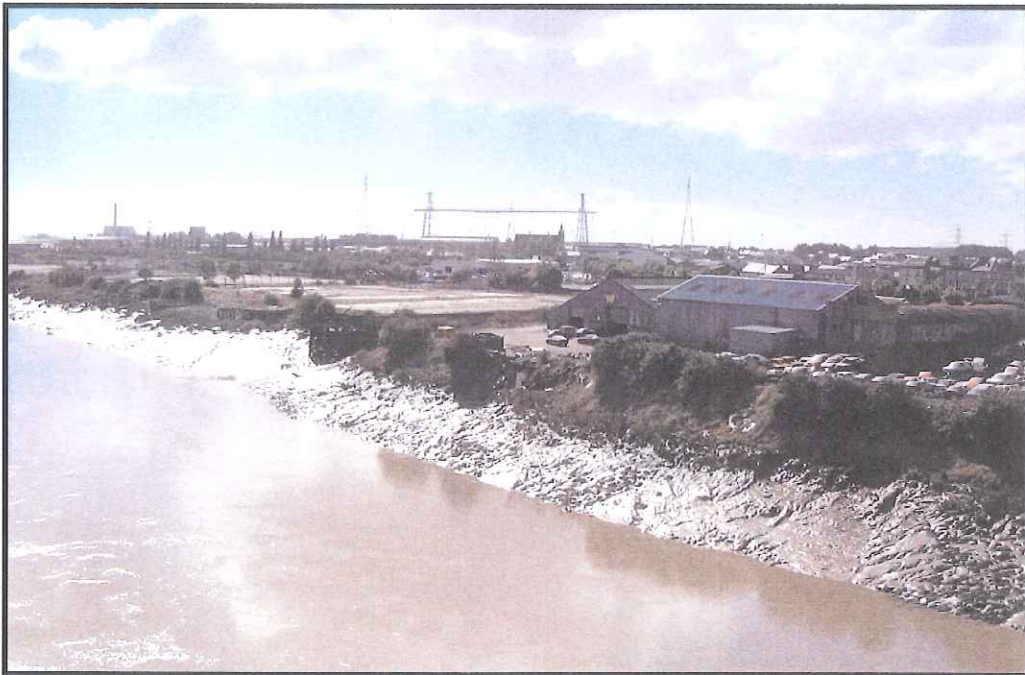


Archaeological Desktop Study  
of land at  
**LOWER DOCK STREET, PILLGWENLLY,  
NEWPORT, GWENT.**  
for  
The Raven Group



Report No. 1072/2002



Bristol and Region Archaeological Services

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Archaeological Desktop Study  
of land at  
**LOWER DOCK STREET, PILLGWENLLY,  
NEWPORT, GWENT.**

Centred on  
N.G.R. ST 3175 8745

Client: The Raven Group  
Agent: Graham Jones Associates

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### NOTE

Notwithstanding that Bristol and Region Archaeological Services have taken reasonable care to produce a comprehensive summary of the known and recorded archaeological evidence, no responsibility can be accepted for any omissions of fact or opinion, however caused.

January, 2003.

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## **SUMMARY**

The study area forms part of the Gwent Levels which are known to be rich in prehistoric and Roman archaeology both in the intertidal zone and inland of the sea-wall.

There is the possibility that a Dark Age trading settlement existed close to the mouth of the River Usk. The remains of a Dark Age boat were found during the construction of the Alexandra Dock.

The study area lies well outside the medieval town of Newport in an area of reclaimed marsh land, probably used as pasture.

The possible course of the creek running inland from Jack's Pill has been identified on an early 19th-century map. The back-filled creek lies below the south end of the portion of the study area between Lower Dock Street and Usk Way. It lies to the south of the Cattle Market area.

Ships of any age may have been beached on the Usk foreshore or in the tidal creeks. Medieval and later vessels would probably have been prevented from progressing inland by tidal gates set in the sea wall.

The land was raised by as much as three metres before the construction of the Cattle Market commenced in 1843.

One of the buildings within the Cattle Market is Listed Grade II. Part of the study area lies within the Lower Dock Street Conservation Area. It is the intention of the Council to extend the Conservation Area to include the Cattle Market and adjoining streets.

Comments are made on how the potential archaeological resource may be dealt with in the planning process.

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## 1. INTRODUCTION

- 1.1 An archaeological and historical study of land around Lower Dock Street in the Pillgwenlly area of Newport, Gwent was commissioned from Bristol and Region Archaeological Services by Graham Jones Associates on behalf of The Raven Group.
- 1.2 Planning Policy Wales, issued by the Welsh Assembly and revised in March 2002, sets out under section 6.5 the means by which archaeological remains should be considered within the planning process (Appendix 1).
- 1.3 Where nationally important archaeological remains, whether scheduled or not, and their settings are likely to be affected by proposed development, there should be a presumption in favour of their physical preservation in situ. In cases involving lesser archaeological remains, local planning authorities will need to weigh the relative importance of archaeology against other factors, including the need for the proposed development. (PPW 2002, sec. 6.5.1).
- 1.4 Where local planning authorities decide that physical preservation in situ of archaeological remains is not justified in the circumstances of the case, and that development resulting in the destruction of the archaeological remains should proceed, before granting planning permission the authority needs to be satisfied that the developer has made appropriate and satisfactory provision for the archaeological investigation and subsequent recording of the remains and the publication of the results. (PPW 2002, sec. 6.5.3)
- 1.5 There is a requirement for a developer to provide sufficient information on the archaeological implications of development as part of the planning process in order that an informed and reasonable planning decision can be taken. The information may be obtained through an archaeological desktop study and/or an archaeological field evaluation commissioned by the developer. This archaeological desktop study represents the first stage in this process.
- 1.6 The study was undertaken during September and October 2002 by Reg Jackson and Dr Roger Leech and involved the examination of documentary and printed sources, maps and plans, photographs and other illustrative material and site visits. Archaeological evidence recorded in the Glamorgan-Gwent Sites and Monuments Record (SMR) was also examined.
- 1.7 The principal objectives of the study were to locate any archaeological features likely to be affected by future development and to assess their significance and potential for survival. In particular the original course and extent of a river inlet now known as Jack's Pill was required to be established, if possible.
- 1.8 Bristol and Region Archaeological Services would like to thank the staff of the Gwent Record Office, the National Library of Wales, Newport Reference Library, Newport Museum, the Public Record Office and the Glamorgan-Gwent Archaeological Trust for their assistance.

## 2. THE SITE

- 2.1 The study area is centred on NGR ST 3175 8745 (**Fig.1**). It is divided in two by Lower Dock Street. The western portion is an irregular shape largely occupied by the Cattle Market, its boundaries following Ruperra Street, East Market Street, John Street, Lower Dock Street, South Market Street and West (Rear) Market Street. It extends slightly to the west taking in properties in Albert Street and Tredegar Street. The eastern portion is roughly triangular in shape, bounded on the west by Lower Dock Street, north by the elevated section of George Street leading to the George Street Bridge and east by the A4042 Usk Way. The eastern boundary of the study area lies approximately 160m from the west bank of the River Usk.
- 2.2 The original market site is an area of tarmac and concrete hardstanding with a number of single-storey buildings around its periphery occupied by a café, market office and agricultural engineers (**Plate 1**). The present cattle market is located in the south-west corner of the site and comprises metal animal pens on a concrete surface and steel-framed sheds. Parts of the original enclosure wall of the cattle market survives, notably along the west, north and north-east sides, that to the north being topped by ornamental cast-iron railings. By the entrance to the market at the junction of West Market Street and Tredegar Street is a plaque commemorating the market's construction.
- 2.3 Between the market site and the smaller area of tarmac and concrete hardstanding fronting Lower Dock Street is a large steel-framed warehouse building occupied by Anglo-Welsh Timber and Gwent Tiles. A number of garages occupy the area at the junction of Lower Dock Street and South Market Street. Original stone walls form the boundary between this part of the site and John Street and also the boundary with the garages.
- 2.4 The west extension of the site between Albert Street and Tredegar Street is occupied by the Gwent Community Health NHS Trust Clinic; a single storey building of recent construction.
- 2.5 The study area also takes in a 19th-century two-storey former residential building occupied by Market Motors at the junction of John Street and East Market Street.
- 2.6 The large triangular-shaped site on the eastern side of Lower Dock Street is laid to grass (**Plate 2**).
- 2.7 The whole of the study area lies at about 9.1m above Ordnance Datum and is underlain by Marine or Estuarine Alluvium of recent age over Lower Old Red Sandstone (British Geological Survey). The alluvium is likely to comprise soft and very soft clays and silts with sandy interbeds and, possibly, some peat horizons.
- 2.8 One building within the study area is Listed Grade II providing it with statutory protection. That lies within the cattle market and backs on to South Market Street.
- 2.9 Part of the site lies within the Lower Dock Street Conservation Area and Newport County Borough Council are considering extending the Conservation Area to include the Cattle Market site.
- 2.10 There are no Scheduled Ancient Monuments within the study area.

### 3. ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

#### Prehistoric

- 3.1 The study area forms part of the Gwent Levels which were created through gradual sediment deposition on the banks of the River Severn during the post-glacial rise in sea level. The resulting coastal plain is the largest reclaimed wetland in Wales lying between 4.5 and 6.1m aOD, rising to 6.7m or more towards the coast. Before the dumping of material during the 19th century led to the raising of the study area by up to three metres, this whole area lay below the level of the highest tides which at present are between about 6.2 and 6.4m aOD. Without the construction of sea-walls the Levels would have been frequently inundated. (Rippon 1996, 3-5).
- 3.2 Soils on the Levels are mostly of the 'Wentlooge Series' now renamed the 'Newchurch 2 Series'. Generally, they consist of brownish-grey, moderately friable silty clays, becoming more grey in colour and heavier in texture with depth.
- 3.3 Recent archaeological work has shown that the Levels have particularly rich buried archaeology both in the intertidal zone and inland of the sea-wall. The results of this work have been published primarily in Rippon 1996, Rippon 1997 and the annual SELRC reports. Over most of the Levels, prehistoric and Roman deposits are sealed by post-Roman alluvium, the Roman mean sea level being 1.6 to 1.7m lower than today. Even the most advanced methods of non-interventional (i.e. non-excavational) archaeological prospection cannot identify such sites without excavation (Rippon 1996, 6).

#### Roman

- 3.4 It was during the Roman period that the first efforts were made to drain the Gwent Levels. The construction of a sea-wall need not have been on the same scale as that of today, as the Roman sea level was about 1.6 to 1.7m lower. However, an extensive drainage system was dug and tidal gouts were constructed. Evidence of Roman activity has been found to the west and east of the mouth of the River Usk.

#### Dark Age

- 3.5 Many of the wetlands around the Severn Estuary appear to have seen substantial periods of marine inundation in the post-Roman period. This often led to a deposition of *c.*0.5 to 0.7m of alluvium over the Roman ground surface and the creation of a series of meandering tidal creeks.
- 3.6 The area between the rivers Ebbw and Usk, which includes the study area, was known as Mendalgief in the early medieval period. This suggests the possibility of Viking settlement as Mendalgief may be a Scandinavian place-name, derived from 'mynn' (Old Norse for 'river mouth'), 'deild' (Old Norse for 'a share'), and 'gjaev' (Old Danish for 'a flat tongue of land between two watercourses') (Paterson 1920, 42-3).
- 3.7 The remains of a possible Dark Age timber boat were found during the excavation of the Alexandra Dock in Newport. This has recently been radiocarbon dated, the results giving a date range for the construction of the boat of AD 860 to 1180 (Rippon 1996, 37).
- 3.8 It has been suggested that a small trading settlement may have existed near Newport shortly before the Norman Conquest. A documentary source records that English merchants frequently went to the mouth of the River Usk in order to trade implying the presence of a small 11th-century trading station near Newport (Rippon 1996, 37).

#### Medieval

- 3.9 Newport grew up as a settlement around its Norman castle. The study area lies well outside the southern limit of the medieval town boundary in an area of marshland. In the early medieval period, the flooded areas were recolonised. Scattered settlements were established on the higher



coastal land probably in the late 11th/12th centuries. Initially, land was protected from tidal inundation by the sea-wall and protected from freshwater flooding through the establishment of major reens and 'gouts'. Gouts were tidal doors in the sea-wall, allowing fresh water to pass out into the estuary but preventing sea water from entering the drainage system and causing flooding from high tides. Fields were then created through a gradual process of reclamation, with new parcels of land being enclosed as and when new land was required by the population. The fields laid out in the medieval period probably survived into the early modern period and their boundaries may have been generally as those shown on the 19th-century tithe map (**Fig.8**).

- 3.10 No finds of medieval date have been made in the vicinity of the study area. However, the discovery this year of the remains of a medieval ship on the west bank of the Usk 800m upstream of the study area have raised awareness of the possibility that such remains could also lie below the study area, in particular within the inlet known as Jack's Pill.
- 3.11 The 15th-century wooden vessel found during the construction of Newport's Theatre and Arts Centre is of international importance. The remains are of an ocean-going vessel up to 25m long. It lies within a former tidal inlet on the west bank of the Usk beside the original harbour and near to the castle. The ship's hull and timbers are extremely well-preserved as are the surviving contents of the vessel, including timber bowls, leather shoes, woollen clothing, rope and rigging. An attempt is to be made to lift and conserve the boat at considerable cost. This discovery complements finds of ancient boats from the Gwent Levels including a Roman boat from Magor and an earlier medieval boat found in the eroding foreshore at Magor Pill. The Glamorgan-Gwent Archaeological Trust, who are excavating the ship, consider that this new find confirms this area of south-east Wales as the most prolific source of such early maritime discoveries in Britain (information from GGAT web site). It should be noted that the remains of the ship lie only a few metres behind the present river-wall.
- 3.12 A number of maps dating to the 18th and early 19th centuries have been examined to try to establish the extent and course of the creek running from Jack's Pill through the study area before building development changed the landscape completely after about 1840. The early course of the creek is not recorded but it seems unlikely that it was altered a great deal once drainage and land reclamation took place in the medieval period. At that time the creek would almost certainly have been embanked and a gout constructed across its mouth to prevent ingress by tidal waters. Such a gout in the sea-wall would have prevented ships passing beyond the part of the pill which still remained tidal.
- 3.13 A late 18<sup>th</sup>-century map by John Cary shows a number of tidal creeks draining into the River Usk downstream from Newport. Although the accuracy of such early maps is open to question, Cary's maps are considered remarkable for their accuracy (Tooley 1978, 71). The map certainly shows a creek extending quite a distance inland from a point which would correspond with the general location of Jack's Pill (**Fig.2**). This is confirmed by a 1785 War Office map of Monmouthshire which also shows a creek running inland from Jack's Pill (**Fig.3**; PRO WO 78/5698).
- 3.14 The course and extent of the Jack's Pill creek is represented in greater detail on an 1834 map entitled 'A Plan of an Intended Floating Dock with Water Courses, Roads and other works communicating therewith ...' and drawn by the surveyor, T. Morris (**Fig.4**; GRO Q/P & BR 60). This shows the creek known as Mountjoy Reen, apparently taking the form of a drainage channel, running approximately south-west from Jack's Pill before turning towards the north-west close to Commercial Road. This would take the channel across the very south end of the triangular-shaped portion of the study area between Usk Way and Lower Dock Street. However, it would take it to the south of that part of the study area occupying the Cattle Market between South Market Street and Ruperra Street.

- 3.15 A detailed map of the sea-walls and reens on the Wentloog Level was prepared by T. Morris in 1831 (**Fig.5**; GRO D1365.2). This shows that, in addition to the Mountjoy Reen depicted on the 1834 survey, a further drainage channel ran roughly north-east from the Mountjoy Reen to the west of what was later to become Lower Dock Street. The latter channel probably ran approximately on the line of the mid 19th-century East Market Street.

#### **Post-Medieval and Early Modern**

- 3.16 The study area remained as agricultural land until the 19th century. It was the discovery in the latter half of the 18th century of mineral wealth in the hills to the north of Newport that transformed the town and the low-lying land between the town and the mouth of the Usk.
- 3.17 The Monmouthshire Canal Act of 1797 made provision for the extension of the canal from its terminus at Newport to Protheroe's Wharf at Pillgwenlly and this work was completed in 1808. The canal is shown on a 'Plan of the Extension of the Monmouthshire Canal below the Town of Newport ...' prepared in 1805 by the engineer, John Hodgkinson (**Fig.6**; GRO Q/P & BR 6). Davies (1998, 107) states that the crossing point of the canal over Jack's Pill required the pill to be culverted and partly filled and that the pill 'penetrated a lot further inland [than the Town Pill] ... as far as Commercial Road'.
- 3.18 In 1807 Sir Charles Morgan granted a lease on 200 acres of land, including the study area, to Samuel Homfray, Rowley Lascelles, Richard Fothergill and himself together trading as The Tredegar Wharf Company (Davis 1891, 7). This company transformed the wharves at Pillgwenlly for the shipment of coal and iron. It also began the development of the agricultural and marsh land between the southern edge of Newport and Pillgwenlly. Between 1807 and 1810 Commercial Road was laid out on a causeway but initially there was not a single house between the Salutation Inn and Pillgwenlly, the land on either side being low, wet meadows (Knight 1983, 56).
- 3.19 Maps of the area produced in 1829 by Thomas Morris (**Fig.7**; Davis 1891) and in 1832 by Robert Dawson (**Fig.8**; GRO Misc Mss 980) reflect the undeveloped nature of the study area at that time. However, by 1832 a few houses had been built along Commercial Road and a long 'Ropery' or rope walk for manufacturing ropes had been established to the north-west of the canal. The rope walk also appears to have been depicted on the tithe map of c.1841 although at that time it was not named as such. The rope walk lay within the study area between Lower Dock Street and Usk Way. In the 1820s the area of Jack's Pill between the canal and the river became a dock with the construction of wharves while to its south a dry (or 'graving') dock was built (**Fig.9**; GRO D2464.5). A detailed survey of the mouth of the River Usk including Jack's Pill was carried out on behalf of the War Office in 1827 (**Fig.10**; PRO WO 78/5698).
- 3.20 The construction of the Town Dock began in 1835 and it is believed that the material derived from the excavation work helped to reclaim much of the low-lying land around Pillgwenlly. Another method used for raising the level of the land, particularly within the study area, was the dumping of ballast brought in by ships either as whole or part cargoes. This ballast-tipping must have started after the 1834 map was surveyed (**Fig.4**) but before the production of the tithe map c.1841 (**Fig.11**).
- 3.21 The Newport (St Woolos) tithe map is undated but the accompanying tithe apportionment is dated 1841 (**Fig.11**; GRO D917.11 & A110.C65). The following extracts from the tithe apportionment relate to the study area:

Plot No.	Owner	Occupier	Land Use
505	Tredegar Company	Wharf David Davies	Pasture
506	Tredegar Company	Wharf Tredegar Wharf Company	Building Ground
507	Tredegar Company	Wharf Tredegar Wharf Company	Building Ground
508	Tredegar Company	Wharf Tredegar Wharf Company	Building Ground
509	Tredegar Company	Wharf Patrick Powell	Pasture
510	Tredegar Company	Wharf Patrick Powell	Pasture
510a	Tredegar Company	Wharf Patrick Powell	Pasture
511	Tredegar Company	Wharf Patrick Powell	Pasture
512	Tredegar Company	Wharf Patrick Powell	Pasture
513	Tredegar Company	Wharf David Davies	Pasture
513a	Tredegar Company	Wharf Thomas Hartshorn	House & Gardens
514	Tredegar Company	Wharf David Davies	Pasture
515	Tredegar Company	Wharf William Edward	Pasture
515a	Tredegar Company	Wharf Patrick Powell	Ballast Ground
516	Tredegar Company	Wharf Morgan Evans	Pasture
516a	Tredegar Company	Wharf Patrick Powell	Ballast Ground
517	Tredegar Company	Wharf William Gwilliam	Yard
688	Tredegar Company	Wharf David Davies	Ballast Ground
689	John Jones	In Hand	Ballast Ground
690	Tredegar Company	Wharf David Davies	Part of Dock Street
690a	Tredegar Company	Wharf David Davies	Part of Dock Street
691	John Jones	In Hand	Ballast & Building Ground

The title map shows that part of Dock Street had been laid out parallel to the rope walk but a large part of the area was either described as pasture or 'ballast ground'. The ballast ground covered an irregularly shaped area to the west of Jack's Pill and may represent the back-filling of particularly marshy ground along the course of the Mountjoy Reen running inland from the pill and the drainage channel running north-east from the Mountjoy Reen. The area of the ballast ground is outlined on **Fig.12** and a survey carried out in 1885 refers to the sea-wall from the Alexandra Docks to Jack's Pill being destroyed 'it now being covered (and also the land adjoining) with Ballast to the height of several feet above Tide Level' (GRO D2282.5). Some areas of building ground are shown close to Commercial Road.

3.22 A plan of 1843 suggested the diversion of the Mountjoy Reen to form a straight east/west channel (**Fig.13**; GRO D695.360). It is unlikely that this diversion was ever put into practice as in 1843 a start was made on building the Cattle Market to the east of Commercial Road. The

site of the 19th-century market lies completely within the study area. It is said that the land had to be raised by up to 3m above flood level for the construction of the market. It was built by Sir Charles Morgan and the Tredegar Wharf Company at their own expense and opened in 1844. It was described at that time as having an area of four acres and accommodation for 1,500 horses and cattle, 2,000 sheep and 500 pigs, with 1,300 feet of shed accommodation (Knight 1983, 85). It was the second largest livestock market in the country. The market took the form of a quadrangle with single storey sheds enclosing three sides of an open court

- 3.23 The First Edition Ordnance Survey map of 1884 shows that housing and commercial development had taken place around the Cattle Market. The study area between East Market Street and Lower Dock Street was occupied by houses, public houses, a post office and a brewery. Windmill Street linked John Street and South Market Street. The portion of the study area between Lower Dock Street and Usk Way formed part of the Great Western Railway goods depot, formerly the site of the Western Valleys Railway Station which had closed in 1880.

#### **Modern**

- 3.24 By the early 20th century the brewery between East Market Street and Windmill Street had expanded to occupy most of that plot of land. The rest of the study area remained unchanged well into the second half of the 20th century. By 1967 the brewery had expanded again to take in the whole of the area from the Cattle Market to Lower Dock Street, Windmill Street having disappeared. The railway goods depot had closed and become a coal distribution depot and much of the railway infrastructure had been dismantled.
- 3.25 Since 1967 the brewery, the coal distribution depot and the last of the railway lines have been removed. The A4042 Usk Way had also been built along the eastern boundary of the study area.

#### 4. CONSERVATION AREA AND LISTED BUILDING STATUS

- 4.1 The Lower Dock Street Conservation Area was designated in June 1995 (NCBC undated). It includes the block of buildings bounded by Ruperra Street, Lower Dock Street, John Street and East Market Street. The south-west corner of this group of buildings lies within the study area and includes a two storey mid 19th-century residential property currently occupied by Market Motors (**Plate 3**). The demolition of this building is apparently required to improve the existing tight corner at the junction between John Street and East Market Street.
- 4.2 An Appraisal of the Lower Dock Street Conservation Area has recently been undertaken with the intention of extending its boundaries and making various improvements to 'enhance the vitality of the Conservation Area and the quality of life of residents' (NCBC undated).
- 4.3 The Appraisal suggests that the Conservation Area boundaries be extended to include what is termed 'The Tredegar Market Quarter': that is the Cattle Market, Ruperra Street, West Market Street, South Market Street and Dolphin Street. This would take in a large portion of the proposed development area.
- 4.4 Attention is drawn in the Appraisal to a number of remaining architectural fragments of the original market:
- 4.4.1. The northern boundary fronting Ruperra Street comprises an ashlar wall topped with cast-iron railings. The wall and railings remain substantially intact 'and serve to illustrate the quality of the original development' (**Plate 4**).
- 4.4.2 A much-modified fragment of the eastern single storey range of buildings within the market survives in the north-east corner (**Plate 5**).
- 4.4.3 The southern range backing on to South Market Street, although fragmentary, retains its original character and one building is Listed Grade II. It comprises a single storey, metal-framed shed with masonry walls faced in ashlar with pediments on the return elevation. It currently has a corrugated iron pitched roof. The metal frame, presumably cast-iron, is an interesting design with circular motifs at each gable end (**Plates 6 & 7**).
- 4.5 The central sections of both West Market Street and East Market Street have been removed by later development and this has significantly damaged the setting of the market and the historic morphology of the locality by divorcing the residential streets to the north and south from one another. The Appraisal states that 'whilst post-war development has taken place across the former route of West Market Street, there is no physical obstruction across the route of the missing section of East Market Street. Every effort should be given to reinstating the integrity of both sections of highway, if the opportunity arises'.
- 4.6 Nos. 86/87, 89 and 90 Lower Dock Street (between Dolphin Street and South Market Street) and nos. 104 and 106/107 Lower Dock Street (between John Street and Ruperra Street) are described in the Sites and Monuments Record as 'Locally Listed'.

## 5. GEOTECHNICAL DATA

- 5.1 Geotechnical data was obtained from the British Geological Survey and Newport County Borough Council.
- 5.2 The full report from the British Geological Survey is attached as Appendix 2. Data sets for the study area and its immediate environs are shown on the Borehole Location Map on page 2 of the Geoscience Data List, referenced as 1, 75, 76 and 218, all from boreholes on the Cattle Market site to the west of Lower Dock Street.
- 5.3 Copies of the data for the above could be obtained from the British Geological Survey.
- 5.4 Data from Newport County Borough Council is relates to the area east of Lower Dock Street and is attached as Appendix 3. The boreholes most relevant to the depths at which archaeology might be encountered are boreholes 2 and 6, close to the former line of Jack's Pill. The depth of made ground, including coal, brick, glass and wood, was c.4 metres at borehole 2, c.3.4 to 4 metres at borehole 6.
- 5.5 The recently discovered medieval ship found closer to Newport Bridge was at 3.5 to 5.5 metres OD. The uppermost part of a ship lying at a similar depth in Jack's Pill would be c.4 metres below the present ground surface.

## 6. CONCLUSIONS

- 6.1 The study area originally formed part of the Gwent Levels where prehistoric and Roman archaeology has been found both in the intertidal zone and inland of the sea-wall. A number of archaeological discoveries dating from the Mesolithic to the late Roman periods have been made in recent years on the Levels to the west and east of the study area. It is possible that similar remains lie below the study area.
- 6.2 The area between the rivers Ebbw and Usk was known as Mendalgief in the early medieval period and it is possible that this place name has Scandinavian origins suggesting a Viking settlement in the vicinity. It has been suggested that a small trading settlement existed at the mouth of the Usk at least shortly before the Norman Conquest. The remains of a possible Dark Age timber boat, recently radiocarbon dated, were found during the construction of the Alexandra Dock to the south of the study area.
- 6.3 The study area lies well outside the medieval town of Newport. It seems likely that reclamation of the low lying area took place during the medieval period with the construction of drainage ditches and the laying out of fields for pasture. The tidal creek leading inland from Jack's Pill was probably embanked and used for drainage into the River Usk where its mouth would have been gouted to prevent tidal waters flooding inland.
- 6.4 The medieval course of the creek leading inland from Jack's Pill is not known but it probably followed the general line of the Mountjoy Reen shown on maps of 1831 and 1834, when it extended beyond the line of the present Commercial Road. If that is the case then the back-filled creek would lie below the most southerly end of the portion of the study area between Lower Dock Street and Usk Way but further west would lie outside the area of the Cattle Market. A drainage channel running roughly north-east from the Mountjoy Reen probably followed the line of what is now East Market Street
- 6.5 A medieval ship was found earlier this year on the site of Newport's new Theatre and Arts Centre, just a few metres from the present Usk waterfront. It is possible that the remains of vessels of any age, but particularly those of medieval and later periods, may have been beached anywhere on the Usk foreshore or in tidal creeks running inland from the river. No documentary record of such abandoned hulks is likely to exist so there is no means of pinpointing their positions. Gouts or tidal gates in the sea wall would have prevented medieval or later vessels progressing beyond the remaining tidal portions of the pills.
- 6.6 The study area remained unoccupied until the mid 19th century when the mineral wealth discovered in the hills to the north of Newport led to an expansion of the town and its docks. The Monmouthshire Canal was extended to the east of the study area in the early 1800s and land including the study area was leased to the Tredegar Wharf Company in 1807. Commercial Road was laid out but remained largely undeveloped. The low lying area to the west of Jack's Pill was infilled with ballast and other materials to a depth of around three metres before construction work commenced on the Cattle Market in 1843.
- 6.7 One of the original buildings of the Cattle Market, fronting South Market Street, is Listed Grade II. Mid 19th-century houses on the corner of John Street and East Cattle Market Street lie within the Lower Dock Street Conservation Area. It is Newport County Borough Council's intention to extend the Conservation Area to include the Cattle Market and adjoining streets. Some surviving features of the Cattle Market are mentioned in a recent Appraisal of the Conservation Area of being of architectural significance.

- 6.8 The area between the Cattle Market and Lower Dock Street was developed for housing in the 19th-century although a brewery established between East Market Street and Windmill Street gradually expanded to take in some of the housing. That part of the study area between Lower Dock Street and Usk Way was the site of the Western Valleys Railway Station which was superceded by the Great Western Railways goods depot and, later, a coal distribution depot.
- 6.9 While the Cattle Market remains most of the study area is now open land occupied by a number of small buildings and the premises of Anglo-Welsh Timber.



## 7. CONTRACTOR'S ADVICE

- 7.1 There is the possibility of evidence of prehistoric or Roman settlement lying below the study area, or that the remains of a boat pre-dating the medieval period may exist in an unrecorded channel leading into the River Usk.
- 7.2 It is thought unlikely that a medieval or later vessel could have penetrated as far inland as the study area. Its passage up the creek above Jack's Pill would almost certainly have been barred by a tidal gate in a sea-wall that would have been established as part of the process of land reclamation in the medieval period.
- 7.3 The most archaeologically sensitive part of the proposed development is that over and close to the former line of Jack's Pill. The only development proposed for this area is for a new petrol station. The next stage in the planning process might normally take the form of an archaeological evaluation by trial trenching. However the presence of approximately four metres of made ground over the early nineteenth-century ground surface would make such an exercise extremely difficult and the results would not necessarily be at all conclusive. If excavation for petrol tanks extends to a depth exceeding 4 metres an archaeological watching brief of the excavations in progress may be the most appropriate means by which to ensure that preservation of any archaeology is ensured, either by record or by preservation.
- 7.4 It has been accepted that digging trenches through the upper alluvium in search of archaeological features, or recognisable topographic units, is an expensive, disruptive and time-consuming business (Locock 2001, 139). The necessity of stepping-out the sides of deep trenches for safety reasons means that large areas and considerable quantities of spoil have to be excavated and this is particularly pertinent in the present circumstances where any archaeology would lie at depths of over four metres, taking into account the build up of alluvium and the 19<sup>th</sup>-century made ground. Trial trenching on this scale also creates potential soft-spots under proposed buildings which could lead to construction problems.
- 7.5 It is possible that planning permission could be sought with the archaeology being dealt with under a planning condition that would allow for a programme of archaeological recording such as an intensive watching brief and/or excavation, if during the development process archaeology is found to be present on the site. The curatorial section of Glamorgan-Gwent Archaeological Trust will advise on appropriate mitigation measures that would need to be put in place such as preservation by record (excavation) or preservation in-situ.
- 7.6 It should be noted that if a significant archaeological find was made which required total excavation, for example a boat, then there could be considerable disruption to construction programmes with serious financial implications.
- 7.7 One building within the study area is protected by Listed Building status. Development close to that building may not be permitted or may be subject to constraints on height, bulk and types of material used.
- 7.8 Part of the study area lies within the Lower Dock Street Conservation Area. Demolition of a building within that area will require Conservation Area consent and may be resisted. In the event of demolition being agreed a detailed record of the building will be required.
- 7.9 Some parts of the Cattle Market have been noted as being of architectural interest. The planners may wish these to be retained if possible.

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D2464.5 – Conveyance, John Jones to The Newport Dock Company, 1837  
D4039.14 – Plan of Newport Dock, 1859  
D917.11 – St Woolos, Newport, tithe map, c.1841  
A110.C65 – St Woolos, Newport, tithe apportionment, 1841

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Scale 1:2500, 1902  
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Scale 1:2500, 1967

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## APPENDIX 1: Extract from Planning Policy Wales, revised March 2002

### *Section 6.5: Development control and the historic environment*

#### *Archaeological remains*

- 6.5.1 The desirability of preserving an ancient monument and its setting is a material consideration in determining a planning application, whether that monument is scheduled or unscheduled. Where nationally important **archaeological remains**, whether scheduled or not, and their settings are likely to be affected by proposed development, there should be a presumption in favour of their physical preservation in situ. In cases involving lesser archaeological remains, local planning authorities will need to weigh the relative importance of archaeology against other factors, including the need for the proposed development.
- 6.5.2 The needs of archaeology and development can be reconciled, and potential conflict very much reduced, if developers discuss their proposals for development with the local planning authority at an early stage. Archaeological assessments commissioned by developers (sometimes as part of a wider Environmental Impact Assessment) can help to provide information on the archaeological sensitivity of a site before submitting a planning application. If important remains are thought to exist at a development site, the planning authority should request the prospective developer to arrange for an archaeological field evaluation to be carried out before any decision on the planning application is taken. The results of any assessment and/or field evaluation should be provided as part of a planning application. If this information is not provided, authorities should consider whether it is appropriate to direct the applicant to supply further information, or whether to refuse permission for inadequately documented proposals.
- 6.5.3 Where local planning authorities decide that physical preservation in situ of archaeological remains is not justified in the circumstances of the case, and that development resulting in the destruction of the archaeological remains should proceed, before granting planning permission the authority needs to be satisfied that the developer has made appropriate and satisfactory provision for the archaeological investigation and subsequent recording of the remains and the publication of the results. Archaeological investigations should be carried out before development commences, working to a project brief prepared by the planning authority.
- 6.5.4 Local planning authorities may impose conditions to protect a monument and require that an archaeological watching brief is carried out. In order to secure the provision of an appropriate archaeological investigation and subsequent recording of remains, a negative condition may be imposed prohibiting the carrying out of development until such time as works or other action (for example, an excavation) have been carried out by a third party.
- 6.5.5 Archaeological remains may only become apparent when development has commenced. Where such remains are deemed by the Assembly to be of national importance, the remains may be scheduled. In these circumstances, developers would need to seek separate Scheduled Monument Consent before continuing work. The local planning authority or the Assembly may revoke planning consent if deemed necessary.

## **APPENDIX 2: GEOLOGICAL SURVEY REPORT**

SITE APPRAISAL

Site Name	Depth (m)	Stratum	Past land uses	Adjacent land uses	Site Conditions	Physical constraints	Source Data
George Street (A1)	<p>GL (pre recent site clearance works) - 2.4/3.8</p> <p>2.4/3.8 - 10.8/16.</p> <p>10.8/16.8 - 10.8/&gt;21.0</p> <p>10.8/&gt;21.0</p>	<p><b>MADE GROUND.</b> Loose to medium dense grey brown silty SAND with many gravels occasional cobbles including coal, brick, glass and wood</p> <p>Firm becoming soft and very soft grey brown becoming grey silty CLAY with pockets and occasional layers of peat. Commonly below 9m. Loose sand strata are also present in some areas below 10m. ALLUVIUM [May be thinner in N and NE parts]</p> <p>Dense becoming very dense brown/ired brown silty clayey SANDS and GRAVELS</p> <p>Interbedded Stiff silty CLAY (weathered mudstone) and SANDSTONE</p> <p>Of particular interest are the marked stratigraphic changes across the site. There appears to be a spur of bedrock coming in from the north trending to the south with the bedrock elevation shelving rapidly to east and west. Rapid changes as much as 10m in 50m.</p> <p>Groundwater encountered as seepages at base of fill materials. Sub artesian pressures in gravels.</p>	<p>Goods depot</p> <p>Post Office</p> <p>Railway sidings</p> <p>Coal distribution depot</p> <p>Bus depot</p> <p>Scrapyard in SE corner.</p>	<p>Housing</p> <p>Infilled canal</p>	<p>Open rough ground. Recent reclamation works have removed over site slabs and footings.</p>	<p>Ground raising by 1m may be required.</p> <p>Deep sewer (segmental tunnel?) with connections from central Newport with associated protection easement for new foundations located almost centrally through site.</p> <p>3No. higher level masonry or brick egg shaped tunnel sewers trending across the site.</p>	<p>Integral Géotechnique (1994)</p> <p>Soil Mechanics (1996)</p>

PRELIMINARY CONTAMINATION ASSESSMENT

Site Name	Historical potential						Ground Contamination and Remediation Measures		Ground Gas and Precautionary Measures	
	TI	TO	C/I	Gas	As	C/F	P	Soil Contamination	Groundwater contamination	Gas regime
George Street (A1)	✓	✓		✓	✓	✓	✓	No results available Potential for spontaneous combustion due to coal waste in made ground strata	No results available Presence of hot spot contamination cannot be ruled out. Groundwater contamination probably consistent with leaching from the made ground materials and the historical context of the site.	No results available Inferred Based on the available desk study information, it is possible that the site could be affected by methane and/or carbon dioxide and, as such it is likely to be classed as gas 'characteristic situation 2' given and listed in Table 4 of the Wilson & Card 1999. Reliability and risk in gas protection design

# OUTLINE REQUIREMENTS FOR SITE REMEDIATION

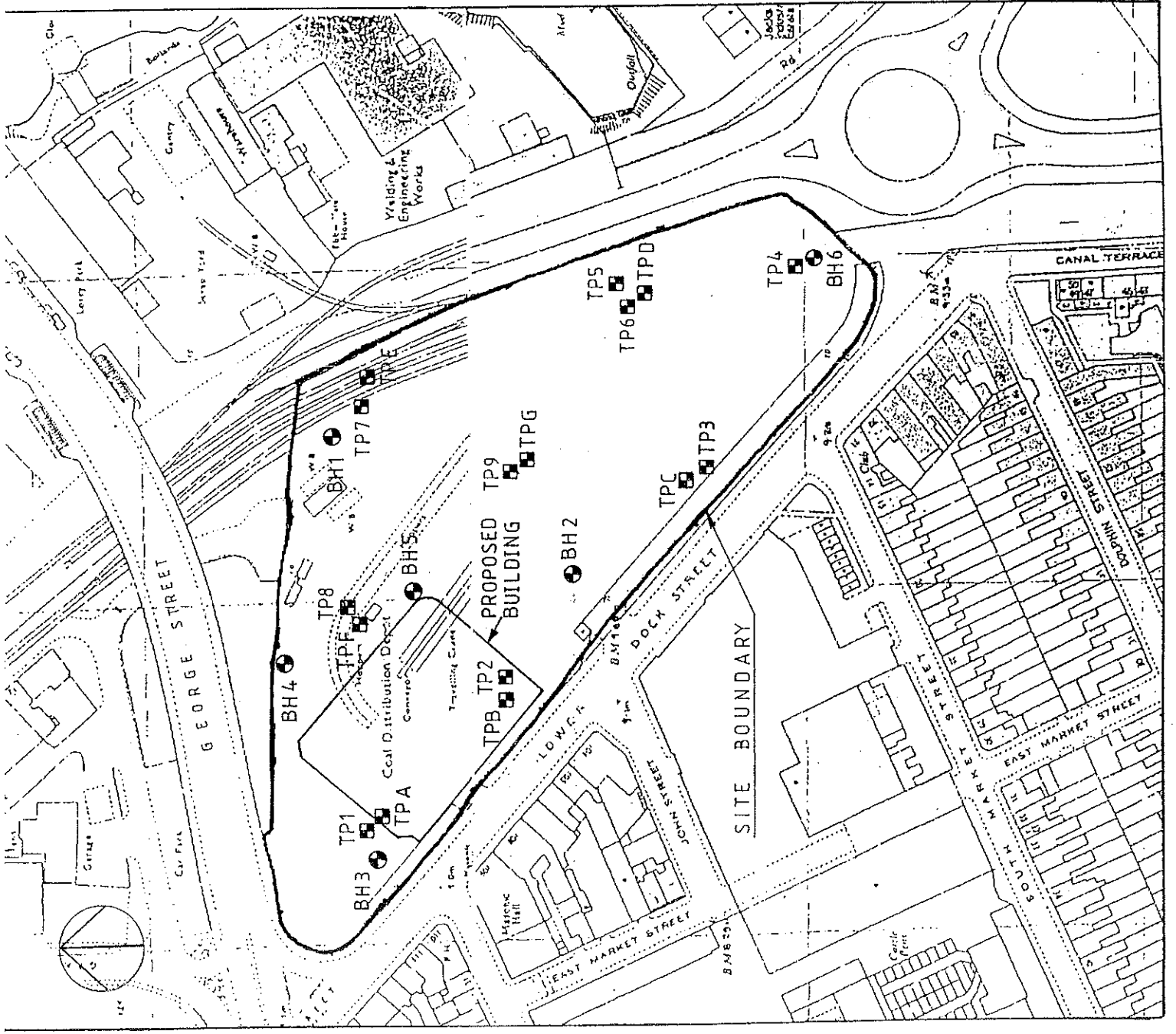
Site Name	Demolition and ground preparation works	Foundations / Floor Slabs	Access roads	Drainage
George Street (A1)	<p>Scale of recent site clearance works not fully determined. Removal of slabs and foundations has been carried out.</p> <p>All underground structures including basements should be removed to a minimum depth of 1.5m from beneath the underside of the formation levels.</p> <p>All concrete and tarmacadam hardstandings should also be removed.</p> <p>All redundant buried services to be removed or grouted up after removal of any contents.</p> <p>The reduced levels should be brought up with well compacted acceptable site excavated or alternatively imported suitable materials. Variable settlement should be expected across the site because of the variable thickness and character of the alluvium. Settlements expected to be short term.</p> <p>Allowances should also be made for the removal of "soft spots/areas" and their replacement with well compacted imported materials as previously described.</p> <p>Allowances should be made for any materials to be removed off site to be taken to a suitably licensed tip.</p> <p>Surveys are required for the integrity and position of the sewers across the site.</p>	<p>At this stage, it is considered that piled foundations are the most likely suitable foundations for the development.</p> <p>Pre-cast or cast in situ concrete driven piles founded within the underlying weathered mudstone bedrock are likely to be the most suitable. Augered or bored piles are also feasible.</p> <p>Pile lengths are likely to vary between typically 17m and 25m.</p> <p>Design allowance for Negative skin friction required.</p> <p>Careful layout design will be required to cater for tunnels and sewers. Allowances should be made for monitoring and dealing with ground induced vibrations from the piling works.</p> <p>Floor slabs should be designed and constructed as suspended.</p>	<p>For the access roads, upon the remediated fill a California Bearing Ratio (CBR) value of typically 5% should be used for design purposes.</p> <p>In addition to the above, a flexible road and car parking construction should be used.</p>	<p>Drainage will be within the remediated fill. As a precautionary measure to deal with the anticipated total and differential movements, allowances should be made for delaying construction as long as possible after filling and steep gradients to prevent backfalls occurring.</p> <p>Flexible joints should be used at the entry point of all underground services into structures</p> <p>Drains should be constructed within clean backfill to protect future maintenance workers and limit the possibility of long term infiltration of contamination into drains</p>



**LEGEND**

- TP1 Location of Trial Pits (1994)
- BH1 Location of Boreholes
- TPA Location of Trial Pits (1995)

Scale - 1 : 1250



# RECORD OF BOREHOLE 2

JOB NO 5745/C  
 MADE BY K.J.N.  
 DATE MADE 20.2.95

DAILY PROGRESS	DEPTH TO WATER	DEPTHS OF CASING	SAMPLES			LEG- END	DEPTH	REDUCED LEVEL	DISCRPTION OF STRATA
			DEPTH		TYPE				
			FROM	TO					
	m	m	m	m		m		GROUND LEVEL	
8.9.94			0.00	1.00	BS			TARMAC over GRAVEL sub-base	
			1.00	1.45	S(7)		0.50	FILL (Loose brown and grey brown silty SAND with many gravels including pieces of brick, timber and glass)	
			3.60	4.00	BS		3.60		
			4.00	4.45	S(8)				
8.9.94								Very soft and soft brown grey becoming grey below 4.7m, silty CLAY with occasional pockets of brown peat from 9.8m to 10.2m	
9.9.94			5.00	5.45	S(2)		5.00		
			6.50	6.95	S(4)				
			8.00	8.45	S(5)				
			9.50	9.95	S(5)				
			11.00	11.45	S(4)				
	11.60								
			12.50	12.95	S(6)				
			14.00	14.45	S(4)				
			14.50	15.10	BS		14.50		
			15.10	15.50	BS		15.10	Soft brown clayey silty PEAT	
			15.50	15.95	S(7)			Loose red brown sandy SILT	
							16.80		
			17.00	17.45	C(15)			Medium dense becoming dense and very dense with depth, SAND and GRAVELS, with occasional cobbles below 17.5m	
9.9.94									
12.9.94									
12.9.94			19.00	19.45	C(49)				
			20.50	20.95	C(114)				
12.9.94		21.00					21.00	END OF BOREHOLE	

- Equipment: Dando 150 Shell and Auger drilling rig.
- Standard/Cone Penetration Test Results: See attached sheet.
- Groundwater Observations: See attached sheet.
- Chiselling:
 

Depth (m)	Time (Hours)
0.80 - 1.30	1.0
20.80 - 21.00	1.5
- Gas monitoring pipe installed to 5.0m depth.

TYPE OF BORING  
 Shell and Auger

DIAMETER OF BORING  
 GL to 21.00m - 200mm

CASING TUBES  
 GL to 21.00m - 200mm

## BOREHOLE 2

JOB NO	5642/C
MADE BY	K.-J.N.
DATE MADE	20.2.95

DAILY PROGRESS	DEPTH TO WATER m	DEPTHS OF CASING m	SAMPLES			LEG-ENO	DEPTH m	REDUCED LEVEL	DESCRIPTION OF STRATA
			DEPTH		TYPE				
			FROM m	TO m					
13.2.95			0.00	1.00	BS			GROUND LEVEL FILL (Loose dark grey brown clayey silty SAND with gravels and cobbles, including pieces of wood, glass, coal, brick and chalk, some pockets of silty clay below 2.0m)	
			1.00	2.00	BS				
			2.00	3.00	BS				
13.2.95		4.00					3.40 4.00	Soft grey silty CLAY	
								END OF BOREHOLE	

**REMARKS**

- Equipment: Dando 150 Shell and Auger drilling rig.
- Groundwater Observations: Dry
- Gas Monitoring pipe installed down to 4.0m depth.

TYPE OF BORING  
Shell and Auger

DIAMETER OF BORING  
GL to 4.00m - 200mm

CASING TUBES  
GL to 4.00m - 200mm

## **APPENDIX 3: GEOSCIENCE DATA LIST**

## Geoscience Data List

This report is designed for users carrying out site assessments who need to know what geoscience information might be held by the BGS for their site.

The report contains index listings of information held in some key BGS databases within the National Geoscience Data Centre (such as boreholes). Users can select records from the lists and request copies from BGS. Note that index data is also accessible through the BGS Internet Geoscience Data Index on the BGS website at [www.bgs.ac.uk](http://www.bgs.ac.uk)

It should be noted that this report is not a comprehensive listing of all BGS data holdings and other data may be available.

### Client's Reference:

Newport/BaRAS

### Location details:

**Area centred at:** 331750,0187450

**Radius of site area:** 1000 metres

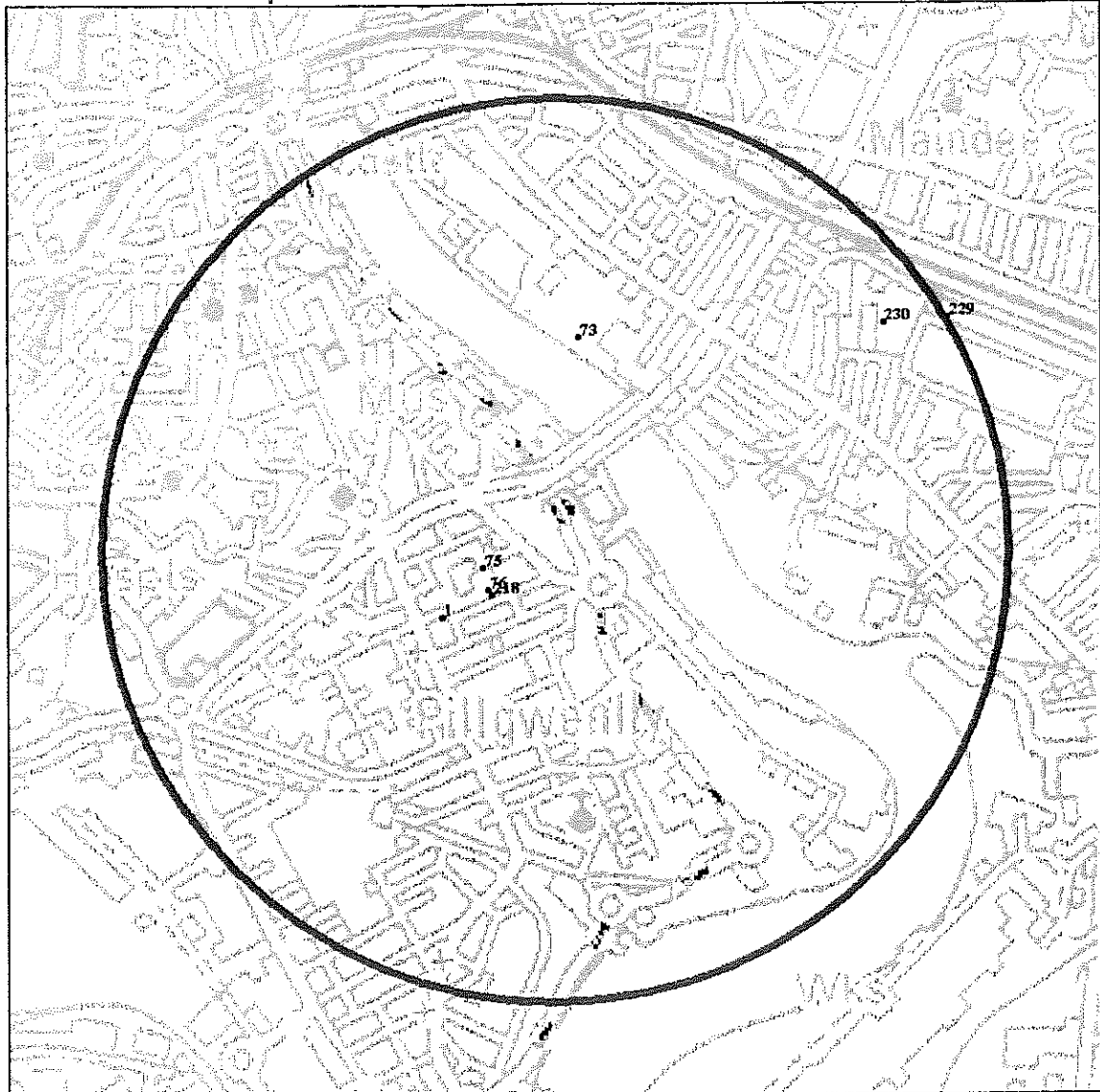
The assessment in this report is carried out for the search area defined above. If the client has submitted a site plan then this will have been used to derive the above location details.

*Geoscience Data List*

**Section 1: List of geological data available in search area**

This section lists the principal data sets held in the National Geoscience Data Centre (NGDC) that are relevant to the search area. Descriptions of the data sets and how to obtain copies of records from them are given in Section 2. The descriptions should be read before requesting any data.

**Borehole location map**



Scale: 1:15506 (1cm = 155m)

**Borehole records**

(A blank Length field indicates the borehole is confidential or no depth has been recorded digitally.)

Total number of records: 7

The 'Office' column shows the office at which the records are held and from where copies can be obtained (see contact details later in the report). KW=Keyworth, MH & MW=Murchison House, WL=Wallingford, EX=Exeter

## Geoscience Data List

Regno	Grid_reference	Name	Length	Office
ST38NW1	ST 31500 87300	NEWPORT TOWN. BH.1,2	9.14	KW
ST38NW73	ST 31800 87920	NEWPORT ELECTRIC POWER STATION		WLKW
ST38NW75	ST 31590 87410	TRIAL PIT AND BORING, CASTLE MARKET, NEWPORT. NO.1	6.45	WLKW
ST38NW76	ST 31600 87360	TRIAL PIT AND BORING, CASTLE MARKET, NEWPORT. NO.2	4.50	KW
ST38NW218	ST 31610 87350	CATTLE MARKET TRIAL NO.2	4.26	WL
ST38NW229	ST 32610 87960	STANDARD TELEPHONES	18.89	WL
ST38NW230	ST 32470 87950	STANDARD TELEPHONES	18.89	WL

### Water Well Records

Total number of records: 5

All these records are registered in the main Borehole Records collections (see Borehole Records Table and map above), and duplicate, or partial duplicate copies may be held at other sites (at Keyworth KW, Exeter EX or Murchison House MH). These represent records that are held in the National Well Record Archive of water wells and boreholes held at Wallingford (WF) or Murchison House (MW). The Well Registration number is used to index records in the National Well Record Archive please quote this if applying for copies of water wells (see contact details later in the report).

Additional index information may be held for the Water Well Records as indicated below, indicating the information that can be found on the well record itself. If fields are blank, then the well record has not been examined and its contents are unknown. A Yes or a No indicates that the well record has been examined and the information as indicated is, or is not, present. This information should help you when requesting copies of Records.

#### KEY:

- Aquifer = The principal aquifer recorded in the borehole
- G = Geological Information present on the log
- C = Borehole construction information present on the log
- W = Water quality information present on the log
- Ch = Water chemistry information present on the log

Well Reg No.	BH Reg No.	Name	Easting	Grid Northing	Depth	Date	Aquifer	G	C	W	Ch
ST38/16	ST38NW 229/BJ	STAND ARD TELEPH ONES	332610	187960	18.90000 0						
ST38/17	ST38NW 230/BJ	STAND ARD TELEPH ONES	332470	187950	18.90000 0						
ST38/2A	ST38NW 75/BJ	CATTLE MARKE T TRIAL NO.1	331590	187410	6.400000						
ST38/2B	ST38NW 218/BJ	CATTLE MARKE T TRIAL NO.2	331610	187350	4.300000						

## Geoscience Data List

Well Reg No.	BH Reg No.	Name	Easting	Grid Northing	Depth	Date	Aquifer	G	C	W	Ch
ST38/8	ST38NW 73/BJ	NEWPORT ELECTRICITY POWER STATION	331800	187920	16.900000	1920					

**There are no records for Boreholes with water level readings in the selected area**

### Locations with aquifer properties

Total number of records: 1

Site_ident	Easting	Northing	Location
AQ_8629	332610	187960	STC NO.1

### Site investigation reports, England and Wales

Total number of records: 13

Number	Title	Registered Numbers
3465	M4 J24-28 NEWPORT BY PASS MONMOUTHSHIRE	ST28NE 1-21, ST38NW 5-56, ST38NE 1-4
3518	NEWPORT (MON) G T C	ST38NW 79
6853	NEWPORT (GWENT) CROWN COURTS	ST38NW 100-110
7514	NASH ROAD NEWPORT MONMOUTHSHIRE	ST38NW 130-133
7921	M4 BRYNGLAS TUNNELS AND A4042 MALPASS ROAD RELIEF SCHEME	ST38NW 134-193 ST39SW 167-237
9034	MAINDEE (NEWPORT) ATE	ST38NW 78
13359	M4 BRYNGLAS TUNNELS AND MALPAS ROAD RELIEF SCHEME	ST38NW 195-197, ST39SW 254-284
14039	PROPOSED RESIDENTIAL DEVELOPMENT BARRACK FIELDS, NEWPORT, MONMOUTHSHIRE	ST38NW 198-202
16680	EXTENSION TO FACTORY, CROMPTON PARKINSON, NEWPORT, MON	ST38NW 68
17517	BT TRANSPORT DEPOT, NEWPORT	
18386	M4 RELIEF ROAD MAGOR TO CASTLETON STAGE 2	
18562	ORB WORKS, STEPHENSON STREET, NEWPORT	ST38NW 203-213
18727	HATHERLEY HEIGHTS, NEWPORT	ST38NW 214-217

### National Grid geological maps (1:10,000 and 1:10,560 scale)

Total number of records: 1

Map	Type	Survey
ST38NW	C	1961

### County Series geological maps (1:10,560 scale)

Total number of records: 12

Map	Type	Published
Monmouthshire28FS	C	
Monmouthshire28SE	C	
Monmouthshire28SE		1892
Monmouthshire29FS	C	
Monmouthshire29SW	C	



## Geoscience Data List

Map	Type	Published
Monmouthshire29SW		1891
Monmouthshire33FS	C	
Monmouthshire33NE	C	
Monmouthshire33NE		1893
Monmouthshire34FS	C	
Monmouthshire34NW	C	
Monmouthshire34NW		1891

### New Series medium scale geological maps (1:50,000 and 1:63360 scale)

Total number of records: 5

Sheet	Title	Type	Survey
249	Newport	S	1961
249	Newport	D	1893
249	Newport	D	1961
249	Newport	S	1893
249	Newport	S	1961

**There are no records for Old Series one inch geological maps (1:63360 scale) in the selected area**

### Geological Memoirs

Total number of records: 1

Title	Date
South Wales coalfield - Part 1 - Newport (Mon.)	1969

**There are no records for Technical reports in the selected area**

**There are no records for Waste sites in the selected area**

**There are no records for Mining plans in the selected area**

## Geoscience Data List

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### Section 2: Descriptions of BGS databases

*Note that this report is not a definitive listing of all data held in BGS.*

#### ***Borehole Records and Water Wells***

Records of boreholes, shafts and wells from all forms of drilling and site investigation work. Some 900,000 records dating back over 200 years and ranging from one to several thousand metres deep. Currently some 50,000 new records are being added to the collection each year.

A small percentage of the borehole records are held commercial-in-confidence for various reasons and cannot be released without the written permission of the originator. If any of the records you need are listed as confidential apply in the normal way. BGS Enquiry Service staff will release the data where this is possible or provide you with the information needed to contact the originator.

Where records are held in more than one office, the contents may differ. Enquiries principally requiring water related information should contact the Wallingford or Edinburgh office.

#### ***Water levels***

These represent a subset of records within the National Well Record Archive of water wells and boreholes where there are either digital or analogue time series of water levels, or where available water level data span multiple years. Time series data are held for approximately 1500 boreholes distributed nationally. Other water level data is available where records have been inspected and digitised. Records are identified by the Well Registration number used for water wells (see above). Please contact our Wallingford office to discuss your specific requirements and to obtain costs.

#### ***Aquifer properties***

These are locations where data on aquifer physical properties (transmissivity, specific yield, storage, porosity or hydraulic conductivity) are held. The data include raw data from field and laboratory investigations, and site-specific summaries of the data. Coverage is limited to aquifers in England and Wales. Records are identified by an aquifer property identifier, which should be quoted when ordering data. This data should be ordered separately, but will normally be provided and charged for as part of the relevant borehole records.

#### ***Site investigation reports***

Additional laboratory and test data may be available in these reports, subject to any copyright and confidentiality conditions. The grid references used are based on an un-refined rectangle and therefore may not be applicable to a specific site. Borehole records in these reports will be individually referenced within the borehole records collection, described above.

#### ***Geological maps***

- **National Grid maps (1:10,000 and 1:10560 scale)** - Since the 1960s the standard large scale map for recording geological information has been the Ordnance Survey (OS) quarter sheet covering a 5km square area. The maps are supplied in different formats depending on their age and the method of reproduction used. Only the latest most up-to-date version is listed.
- **County Series map sheets (1:10,560 scale)** - Maps produced on OS County Series sheets between approximately 1860 and 1960. The list indicates distinct examples of maps from separate surveys or revisions. It is advisable to discuss your requirements before ordering or travelling to view these maps.
- **New Series medium scale maps (1:50,000 and 1:63360 scale)** - Maps at either scale covering the OS New Series one inch map sheet areas used by BGS. Please note that the sheet numbering is not the same as used for current OS 1:50,000 topographic maps.
- **Old Series medium scale one inch maps (1:63,360 scale)** - Early geological mapping covering the OS Old Series one inch map sheet areas. Applies to England and Wales only.

## Geoscience Data List

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While there may be information relevant to your enquiry on older maps, you will generally want the latest edition, and National Grid maps will be preferred to County Series maps, and New Series to Old Series.

### **Memoirs**

Explanatory sheet memoirs describing the geology of the areas covered by either the medium scale (1:50,000 and 1:63,360) map series.

### **Technical reports**

The open file reports listed are mainly from the Onshore Geology Series. These include descriptions of the geology for the National Grid series geological sheets. Please note that the location details in the database are not yet complete so it is possible that not all the relevant reports available will be listed.

### **Waste sites**

Listing of some 3500 waste sites for England and Wales identified by BGS as part of a survey carried out on behalf of the Department of the Environment in 1973. Later information is available from the Environment Agency.

### **Mine Plans**

Plans of various types, principally relating to mining activity and including abandonment plans. For mine plans, the coverage is not comprehensive, but that for Scotland is the most complete. The search includes the collection of Plans of Abandoned Mines (Other than Coal & Oil Shale) for Scotland and the non-coal plans in the BGS Land Survey Plans collection, (mainly Scotland). Microfilm copies of the Plans of Abandoned Mines (Coal & Oil Shale) for Scotland and the Coal Authority's catalogues are available for consultation by prior appointment.

The mine plans listed for the rest of England and Wales (excluding SW England, which is not covered) include working copies, compilations and interpretations which may be copyright or confidential and therefore not be available for purchase. The general nature of some of the plans means that they may not be applicable to a specific site. However, the presence of mining data could indicate that further specialist advice or interpretation is required. Large scale plans produced for site investigations or other purposes are also included for completeness.

## **Section 3: How to access or inspect data**

### **Borehole Records – contact BGS Enquiry Service (see end of section)**

Copies of borehole records can be supplied (order form enclosed) at the flat rate of £13 (+VAT) per log with a minimum charge £26 (+VAT). Normal first class postage within the UK is included. Next day recorded delivery or express parcel dispatch is available on request and charged at cost. Copies of documents can be forwarded by facsimile transmission at an additional charge of £0.50 (+VAT) per A4 sheet. Records with additional detailed geological information derived from BGS examination of borehole material may be charged at the current 'value-added' rate. If you have a need for data with particular geological characteristics, the please contact the enquiries office to discuss your requirements (additional charges may apply).

Alternatively you can make an appointment to visit the relevant enquiry office and examine the records yourself. The Commercial User Ticket (see below) covers inspection of the borehole logs and includes access to a set of relevant documents for one unit area (typically a 5 km x 5 km area). A further charge of £19 (+ VAT) is due for each additional set examined. Data can be freely extracted from the records but any copies requested will be charged as above.

### **Water wells – contact BGS Enquiry Service**

Copies of records can be supplied (order form enclosed) at the flat rate of £13 (+VAT) per log with a minimum charge £26 (+VAT). Normal first class postage within the UK is included. Next day recorded delivery or express parcel dispatch is available on request and charged at cost. Copies of documents

## *Geoscience Data List*

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can be forwarded by facsimile transmission at an additional charge of £0.50 (+VAT) per A4 sheet. If you have a need for data with particular hydrogeological characteristics, then please contact the relevant enquiries office (England and Wales =Wallingford, Scotland=Edinburgh) to discuss your requirements (additional charges may apply).

Alternatively you can make an appointment to visit the relevant enquiry office and examine the records yourself.

Records for England and Wales are held at Wallingford where the visitor charge is £9.50/hour (+VAT, with a minimum charge of £19 (+VAT).

Records for Scotland are held with the borehole records at our Edinburgh office the above Borehole Record charges cover them and apply.

### **BGS Memoirs, maps and open file reports – contact BGS Sales (details below)**

BGS Memoirs, maps and open file reports relevant to your area can be examined in the appropriate BGS Library. Copies can be ordered from our main Sales Desk: Sales Desk, British Geological Survey, Keyworth, Nottingham NG12 5GG Tel: 0115 936 3241, Fax: 0115 936 3488, E-mail: sales@bgs.ac.uk.

Sales Desks are also located in Edinburgh; Tel: 0131 650 0358, Fax: 0131 667 2785, E-mail: scotsales@bgs.ac.uk, and London; Tel: 020 7589 4090, Fax: 020 7584 8270, E-mail: bgs\_london@bgs.ac.uk. BGS London also maintain a reference collection of all BGS publications.

Please check price and P&P before ordering.

### **Waste Sites – contact BGS Enquiry Service**

Copies of register entries, containing a variety of levels of data recording, can be obtained from the BGS Enquiry Service (price on application). The registers can also be inspected by visit (see above)

### **Mine Plans – contact BGS Enquiry Service**

Mine Plans are available for consultation by prior appointment. Copies can also be obtained - price on application.

### **Commercial User Ticket – contact BGS Enquiry Service**

A combined day ticket for commercial visitors to the National Geological Data Centre and the Library is £55 (+VAT) and there is a £33 (+VAT) day ticket for visitors who only wish to use the Library. Frequent visitors can purchase an annual subscription at £275 (+VAT) for access to the NGDC and the Library or £155 (+VAT) for use of the Library only. Further details can be provided on request.

## Geoscience Data List

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### BGS ENQUIRY SERVICE Contact Details:

#### **Keyworth (KW) Office**

*For Borehole and other records (excluding water well records & hydrogeological data) in England & Wales (excluding Northern England, and Devon & Cornwall):*

Records & Data Enquiries  
Sir Kingsley Dunham Centre  
Keyworth  
Nottingham  
NG12 5GG  
Tel: 0115 9363109  
Fax: 01159 363276

#### **Exeter (EX) Office**

*For Borehole and other records (excluding water well records & hydrogeological data) in Devon & Cornwall:*

Records & Data Enquiries  
BGS Exeter Business Centre  
Forde House  
Park Five Business Centre  
Harrier Way  
Sowton  
Exeter  
Devon EX2 7HU  
Tel: 01392 445271  
Fax: 01392 445371

#### **Wallingford (WL) Office**

*For water well records and hydrogeological data (water levels, water chemistry and aquifer properties) in England & Wales:*

Records & Data Enquiries  
British Geological Survey,  
Maclean Building,  
Wallingford,  
Oxford OX10 8BB.  
United Kingdom  
Tel: 01491 838800  
Fax: 01491 692345  
Email: [hydoenq@bgs.ac.uk](mailto:hydoenq@bgs.ac.uk)

#### **Murchison House (MH or MW) Office:**

*For water well records and hydrogeological data for Scotland, and all other records in Scotland & Northern England:*

Records & Data Enquiries  
Murchison House  
West Mains Road  
Edinburg  
EH9 3LA  
Tel: 0131 650 0282  
Fax: 0131 667 2785  
Email: [boreholesnorth@bgs.ac.uk](mailto:boreholesnorth@bgs.ac.uk)

### Section 4: More detailed geological reports available from BGS

This report forms part of a range of reports offered by the BGS Enquiry Service, including reports describing site geology, hydrogeology and geological hazards. For details on these please contact:

BGS Central Enquiries Desk  
British Geological Survey  
Sir Kingsley Dunham Centre  
Keyworth  
Nottingham NG12 5GG  
Tel: 0115 936 3143  
Fax: 0115 936 3136  
Email: [enquiries@bgs.ac.uk](mailto:enquiries@bgs.ac.uk)

Or visit the Enquiry Service pages on the BGS website at [www.bgs.ac.uk](http://www.bgs.ac.uk)

## Geoscience Data List

### Section 5: Terms and Conditions

#### General Terms & Conditions

This report is supplied in accordance with the GeoReports Terms & Conditions available on the BGS website at [www.bgs.ac.uk/georeports](http://www.bgs.ac.uk/georeports) and also available from the BGS Central Enquiries Desk at the above address.

#### Important notes about this report

- Geological observations are made according to the prevailing understanding of the subject at the time. The quality of such observations may be affected by subsequent advances in knowledge, improved methods of interpretation, and better access to sampling locations.
- Raw data may have been transcribed from analogue to digital format, or may have been acquired by means of automated measuring techniques. Although such processes are subjected to quality control to ensure reliability where possible, some raw data may have been processed without human intervention and may in consequence contain undetected errors.
- Detail clearly defined and accurately depicted on large-scale maps may be lost when small-scale maps are derived from them.
- Although samples and records are maintained with all reasonable care, there may be some deterioration in the long term.
- The most appropriate techniques for copying original records are used, but there may be some loss of detail and dimensional distortion when such records are copied.
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- The data, information and related records supplied by BGS should not be taken as a substitute for specialist interpretations, professional advice and/or detailed site investigations. You must seek professional advice before making technical interpretations on the basis of the materials provided.
- If a report or other output is produced for you on the basis of data you have provided to BGS, or your own data input into a BGS system, please do not rely on it as a source of information about other areas or geological features, as the report may omit important details.

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Report issued by: *Christene Thomson*

BGS Enquiries Service

*Geoscience Data List*

## Borehole Records Order Form

<b>Name</b>		<b>Your Ref/Order No.</b>	
<b>Company</b>		<b>Tel:</b>	
<b>Address</b>		<b>Fax</b>	
		<b>Email</b>	
<b>Postcode</b>			

<b>Quarter Sheet</b> (eg. SE50NE)	<b>Number</b> (eg. 21)	<b>Suffix (if given)</b> (eg. A-Z)	<b>Name</b> (eg. Bentley Village Sewer TP 1)

Please note: More than 10 records can be ordered but it is advisable to discuss your requirements first with NGIS staff, as interpreted geological reports are also available.

**RESPONSE TIMES MAY VARY DUE TO CUSTOMER DEMAND AND STAFF AVAILABILITY**

(Please tick required service)

**Standard Service (variable within 5 working days)**

**Premium Service (within 24 working hours, £20 additional charge)**

**Delivery Method Required:** (Please tick) **Post**  **Special Delivery**  **Fax**

Borehole unit price is £13 + VAT, Minimum charge £26 + VAT (includes 1<sup>st</sup> class postage). Special Delivery £3, Faxing costs 50p per faxed sheet. PAYMENT IS REQUESTED BEFORE DATA IS DISPATCHED, ENQUIRY STAFF WILL CONTACT YOU TO CONFIRM COSTS AND ARRANGE PAYMENT METHODS.

Special Requirements or comments:

Please return form to : The Enquiry Service, British Geological Survey, Keyworth, Nottingham. NG12 5GG.  
Tel: 01159363109 Fax: 01159363276 E-mail: enquires@bgs.ac.uk

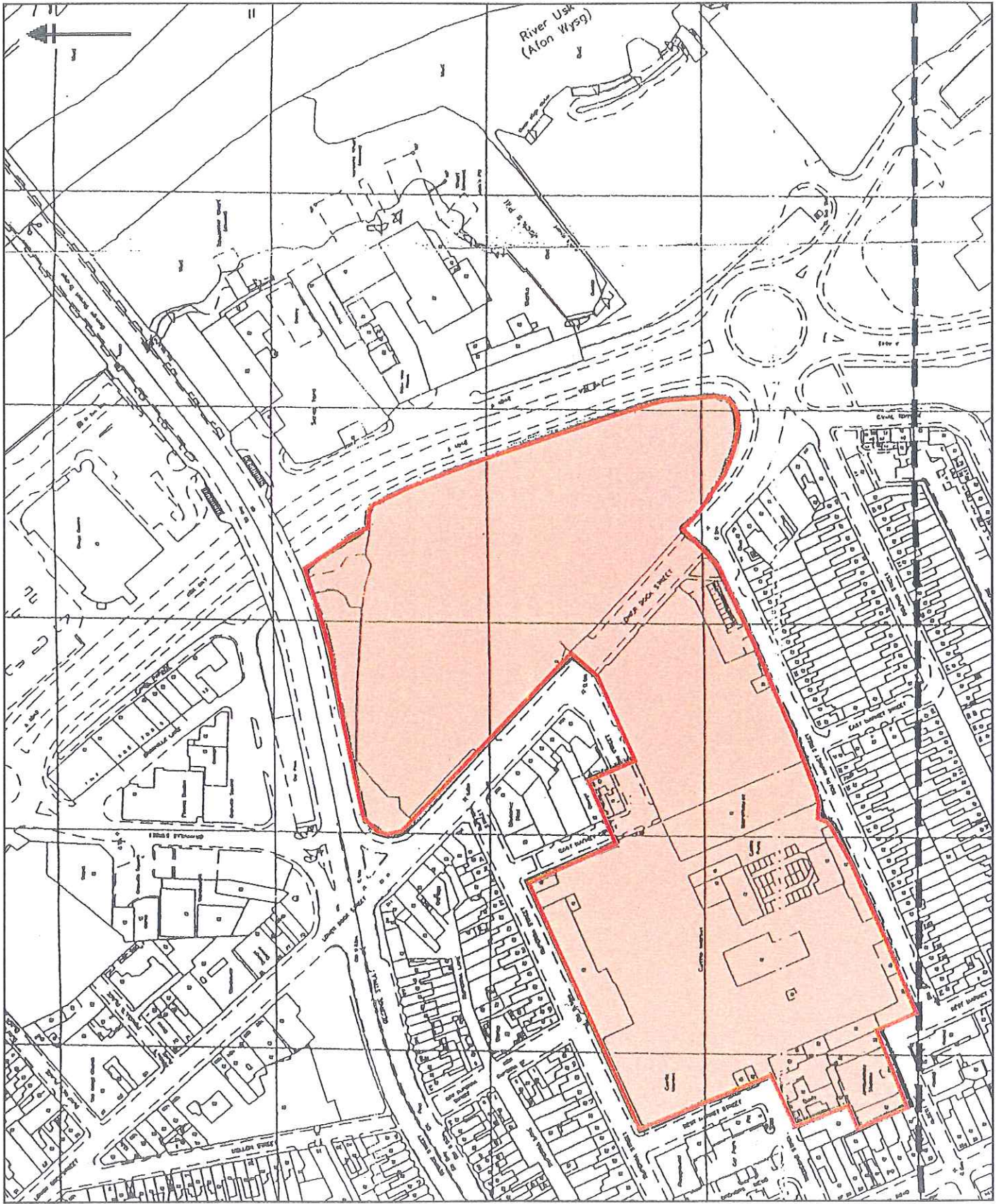


Fig.1 Site location plan, scale 1:2500



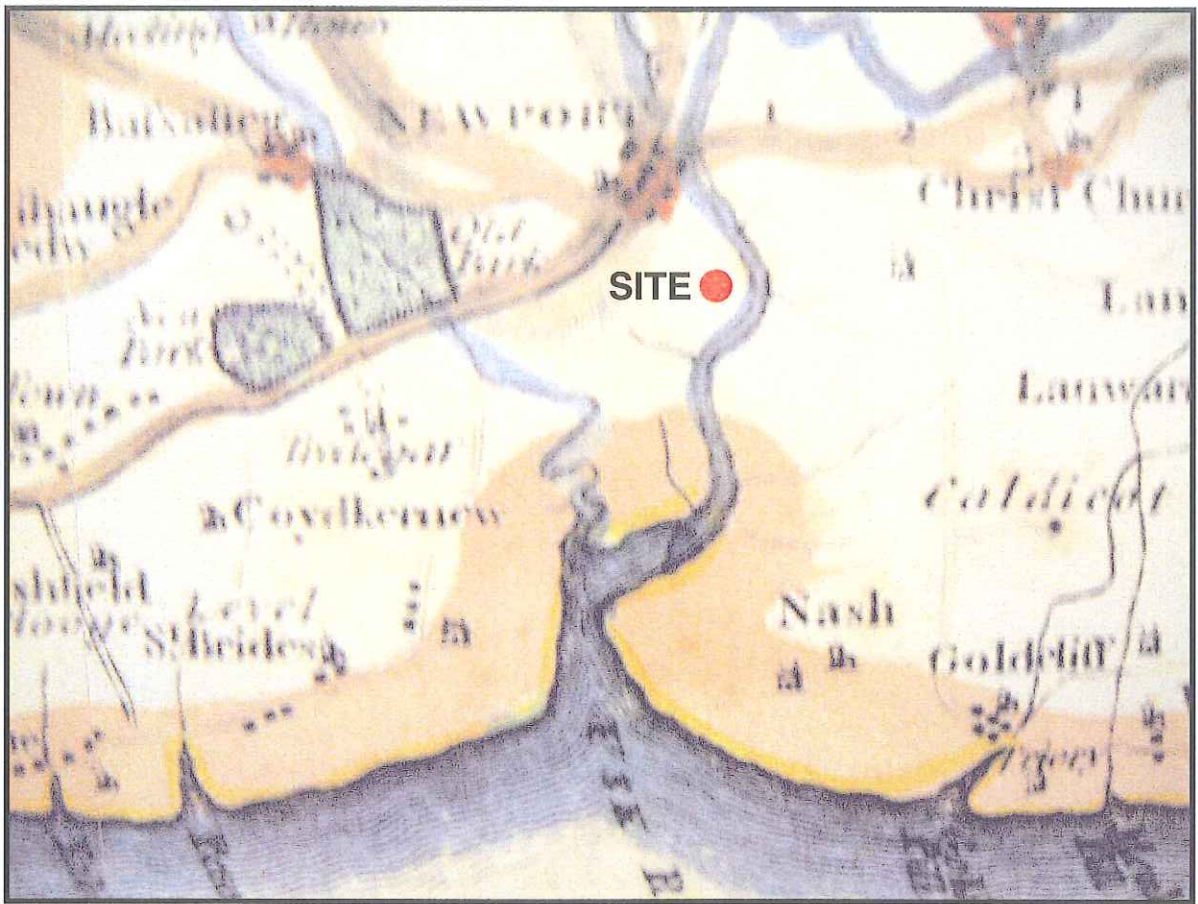


Fig.2 John Cary's 18th-century map

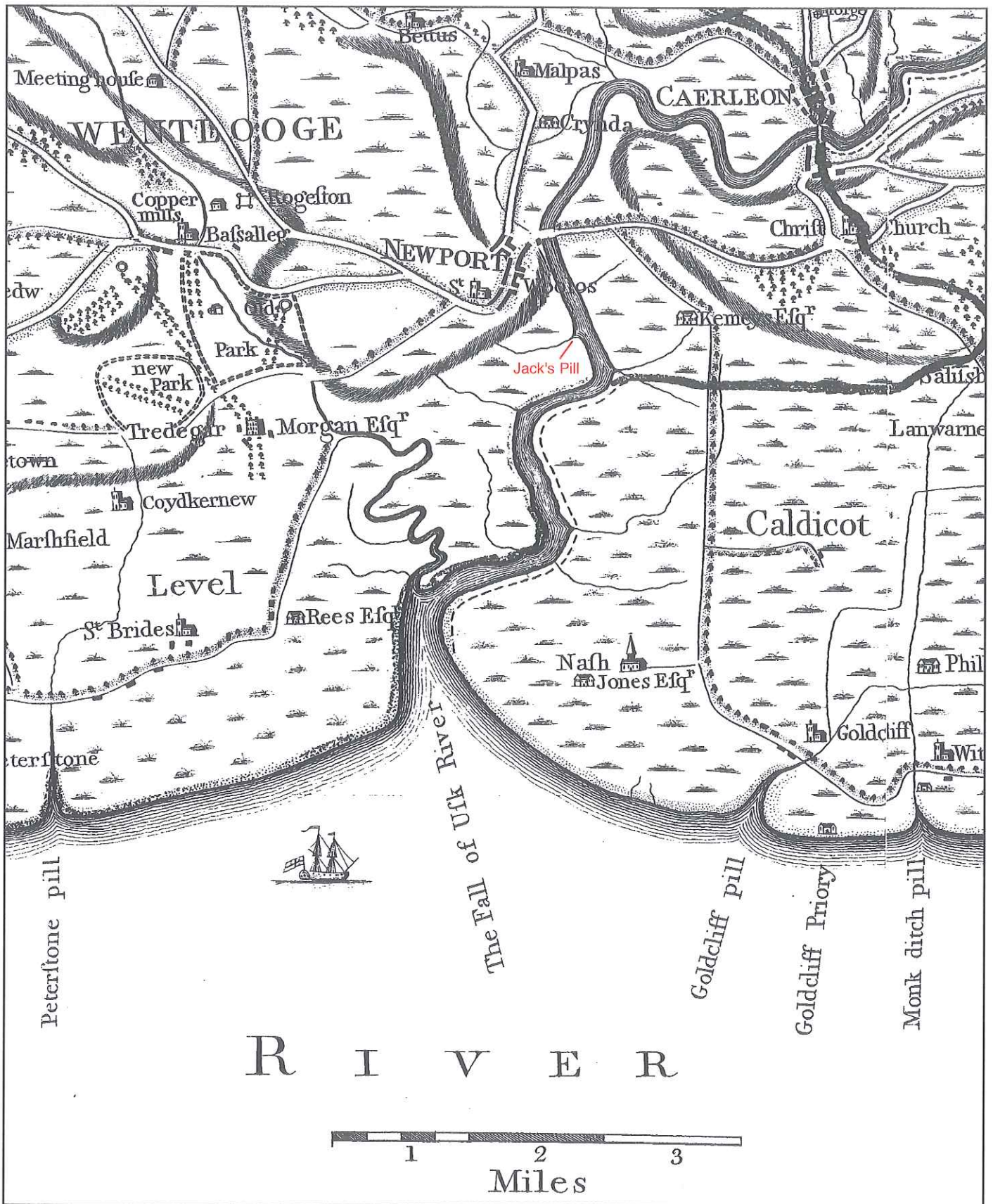


Fig.3 1785 map of Monmouthshire prepared by the War Office

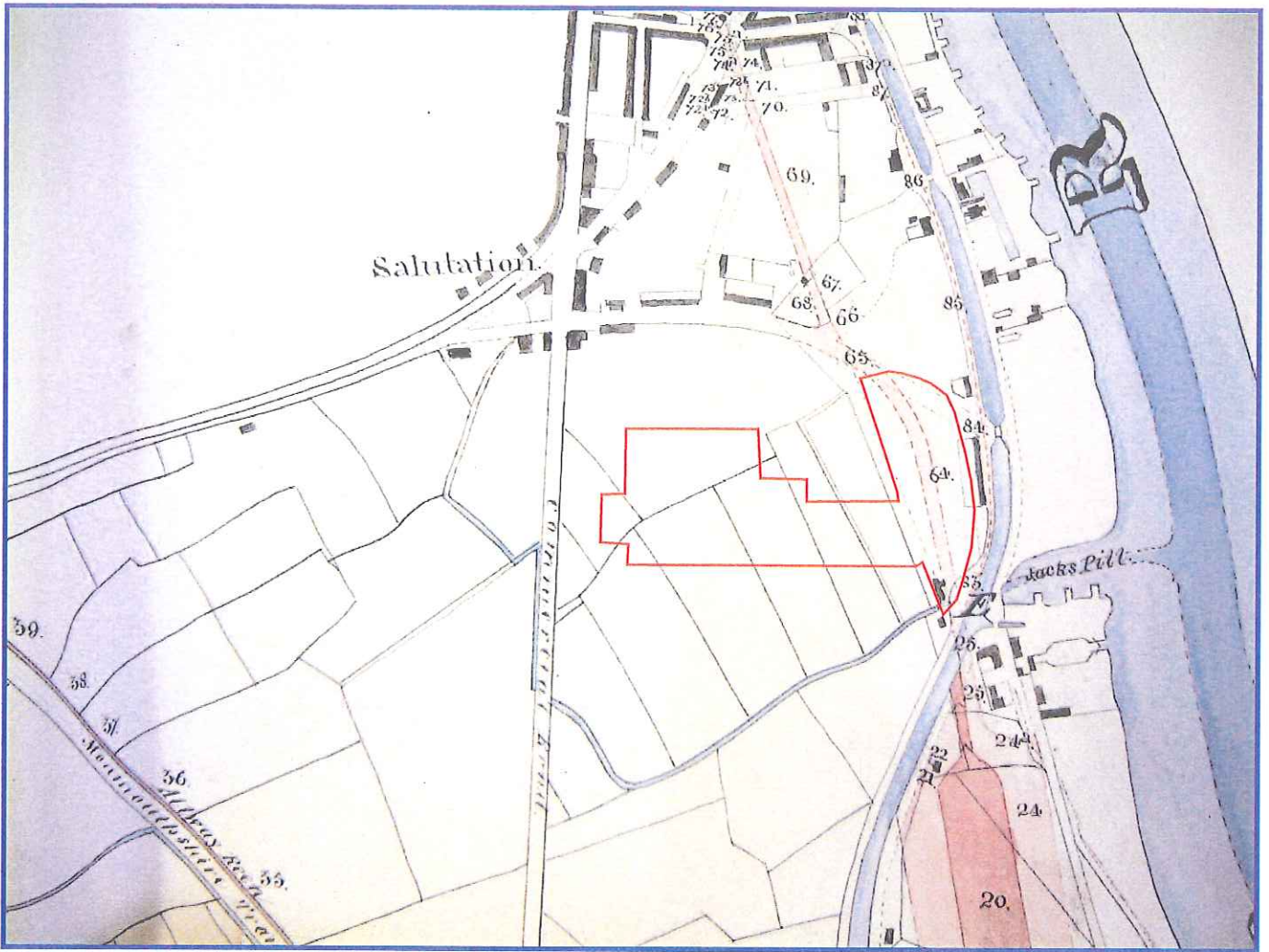


Fig.4 1834 plan by T.Morris showing the course of the creek inland from Jack's Pill

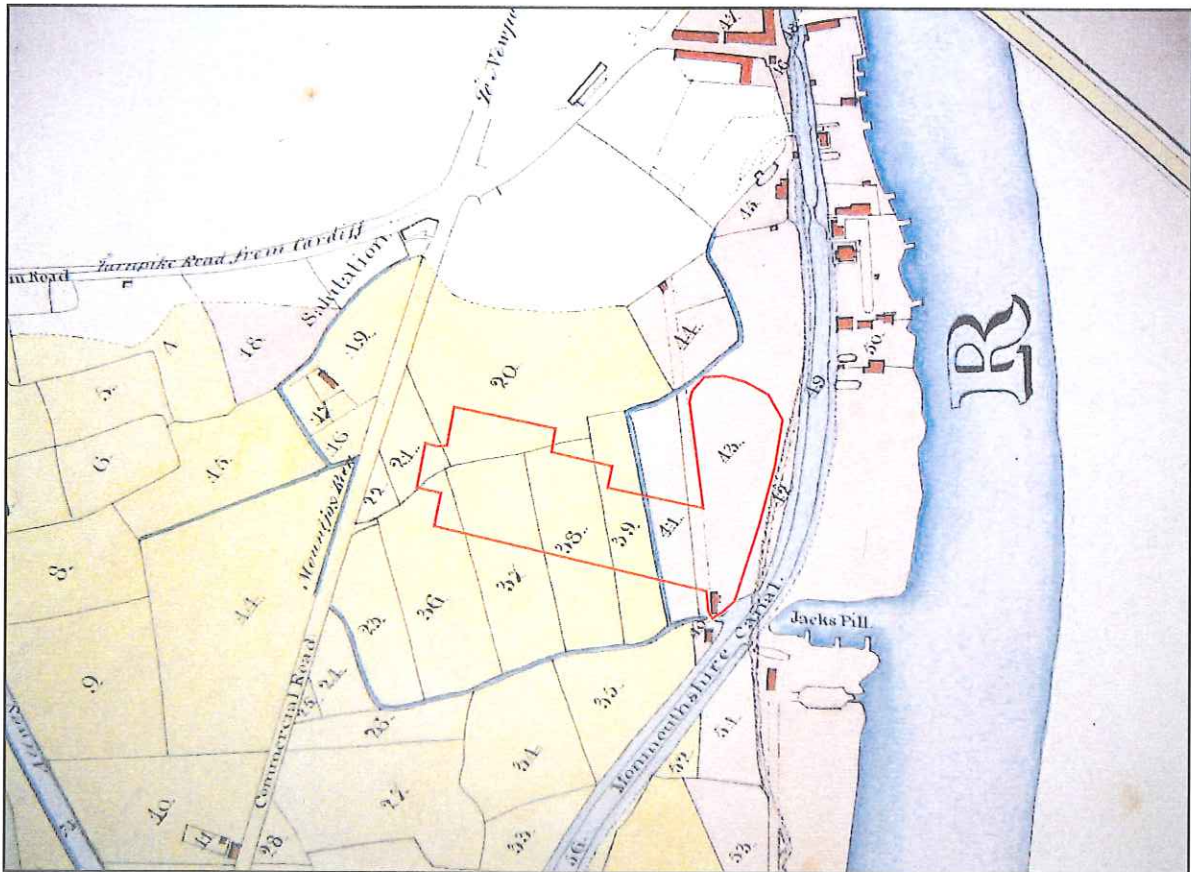


Fig.5 1831 plan by T. Morris showing the course of the Mountjoy Reen and a further drainage channel inland from Jack's Pill

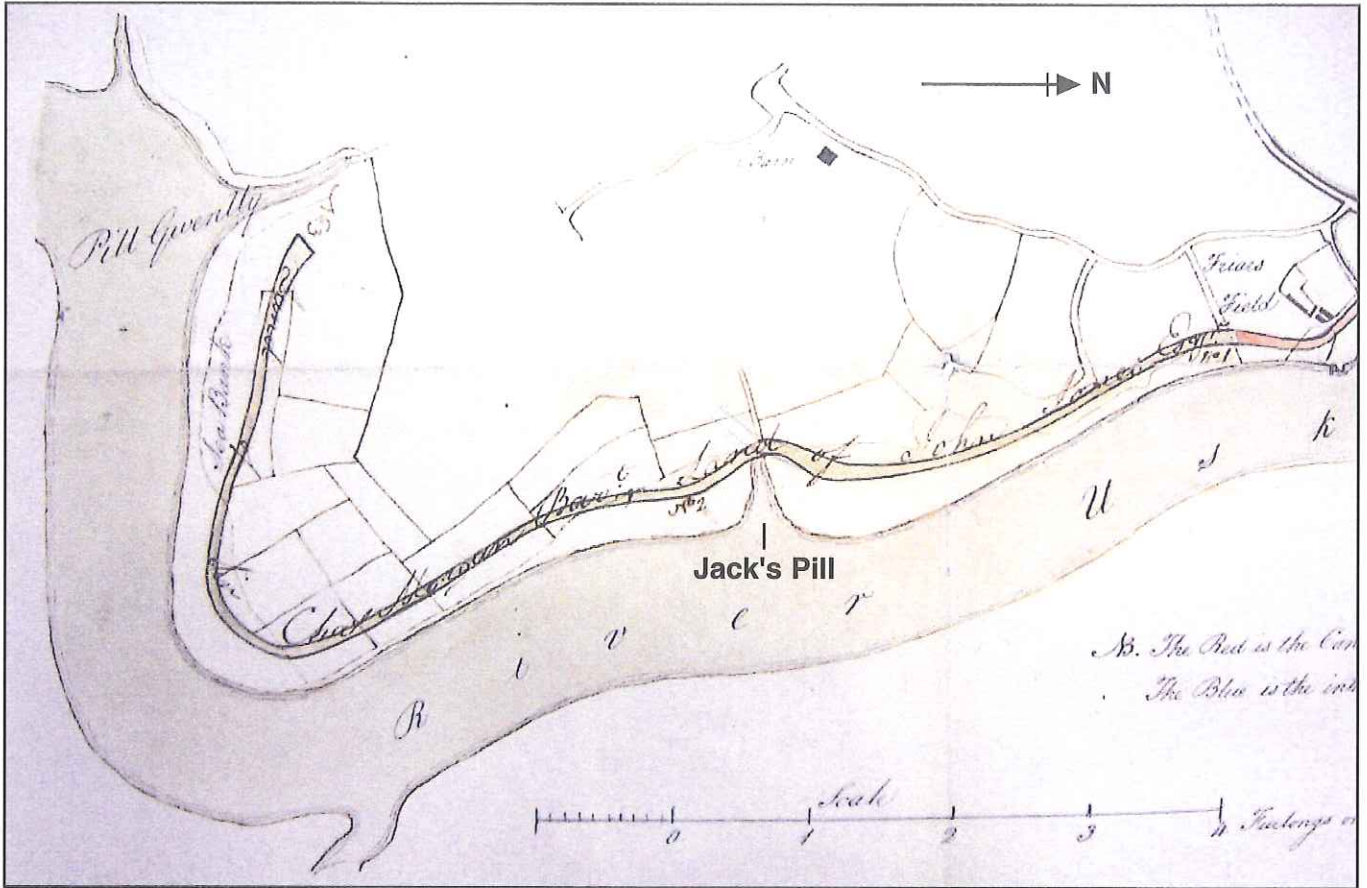


Fig.6 1805 plan of the extension to the Monmouthshire Canal

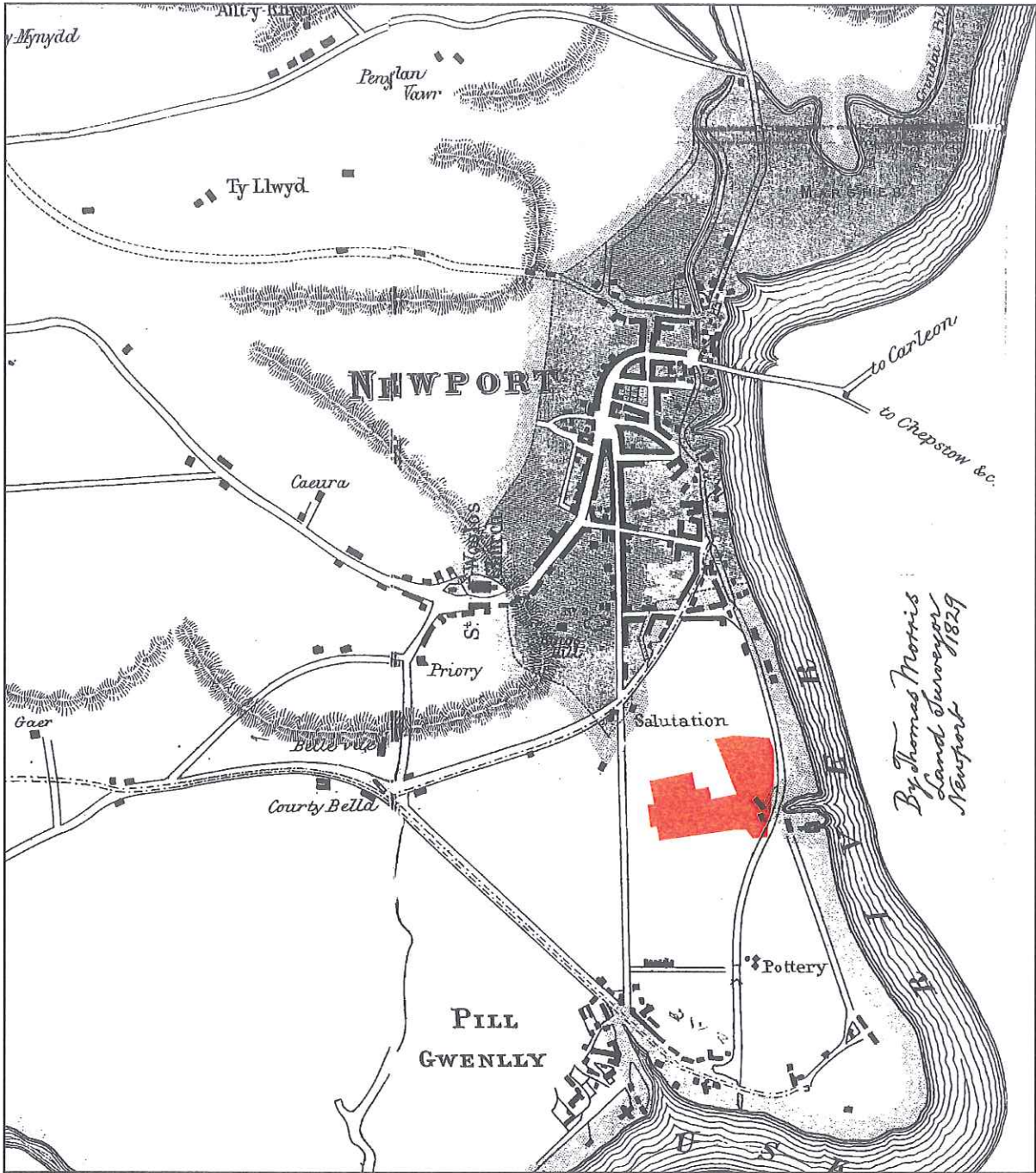


Fig.7 1829 map by T.Morris

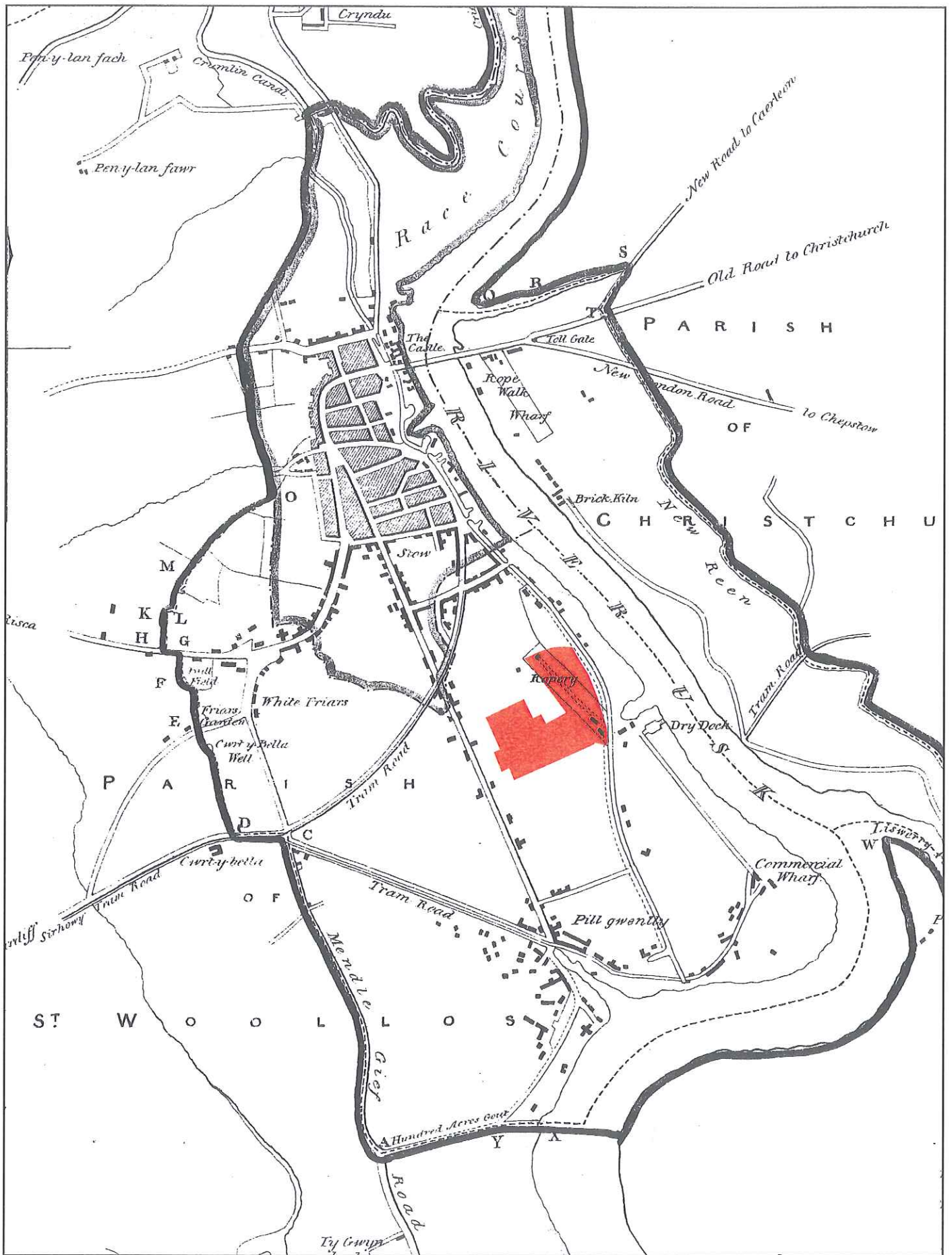


Fig.8 1832 map by Robert Dawson

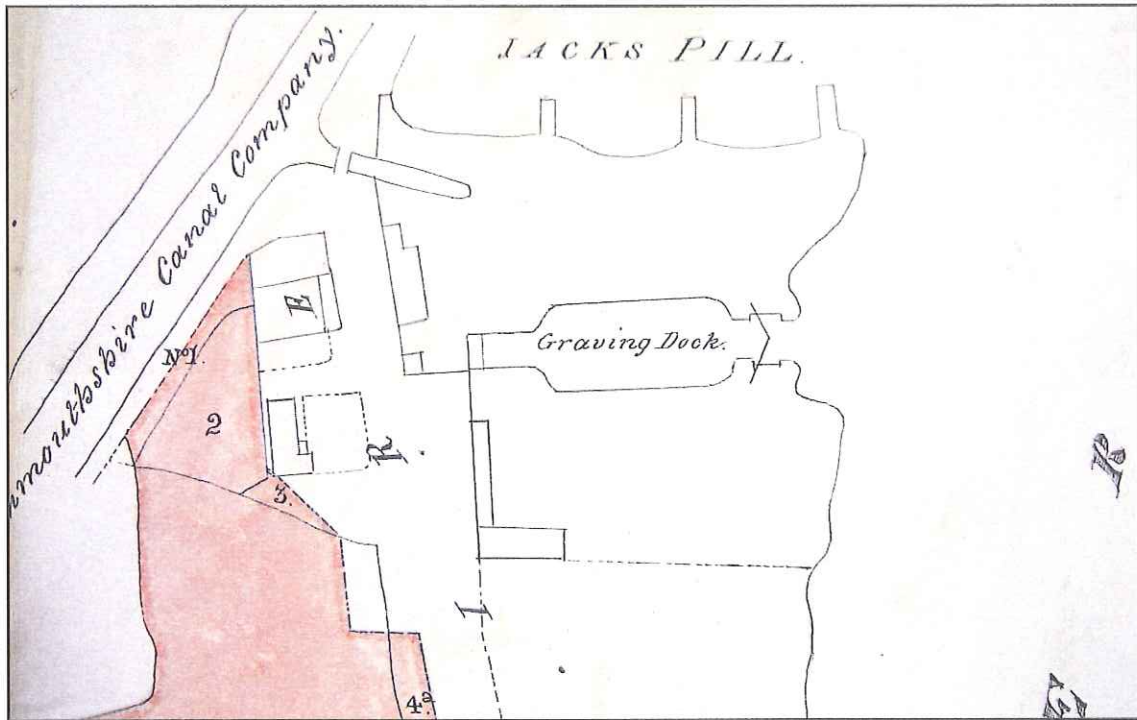


Fig.9 1837 plan of Jack's Pill and the Graving Dock

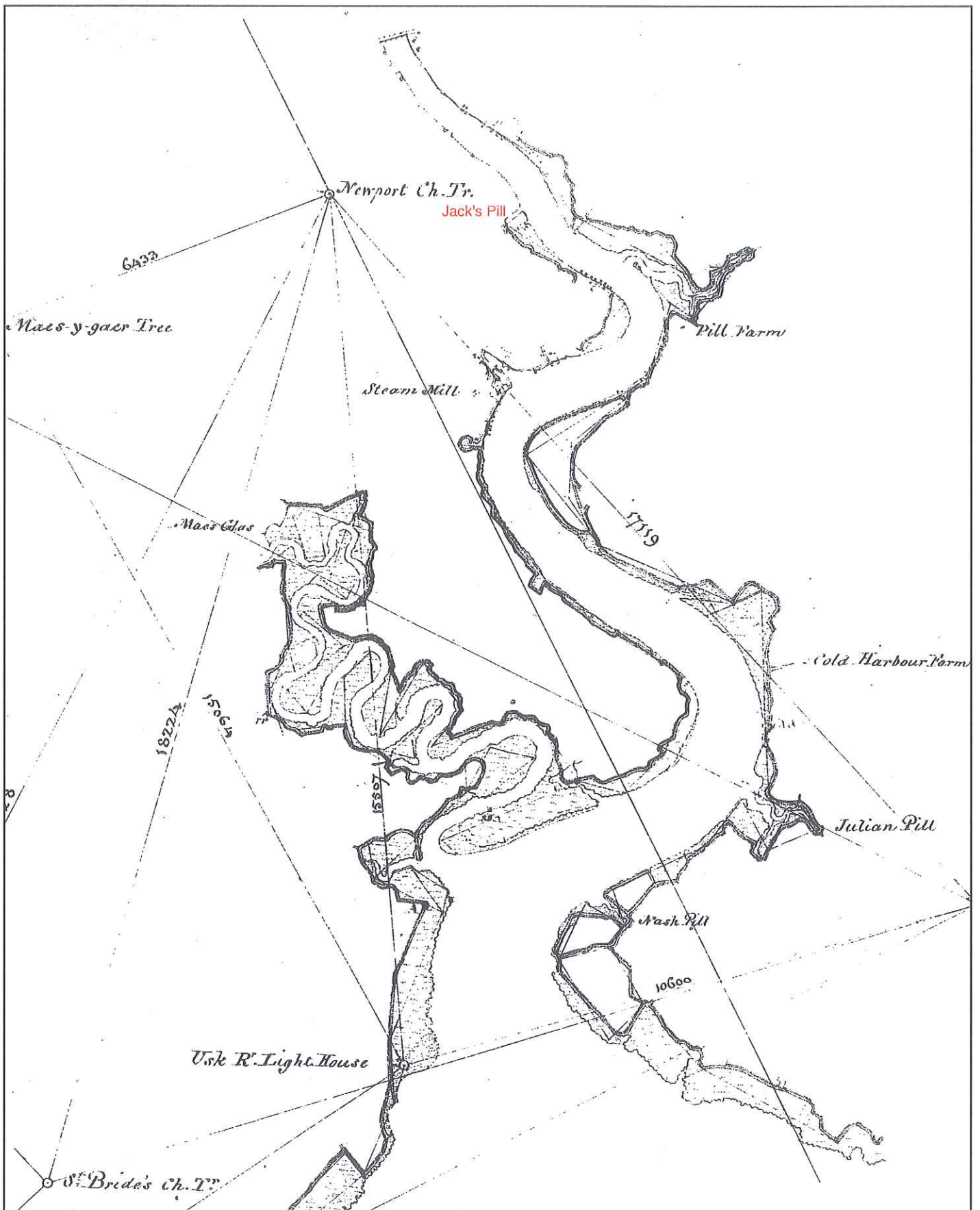


Fig.10 1827 map of the mouth of the River Usk showing Jack's Pill



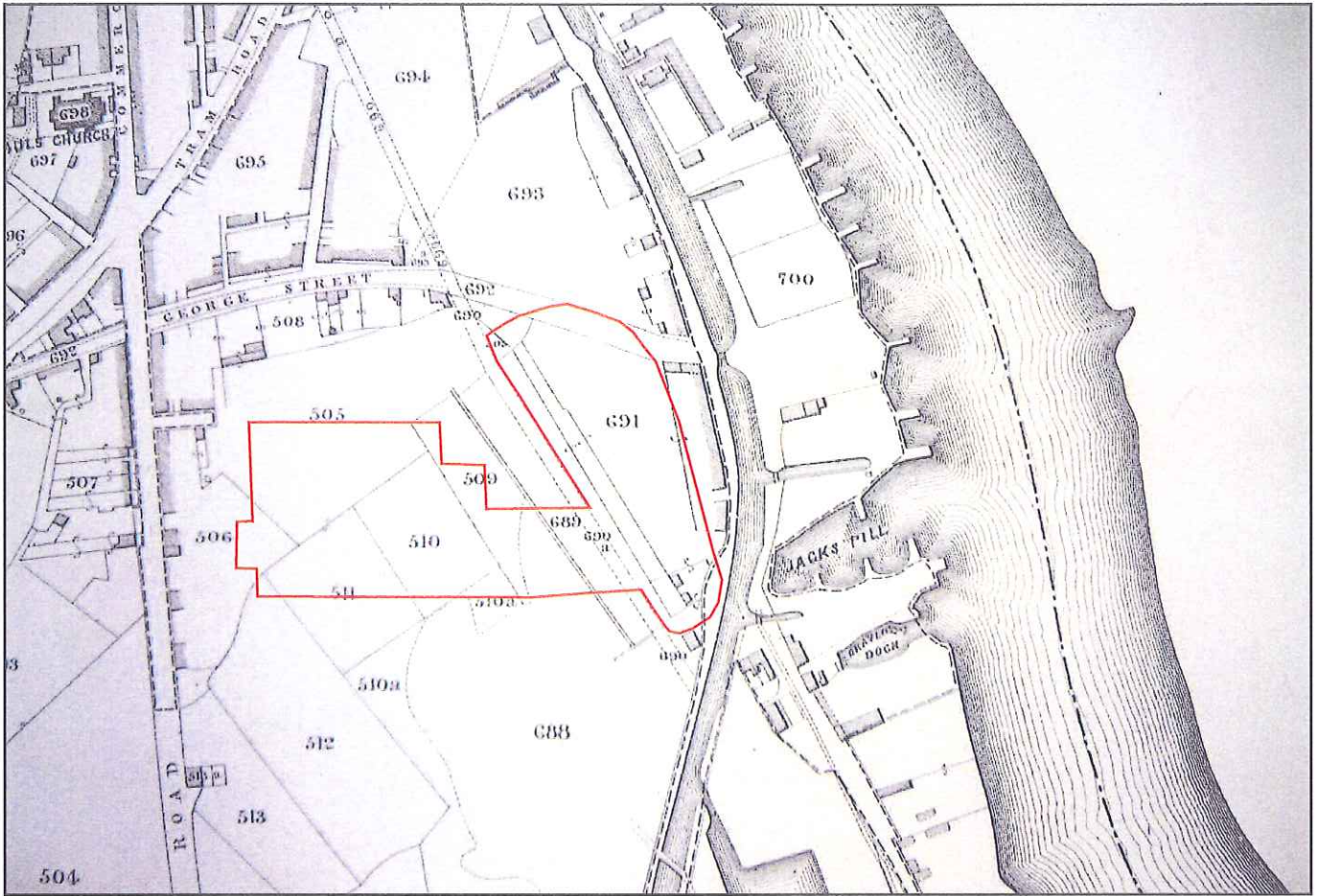


Fig.11 Tithe map, c.1841

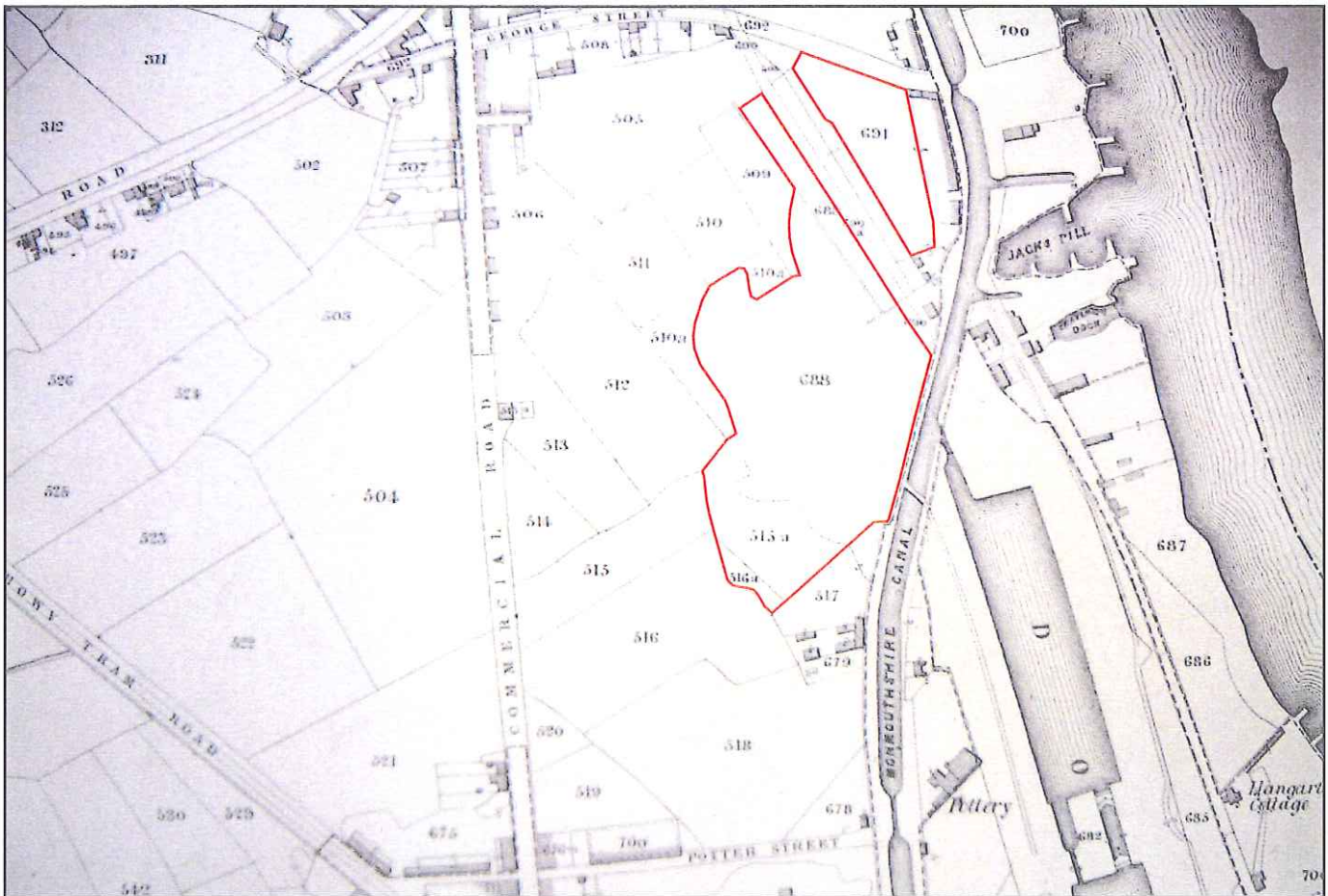


Fig.12 Tithe map, c.1841 showing extent of the Ballast Ground

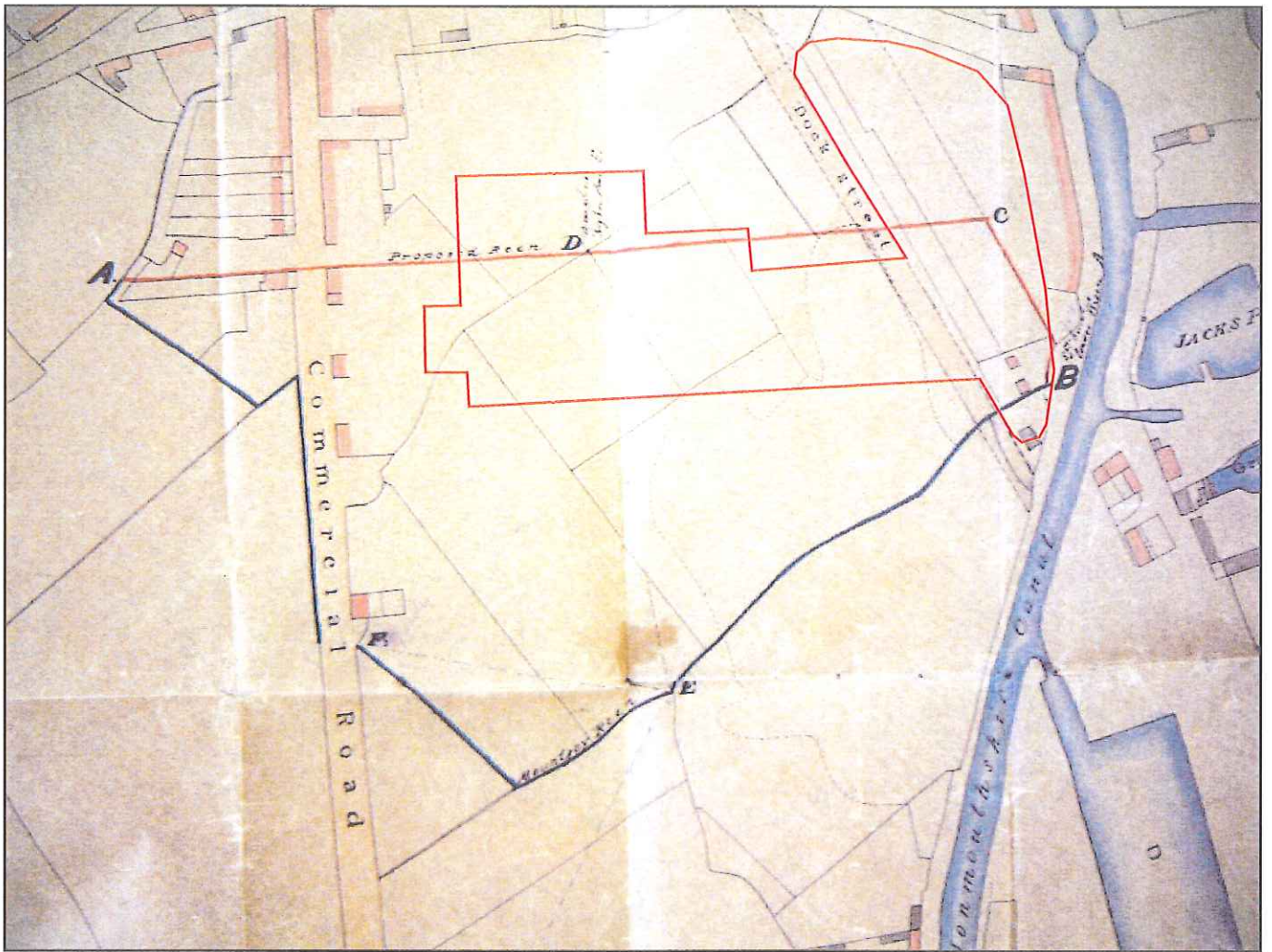
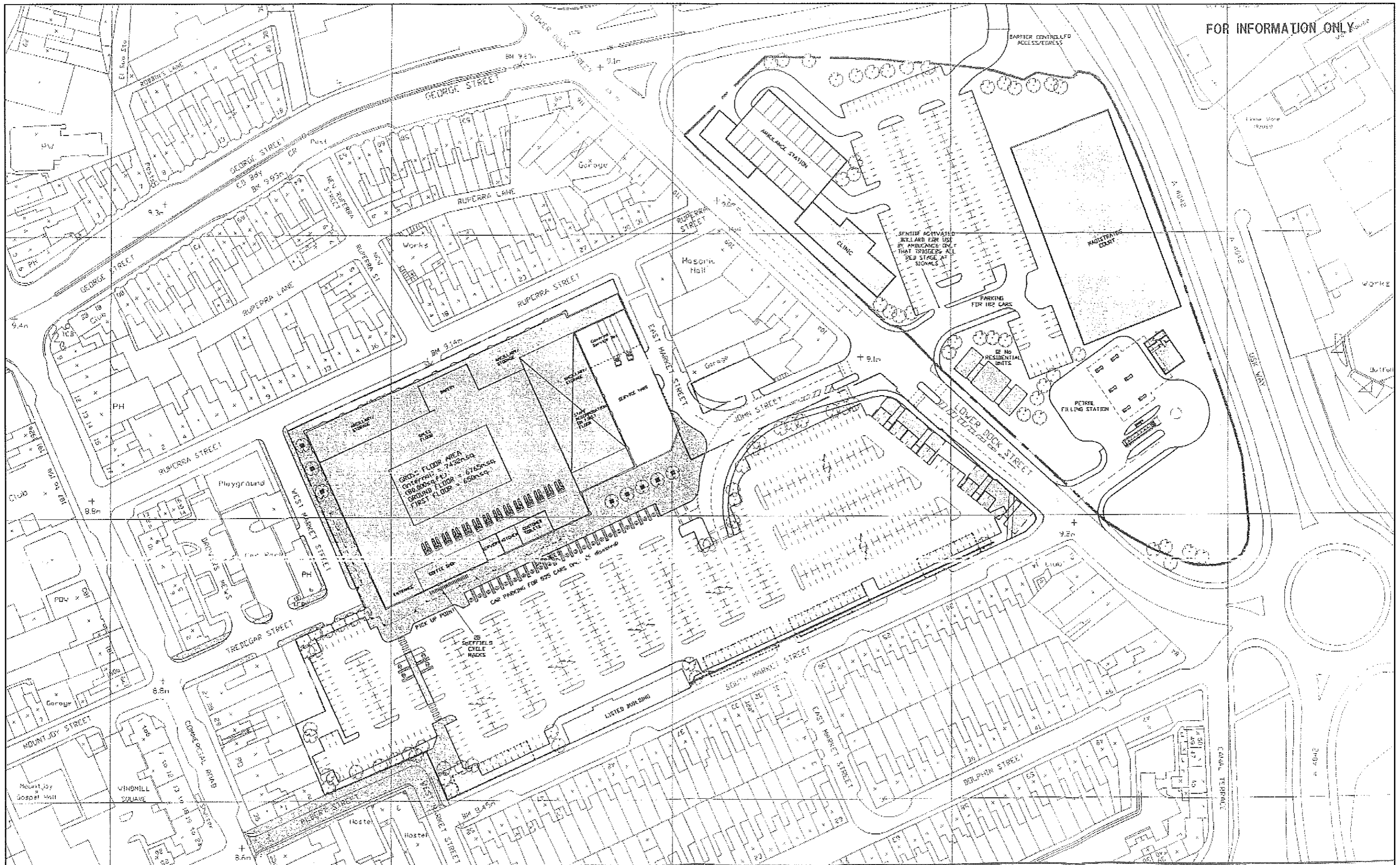


Fig.13 1843 plan showing suggested diversion of the Mountjoy Reen inland from Jack's Pill

FOR INFORMATION ONLY



- Revisions:
- A 210502 Store size noted.
  - B 170702 Layout updated.
  - C 041002 Layout revised.
  - D 301002 Layout revised.
  - E 021102 Police station tented and flats added.
  - F 061102 Layout updated to Highway Engineers recommendation and Petrol Filling Station modified. Cycle racks noted by store.
  - G 101002 Revised parking increased.

Fig.14  
**RETAIL STORE  
 CATTLE MARKET SITE  
 NEWPORT  
 PROPOSED SITE LAYOUT**

Client: <b>THE RAVEN GROUP</b>		Drawn By: K20
Scale: 1 : 1250	Date: OCTOBER 2007	
CAD file name: H:\DATA\ACAD\1680\D\0116		Checked By:

**bmd** ARCHITECTS  
 CHARTERED ARCHITECTS  
 1 WINCHESTER SQUARE  
 LONDON SE1 9AP  
 Tel: 020 7357 6825 Fax: 020 7357 6827 E-Mail: bmd\_arch@compuserve.com

Drawing Number: **1680/D/11**

Rev: **G**



Plate 1 The Cattle Market area



Plate 2 The study area between Lower Dock Street and Usk Way



Plate 3 Mid 19th century building on the corner of John Street and East Market Street



Plate 4 The cast-iron railings between the Cattle Market and Ruperra Street



Plate 5 Fragment of original building in north-east corner of the Cattle Market

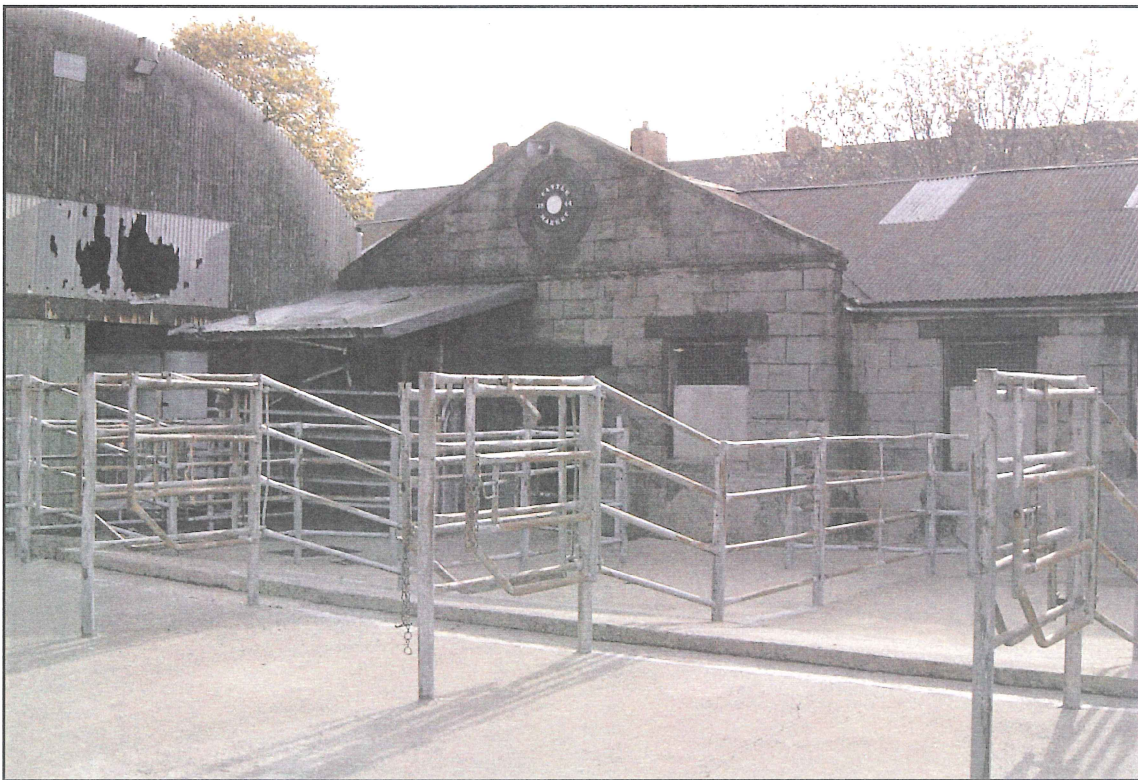


Plate 6 Grade II Listed building on southern side of Cattle Market



Plate 7 Decorated cast-iron support in west gable end of Grade II Listed building