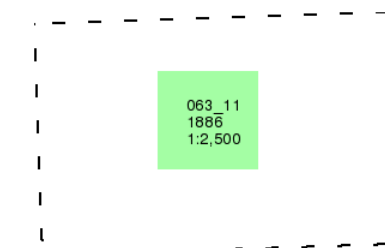
Norfolk

Published 1886

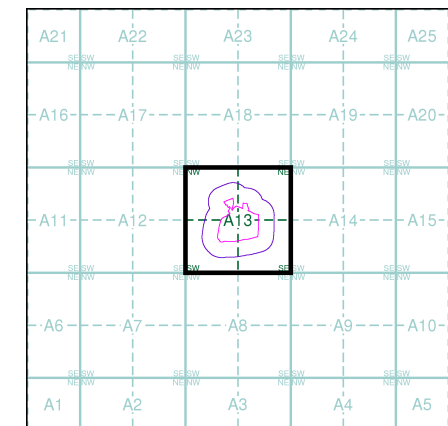
Source map scale - 1:2,500

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



Order Details

Order Number: 91738664_1_1
 Customer Ref: SES 2185
 National Grid Reference: 623020, 309390
 Slice: A
 Site Area (Ha): 4.97
 Search Buffer (m): 100

Site Details

P M T House of Rock, 71-73 New Botolph Street, NORWICH, NR3 1DT



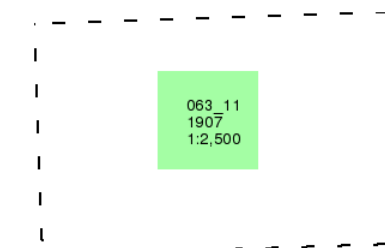
Norfolk

Published 1907

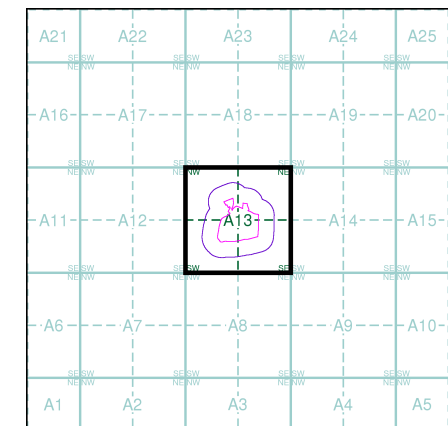
Source map scale - 1:2,500

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

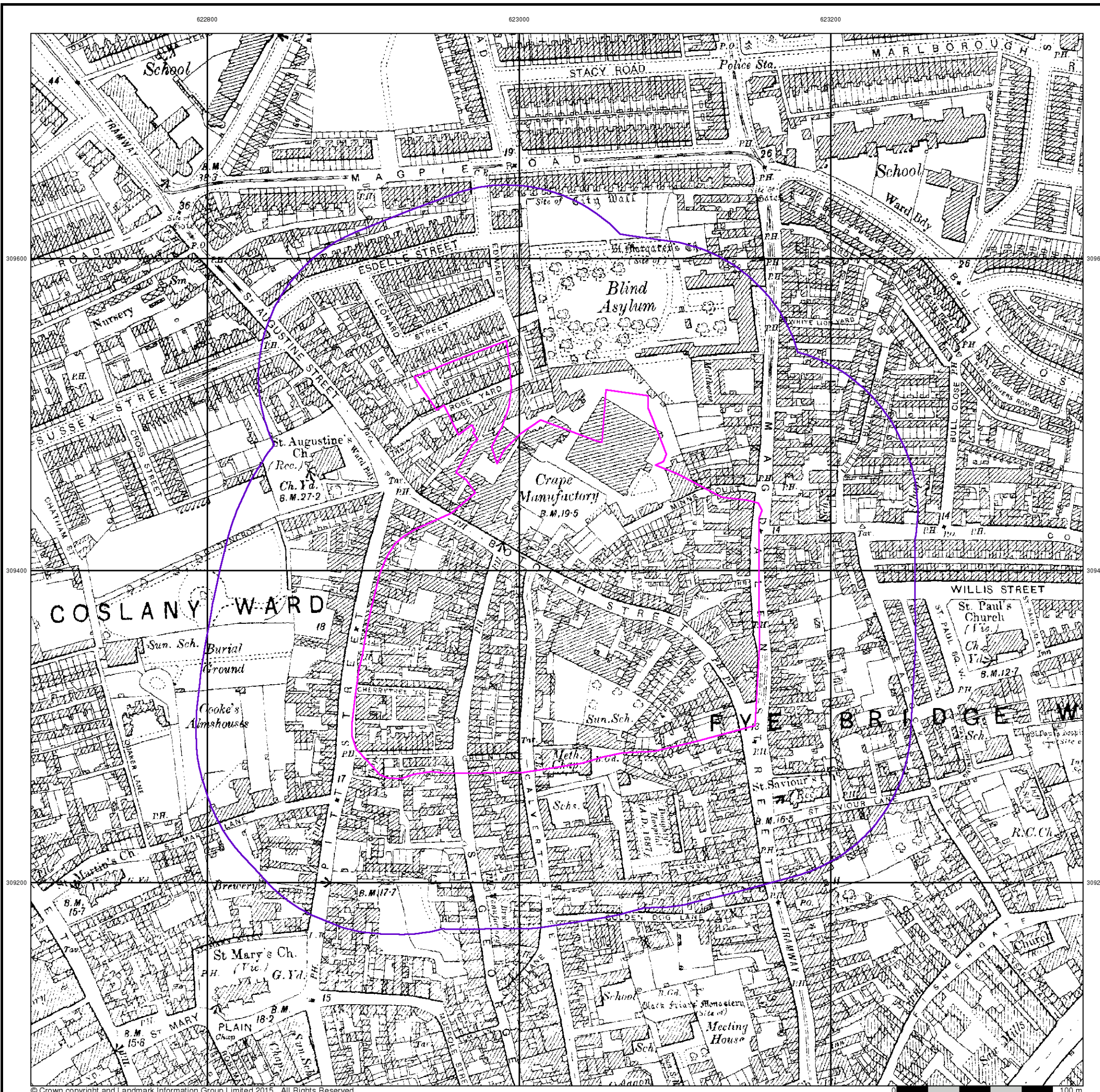


Order Details

Order Number: 91738664_1_1
 Customer Ref: SES 2185
 National Grid Reference: 623020, 309390
 Slice: A
 Site Area (Ha): 4.97
 Search Buffer (m): 100

Site Details

P M T House of Rock, 71-73 New Botolph Street, NORWICH, NR3 1DT



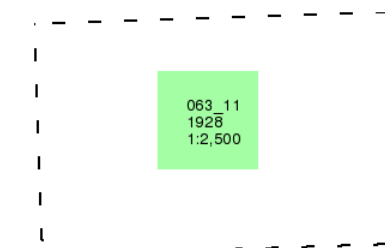
Norfolk

Published 1928

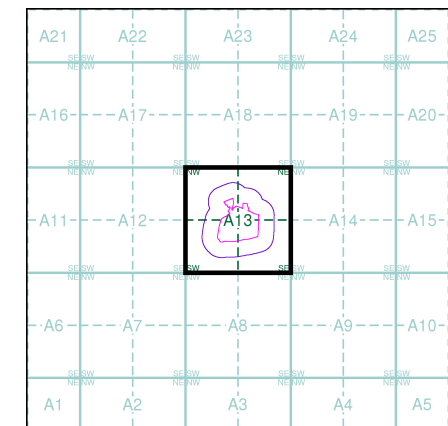
Source map scale - 1:2,500

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

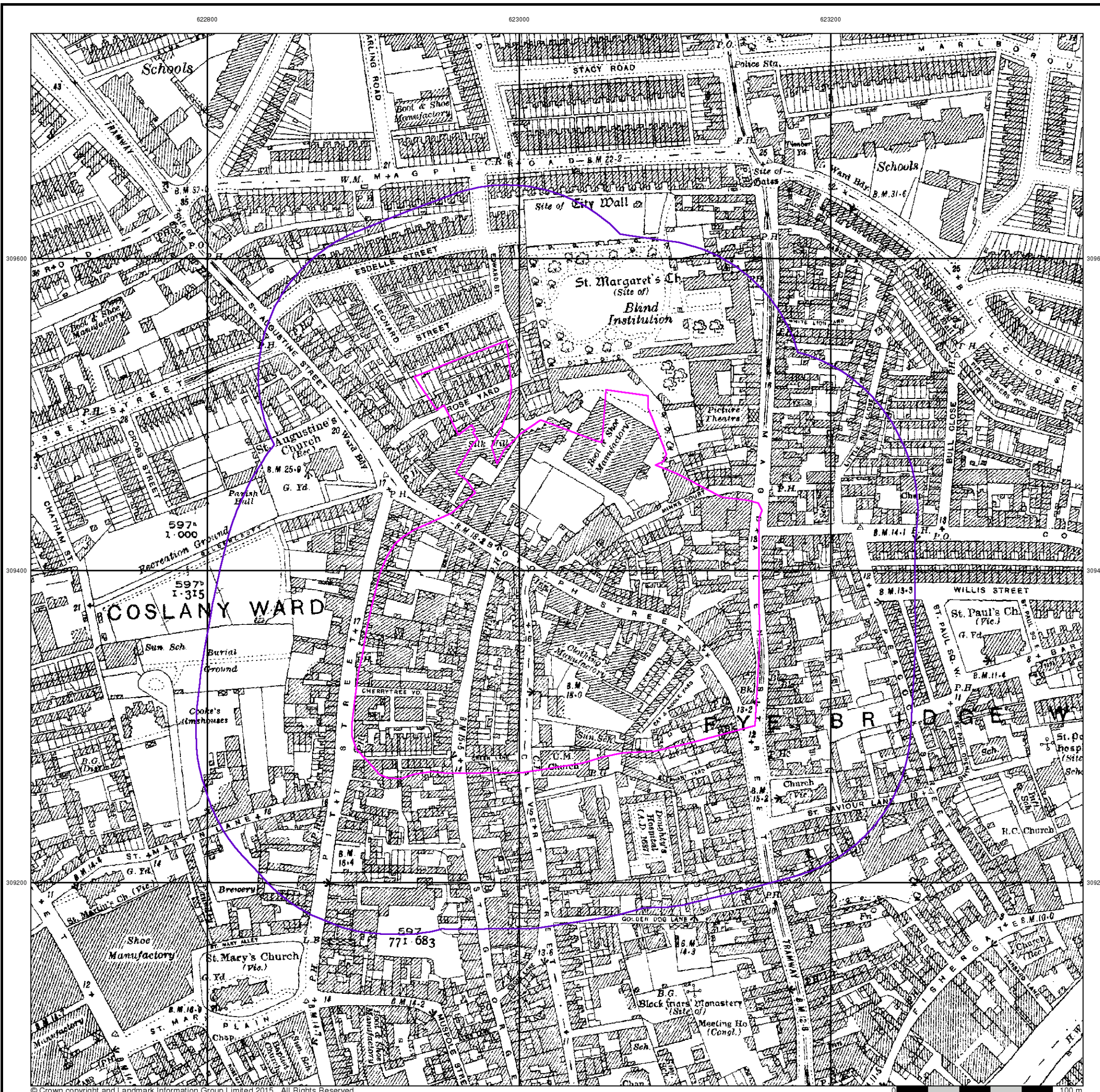


Order Details

Order Number: 91738664_1_1
 Customer Ref: SES 2185
 National Grid Reference: 623020, 309390
 Slice: A
 Site Area (Ha): 4.97
 Search Buffer (m): 100

Site Details

P M T House of Rock, 71-73 New Botolph Street, NORWICH, NR3 1DT



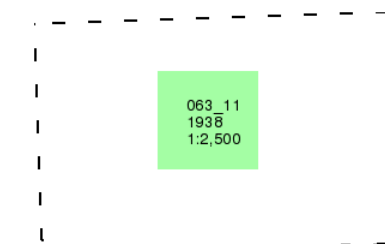
Norfolk

Published 1938

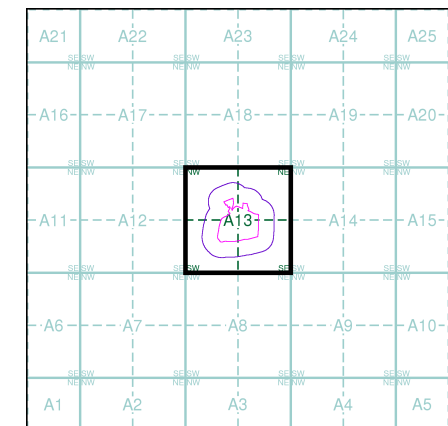
Source map scale - 1:2,500

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

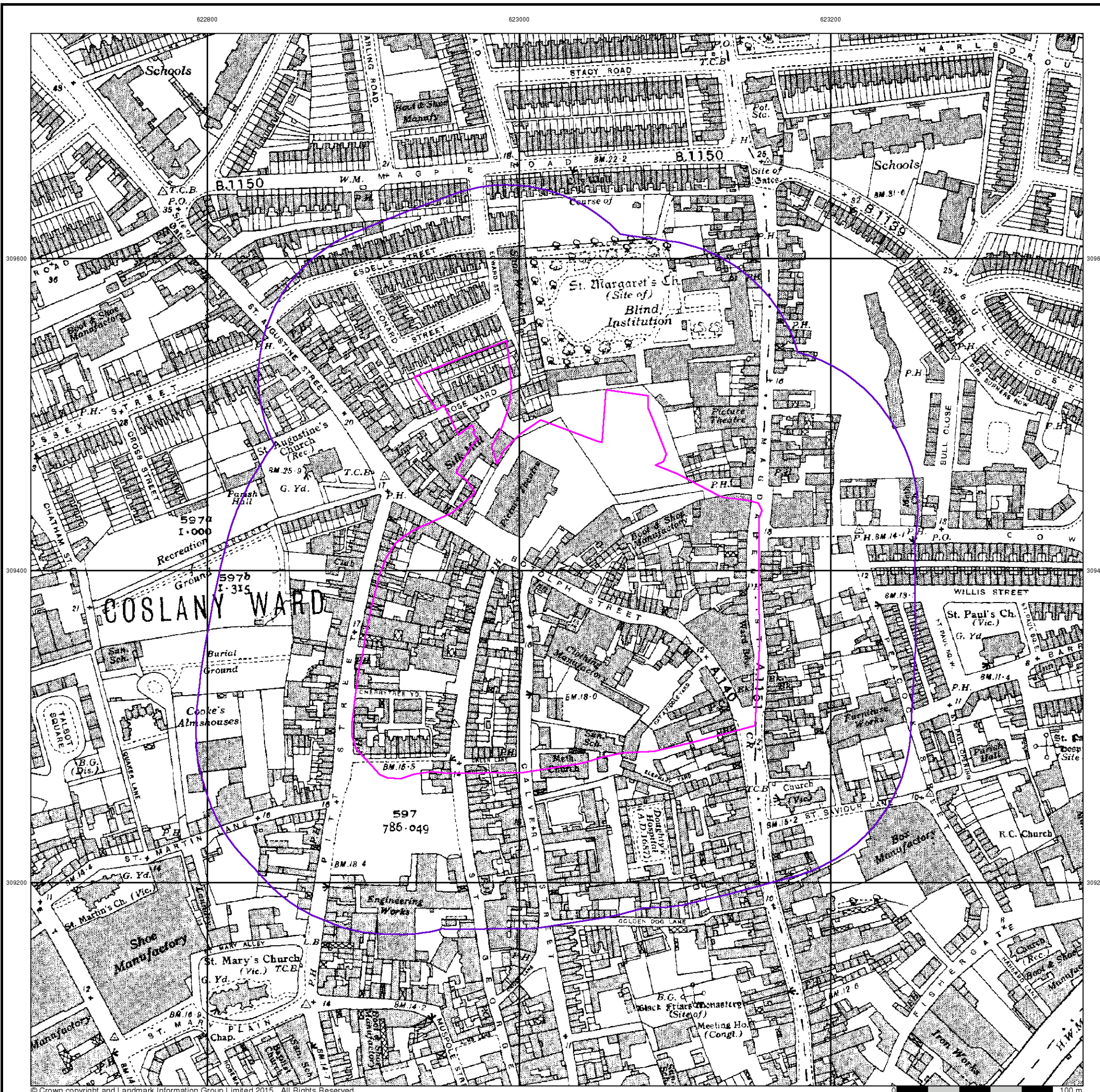


Order Details

Order Number: 91738664_1_1
 Customer Ref: SES 2185
 National Grid Reference: 623020, 309390
 Slice: A
 Site Area (Ha): 4.97
 Search Buffer (m): 100

Site Details

P M T House of Rock, 71-73 New Botolph Street, NORWICH, NR3 1DT



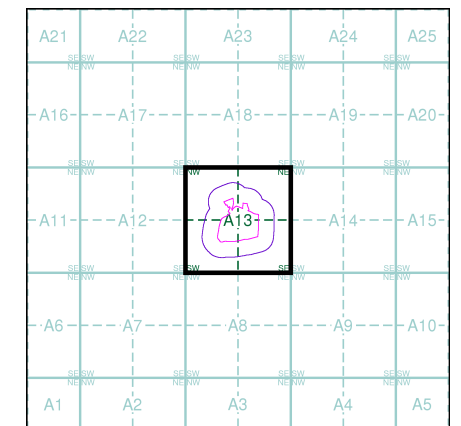
Ordnance Survey Plan
Published 1956 - 1957
Source map scale - 1:2,500

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)

TG2209 1956 1:2,500	TG2309 1957 1:2,500
---------------------------	---------------------------

Historical Map - Segment A13



Order Details

Order Number: 91738664_1_1
 Customer Ref: SES 2185
 National Grid Reference: 623020, 309390
 Slice: A
 Site Area (Ha): 4.97
 Search Buffer (m): 100

Site Details

P M T House of Rock, 71-73 New Botolph Street, NORWICH, NR3 1DT

