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EAST TILBURY, ESSEX
HISTORIC AREA APPRAISAL

Joanna Smith

ARCHITECTURAL
INVESTIGATION

ENGLISH HERITAGE

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ENGLISH HERITAGE

EAST TILBURY
THURROCK, ESSEX

HISTORIC AREA APPRAISAL

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Frontispiece Panorama of East Tilbury from *Bata An Invitiation to East Tilbury* 1958 (© Bata Limited)

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PREFACE AND ACKNOWLEDGEMENTS

The rural settlement of East Tilbury, Thurrock, Essex, has been identified as a potential location for significant development. Under ongoing planning initiatives for the Thames Gateway, a draft master plan by a private development company, Thamesgate Regeneration Limited, was produced in June 2005. This proposed an extensive development, including 14,000 new homes, commercial and community facilities and a new town centre. This initiative would radically change the semi-rural setting of East Tilbury. While some elements of its historic landscape and buildings have been studied, notably the military sites around East Tilbury village and the Bata settlement, no broad assessment of its built environment and significance has been undertaken. At the request of Michael Munt, English Heritage Historic Areas Advisor, East of England Region, a historic area appraisal of East Tilbury was undertaken in 2006. This focussed primarily on the Bata settlement but also covered the village, and was carried out by Joanna Smith and June Warrington of the South Team of Architectural Investigation. The resulting report, written by Joanna Smith, is divided into three parts: an overview of the historical development of East Tilbury, a characterisation of its distinctive components and a concluding section that addresses significance and conservation issues.

The fieldwork, research and photography for the assessment were carried out by Joanna Smith and June Warrington. The maps and plans were drawn by Andy Donald. Thanks are also due to our English Heritage colleagues Jonathan Clarke, Geraint Franklin, Peter Guillery, Elain Harwood, Michael Munt and Charles Walker. The help, kindness and generosity of Joan James and the volunteers of the Bata Reminiscence and Resource Centre, East Tilbury Library is gratefully acknowledged. Thanks are also due to the staff of the Essex Record Office and Gray's Library, Essex, James Ross of Thurrock Council and Mrs Sonja Bata.

The background material and photographs generated by the assessment can be viewed at the National Monuments Record Centre, Great Western Village, Kemble Drive, Swindon SN2 2GZ.

INTRODUCTION

East Tilbury is a rural community on the north bank of the River Thames, lying to the south of a branch of the main London to Southend railway line, approximately two miles east of the town Tilbury. It encompasses two quite distinct settlements: a historic riverside village and a purpose-built industrial village largely developed between the 1930s and the 1960s for the British Bata Shoe Company Ltd. Rising slightly above its low marshland setting, East Tilbury village is formed of a single street, with a few outlying houses and farms, edged to the east and south by an important group of 19th- and 20th-century military sites. The product of an incremental development, the village retains some historic buildings, most notably the medieval parish church, but is now largely characterised by late-20th-century housing. In contrast, the highly unusual Bata settlement combines Garden City planning and Modernist architecture. Both the layout and design of the pre-war factory, housing and community facilities were devised by the parent organisation, the Bata Shoe Company, based in Zlin, Czechoslovakia (now near the eastern border of the Czech Republic). East Tilbury was one of a number of satellites or colonies that the firm was constructing around the world in the 1930s. However, its character has subsequently been diluted by a large private residential development of the 1970s and piecemeal change to the company buildings.

Figure 1 General map of East Tilbury (© and database Crown Copyright and Landmark Information Group (All rights reserved 2007) Licence numbers 00394 and PT0024)

HISTORICAL DEVELOPMENT

EAST TILBURY VILLAGE

Early development

East Tilbury is situated at the point where the River Thames significantly narrows from its wide estuary as it bends around Coalhouse Point. The geology of the area is of deep clayey soils overlain by lighter river alluvium, with the settlements occupying a spur of slightly higher ground, a raised gravel terrace that tapers to a point towards the riverside.[1] There is evidence of occupation during the prehistoric period, although the main focus of settlement seems to have been the higher ground nearby at Mucking.[2] An ancient ridgeway running between Chelmsford and Horndon on the Hill in Essex and Higham in Kent is presumed to have crossed the Thames at East Tilbury.[3] Roman settlement was widespread across the larger district, and a substantial Roman building would appear to have existed in the area of St Catherine's Church.[4] It is likely that extraction of gravel, chalk (found in outcrops on the gravel terrace) and clay began during the Roman period, as well as salt production at 'Red hill' sites.

East Tilbury does not seem to have been occupied again until the late Saxon period. According to Bede's one of the churches founded as part of a Christianising mission by Bishop Cedd around 653AD was at 'Tilaburg' on the banks of the Thames. However, its actual site has not been identified and opinion is divided between East or West Tilbury as a possible location. During the medieval period the settlement at East Tilbury appears to have modestly prospered, presumably benefiting from the river crossing and marshland grazing.[5] The parish church (then dedicated to St Margaret) was built in the

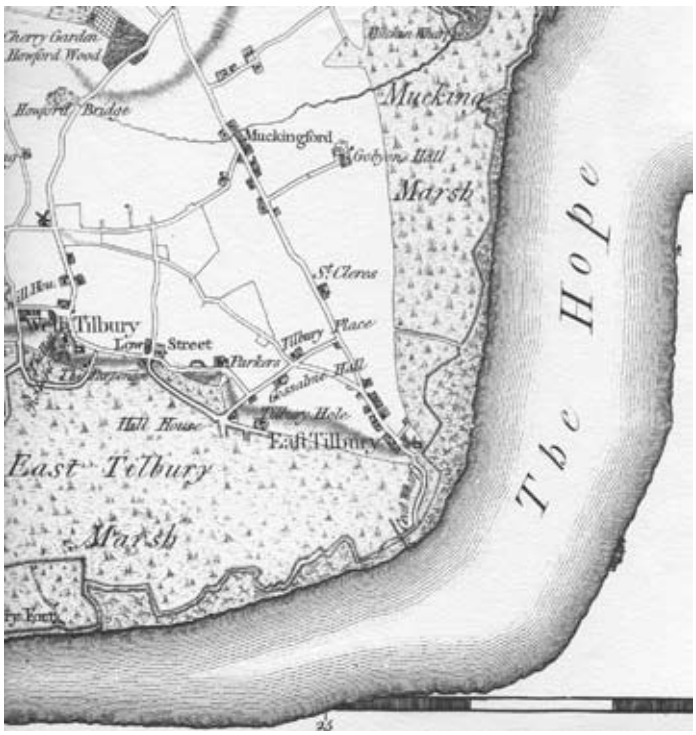

Figure 2 Detail of a map, published 1777, by John Chapman and Peter Andre

12th century, incorporating Roman and medieval brickwork in its walls. It was largely rebuilt and enlarged in the 13th century and extended in the 14th century.

The East Tilbury ferry seems to have faded into insignificance by the 16th century although a ferry house was still in existence at Coalhouse Point in 1777.[6] By this date the ferry landing was probably already being used to unload coal. It was transported along an ancient trackway know as the Coal Road westwards to Chadwell and Grays.[7] The marshes were still largely given over to grazing, although the farmers, cow-keepers and grazing butchers who held them were said to 'live in and near London' rather than locally.[8] In pre-medieval times there appears to have been a large creek to the west of the village, later filled in to become a small stream.[9] In the 18th century a causeway was built across the stream as part of road improvements in the area, linking East Tilbury with the small settlement at Low Street and improving its connection to West Tilbury.[10] However, there had also been a significant loss of land to the river and, to prevent flooding and further erosion, a river wall was erected at some time, marked on the Chapman and André map of 1777 (fig. 2).

From the mid 19th century, the isolated riverside settlement at East Tilbury, which had a population of 401 in 1851, was served by a small school and a Methodist Chapel (both now demolished).[11] Following the construction of the London Tilbury and Southend Railway in 1854-56 a station was opened at Low Street in 1861, just to the west of East Tilbury.[12] But it was East Tilbury's increasingly important defensive role from the 1860s that had a greater impact, reflected in the construction of a number of military structures on the periphery of the village and riverside.

The military defences

East Tilbury's location has always had considerable strategic significance with commanding views across the low-lying Thames river plain and over a wide section of the estuary and its river traffic. However, its position has also made it vulnerable to raiding enemies and a potential landing site for an invasion force. In 1402 the villagers complained of their lack of defences, resulting in the erection of an earthen rampart and towers.[13] Between 1539 and 1540 more adequate defences were provided in the form of blockhouses or bulwarks at East and West Tilbury, ordered by Henry VIII after an invasion scare. But the East Tilbury blockhouse was not maintained and had probably already been demolished by 1667 when the Dutch navy raided along the Thames and Medway. According to local legend, the tower of St Catherine's Church in East Tilbury was bombarded by the Dutch and destroyed.[14] As a consequence,

construction of a substantial fort began at West Tilbury, intended as a first line of defence for the river. In 1799 this was supplemented by a gun battery at Coalhouse Point.[15]

The mid 19th century revolution in military technology - principally the increased range of artillery fire and development of iron-clad warships - rendered the existing Thames defences increasingly obsolete. It was an invasion panic that once again prompted action, resulting in a Royal Commission in 1860, which emphasised the national significance of the region: 'The defence of the Thames involves interests of vast magnitude … it includes the security of the great powder magazine at Purfleet; the important arsenal at Woolwich and the adjoining dockyard; the Government victualling stores and shipbuilding at Deptford; the large amount of valuable property extending for many miles on either bank of the river; the fleet of merchant shipping moored in the port of London; and lastly the metropolis itself'.[16] As a consequence the first line of defence was shifted eastwards from West Tilbury to a triangle of new forts at East Tilbury, Cliffe and Shornmead (the latter in Kent). Coalhouse Fort at East Tilbury was constructed in 1861-62 (fig. 3) on the site of the gun battery, which had been overhauled in 1837-44.

Figure 3 Aerial view of East Tilbury village in 2005 showing East Tilbury Battery, Coalhouse Fort and Wing Battery

The fort was supplemented by a sunken gun battery (East Tilbury Battery), constructed in 1889-90 to the east of the village, and a second low-profile gun battery (Wing Battery), built between 1889 and 1893 to the south of the Fort (fig. 3). These batteries had a short operational life: Wing Battery was taken out of use by 1902 and East Tilbury Battery only functioned until the First World War. This reflects the transience of many military installations in

this period.[17] By 1914 the main defensive line for the estuary had moved further east, although Coalhouse Fort was reoccupied during both wars. In addition, several new facilities were constructed in the early to mid 20th century, including searchlights, a minefield control tower and low-level radar tower near the river bank and an anti-aircraft battery at Bowaters Farm.[18] This seems to have been the last functioning defensive facility at East Tilbury, maintained until 1957.

Recent development

Figure 4 Aerial view of the Bata settlement in 2005

From the mid 1930s the village was increasingly overshadowed by the growing Bata settlement to the north (fig. 4).[19] One consequence was the opening of a new railway halt at East Tilbury in 1936. After the closure of Low Street Station in 1967 this became the sole station serving the community.[20] In the final decades of the 20th century the village underwent a significant degree of rebuilding, if not expansion, an increase in industrial activity, notably gravel extraction and, in 1960, the creation of a modest industrial estate on the site of a former brickworks.

BATA

'Shoemakers to the world': the Bata organisation

From modest origins, the Bata Company grew in the inter-war years of the 20th century to become one of the world's largest shoe manufacturers and retailers.[21] Its founder was Thomas Bata (1876-1932), whose ancestors had been cobblers in the Moravian town of Zlin since the 17th century. He set up in the shoe making business in 1894 with his brother Antonin, becoming sole owner in 1908.[22] Bata's phenomenal success was based on mass production methods and management theories partly derived from the United States and Germany. By 1918 Bata was the largest shoemaking concern in Czechoslovakia and had opened its first shoe-shop

outlet. During the difficult post-war years the company focussed on expanding its retail outlets and penetrating foreign markets (starting with Belgrade in 1919, followed by the establishment of Bata companies in Holland (1921), Denmark (1922), Yugoslavia (1922), Poland (1922) and England (1924)).[23] After economic difficulties at the Zlin plant had peaked in 1922 the firm underwent an extraordinary expansion, extending its sales to Egypt and some Asian countries, particularly India.

By the 1930s the Bata Company had become a 'world-wide shoe empire', co-ordinating its commerce and manufacturing across the globe from its headquarters at Zlin.[24] This entailed control of the entire process of shoe making, from the production of raw materials through to the marketing and sale of the finished goods.[25] The business encompassed not just manufacturing complexes but a diverse range of supporting industries including chemical production, building and construction, power supply, rail transport, management of forest and farm land.[26] The redevelopment of Zlin from the mid 1920s as, in effect, a company town was facilitated by its political control, following the election of Bata as mayor in 1923.

Figure 5 Statue of Thomas Bata, East Tilbury (DP040062)

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Figure 6 Aerial view of Mohlin, Switzerland in 1935 (© State Gallery Zlin)

From the late 1920s Bata's approach of a 'one-world economy' was increasingly challenged by protectionist policies, as other countries raised customs barriers and restricted imports in response to widespread economic crises. Bata responded by establishing overseas companies, thereby circumventing the restrictions of the countries in which the new firms were based.[27]

Between 1929 and 1932, 666 retail outlets opened in 37 countries (especially in Asia and Africa) and 22 (out of an eventual total of 29) overseas companies were founded.[28] Manufacturing sites were established at Ottmuth, Germany (1931); Konagar, India (1931); Mohlin, Switzerland (1932) (fig. 6); Bataville, near Hellocourt, France (1932); Vukovar and Borovo, Yugoslavia (now Croatia) (1932); Chelmek, Poland (1932); East Tilbury, England (1933); Batapur, India (now Pakistan) (1933); Best, Netherlands (1934) and Batanaga, India (1936).[29]

Even the untimely death of Thomas Bata in a plane crash on the 12th July 1932 did not check the prodigious growth of the company. Instead, control passed to his step brother, Jan Bata, while his 17-year-old son, also Thomas, learnt the business.[30] Until the Second World War the company continued to develop along the same lines; a global organisation run by a complex and opaque 'mass of interlocking holding and operating companies', with ultimate control largely residing with a trust in Switzerland.[31]

After the outbreak of war the organisation was presented with considerable difficulties: some of its factories and companies, most notably Zlin, came under German control, others, such as British Bata, lay in the Allied sphere and a few fell within neutral territories. As a result the organisation began to fracture. In 1940 Thomas Bata junior established a new settlement at Batawa, Canada, and a new company, Bata Incorporated, to oversee the wider organisation. Jan Bata's position was more ambiguous, as he continued to maintain connections between the companies under Nazi control and those in allied and neutral territories. This resulted in him being 'specified', i.e. blacklisted by Britain and America prompting him to establish a new settlement in neutral Brazil in 1941.[32] By the end of the war Thomas Bata junior had largely consolidated his control over the Bata Organisation.[33] In 1945 the factories in Eastern Europe were nationalised and a legal battle ensued over ownership of remaining businesses between Jan and Thomas. From this conflict emerged the Bata Shoe Company, led by Thomas Bata junior, with its headquarters in Toronto, Canada. The company continues today, a family owned business headed by Thomas G Bata, the grandson of the founder. Now based in Lausanne, Switzerland the firm has, with the exception of its factory in Holland, shifted its manufacturing to the Far East. It continues to sell footwear from its own retail outlets on the European mainland (but not in Britain).

Business philosophy

Thomas Bata's international business empire was underpinned by a philosophy that combined modern production methods, notions of welfare capitalism and a competitive management system. Some of his ideas and methods were taken from American and European practice, filtered through a Czechoslovakian cultural tradition of 'practical idealism' that sought to incorporate 'oppositional concepts, such as communism and capitalism, modernity with tradition, and social programs with profiteering, while capitalizing on the opportunities that arose from that combination'.[34] Bata's philosophy continued to shape the organisation beyond his death and the post-war realignment of the company.

In order to acquaint himself with the latest developments in manufacturing and business methods Thomas Bata visited the United States three times, in 1904, 1911 and 1919. On his last trip he toured both the largest US shoe company, Endicott & Johnson at Binghampton, Johnson City, where the works were surrounded by workers' housing, schools, parks and sports fields, and the Ford plant at River Rouge, Detroit, to observer mass production techniques. Bata's response to Ford's methods was, reportedly, 'If an automobile can be made and sold like that, why not shoes?'.[35] This kind of manufacturing relied on mechanization, rationalisation and standardization of process, modern efficient factory design and the reduction of skilled labour. It went hand-in-hand with new approaches to organization, exemplified by Frederick Taylor's 'Scientific Management' theory. Bata had built his first 'modern' factory in 1906, but it was in the mid 1920s that the company fully embraced industrialised production methods and standardised building technologies. Thomas Bata had become, so it is said, 'the most important representative of American Taylorism in Europe'.[36]

Figure 7 Sports and recreation facilities at East Tilbury, taken from a 1954 company pamphlet *Working with Bata* (© Bata Limited)

Along with an overhaul of the manufacturing process Bata introduced,

in 1924, a new management system. Supposedly influenced by European models such as the Carl Zeiss factories in Germany, this was based on the principle of 'autonomous workshops'.[37] In this system all departments bought and sold to each other and had a financial interest in the quality and quantity of the output (down to the level of workshop or production line), sharing the profits and losses and collective wages. Bata regarded this as 'a genuinely cooperative organization, everyone working for himself and for all'.[38] The labour force, unskilled and semi-skilled, was recruited young, moulded to the company ethos and subject to strict discipline. But this was ameliorated by modern working conditions, reasonable levels of pay and the provision of a wide range of facilities, including accommodation. From 1916 onwards the company undertook the construction of residential districts, impressive in quantity and quality, as well as shops, cinemas, sports facilities, schools, medical facilities and churches.[39]

Figure 8 The centre of Zlin in 1933 (© State Gallery Zlin)

The role of architecture and planning

Architecture and planning were central to evolution of the company's identity from the 1920s. Its approach took the precepts of the Garden City Movement - that is low-density housing, a heavily landscaped setting, separation of manufacturing and residential areas, a civic core and pattern of streets that avoided monotony - and combined it with Modernist design and industrialised construction. By the early 1930s Bata had developed a consistency in its architecture and design (extending to its advertising, packaging and shop design) and was exporting it across the globe.

The Garden City Movement originated in England with the theories of Ebenezer Howard, published in 1898, and given physical realisation by architects such as Barry Parker and Raymond Unwin in developments at Letchworth (planned from 1903) and Hampstead Garden Suburb (planned from 1906). The movement was very influential in the United States and Europe, including Czechoslovakia, which founded its first garden suburb in Prague in 1912.[40] One of its leading proponents in Czechoslovakia was Jan Kotera (1871-1923), who designed the first housing districts in Zlin for Bata in 1916.[41] Although only a small part of the scheme was built, a similar approach was used by Kotera's pupil, Frantisek Lydie Gahura (1891-1958), while planning the rapid expansion of Zlin from the mid 1920s. The model developed by Gahura and the architect Vladimir Karfik (1901-1996), head of construction at Bata from 1930 to 1946, took elements of garden-city planning, such as a central axis combining an open landscape with municipal and cultural buildings, but located the factory at the heart rather than the periphery of the town, reflecting the company's dominant role.[42]

The design ethos of Thomas Bata was rooted in a preference for simplicity, spaciousness, straight lines and economy in construction. One influence was American rational factory design, based on standarization, modular units and a functional engineering-driven aesthetic.[43] In 1927 a construction system was developed by Gahura and the engineer Arnost Sehdal for a reinforced-concrete frame that formed the basis for a wide range of company buildings, including factories, public and social buildings (but not the family housing units) (figs 9-12). Economy was achieved by the application of mass-production techniques to building, facilitated by the establishment of an in-house construction department in 1924 with 'well-trained management, designers, administrators, blue-prints, patterns, a loss-calculating system, material specifications, machinery and work methods'.[44] By 1938 the department had 38 members of staff.[45] Bata's system was used with subtlety and flexibility to differentiate between different

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Figure 9 Production building in Zlin, 1929-30 (© State Gallery Zlin)

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Figure 10 Production building in Zlin, 1929-30 (© State Gallery Zlin)

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Figure 11 Monument to Thomas Bata, 1933 (© State Gallery Zlin)

types of buildings, notably Gahura's Bata Memorial (1933) (fig. 11) and Karfik's 17-storey administration building (1937-8) (fig. 12). But it also gave the company's buildings a high degree of uniformity and a recognisable identity and transformed Zlin into one of the inter-war period's most fully realised examples of a city planned on Functionalist principles.

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Figure 12 Administrative building, 1937-38 (© State Gallery Zlin)

Czechoslovakia was an important centre of avant garde architecture in the 1920s and 1930s, most notably in Prague and Brno as well as Zlin.[46] The combination of garden-city planning with Modernist design, as opposed to the domestic-revival style favoured by its original proponents, has parallels elsewhere in Europe. For example, in the suburban developments of Henri Sellier in Paris and Ernst May in Frankfurt-am-Main.[47] But while the company's approach to its housing optimised access to space, sunlight and air, its preference was for individual residential units (fig.13) rather than collective or multi-storey blocks until the 1940s. Thomas Bata was of the opinion that 'the man who has a flat in a building with a garden is more stable, and instead of following politics would rather potter about in the garden or sit out on the lawn, so he doesn't go to the pub or political meetings'.[48]

Figure 13 Zlin housing in 2006 (© Elain Harwood)

Figure 14 Central Zlin in 2006 (© Elain Harwood)

Having developed the prototype of a rational industrial settlement in Zlin, Bata then reproduced it in his satellites or colonies. These were conceived as complete communities, laid out following the same basic pattern. The company architects

providing the general plans and designs for important buildings for each satellite but, in line with the collectivist notions of the day, the architects seem to have worked collaboratively, amending or revising colleagues' plans or designing particular elements of different settlements as required.[49] The head organisation provided machinery, instructors (to train the locally recruited workforce), managers and a social model. In turn the satellites established their own building departments to construct and, if necessary, adapt the company's designs.[50] The aim was no less than the creation of 'a secure and ordered industrial universe which fulfilled in one single body the functionalist dream of a modern city at the same time productive, healthy and obedient.' [51]

BATA AT EAST TILBURY

The British Bata Shoe Company Limited

Bata began selling in the British market in the 1920s. This led, following the usual practice, to the founding of an independent branch of the parent company in 1924 in London, called the Bata Shoe and Leather Company Ltd.[52] This was initially concerned with selling its own imported products, but in 1931 the decision was taken to expand into manufacturing and, as a consequence, the British Bata Shoe Company Ltd (hereafter British Bata) was established in 1933.[53]

Closely modelled on the mother company, British Bata acted as both producer and distributor, controlling every aspect of shoe manufacture. The plant at East Tilbury focussed primarily on the manufacture of rubber and leather footwear. In 1940 a factory in Maryport, Cumbria, was purchased for the production of rubber footwear; additional plants were acquired in Dudley, West Midlands (1949), specialising in heavy industrial leather boots and football boots, and in Cumnock, Scotland (1964).[54] Company owned plantations in

Figure 15 Illustration of the factory entrance in 1964, from the company pamphlet *British Bata East Tilbury* (© Bata Limited)

Figure 16 Advert depicting the Bata shop at 72 High Street, Grays, Essex, *Bata Record* 25th April 1958 (© Bata Limited)

Nigeria supplied the rubber, a tannery in Leicester (acquired in 1944) produced the leather and a mill in Chorley, Lancashire manufactured the textiles. By the 1950s British Bata employed around 5000 people. Over 3000 worked at East Tilbury, in the footwear departments, 'engineering section, hosiery factory, shoe-lace factory, polish and leather dressings plant, printing works, and on the Company's own farm'.[55] By 1964 the company owned 300 retail shops (fig. 16) and was exporting around 50% of its total annual production, making it the largest exporter of footwear from the United Kingdom.[56]

From the 1960s manufacturing began to shift overseas to factories that had been set up in developing countries.[57] From 1970 British Bata began to contract, selling first its subsidiary works, then, in 1980, its housing estate in East Tilbury. Sears acquired its retail shops and, by the end of the 20th century, its workforce had dwindled to 150.[58] Finally the factory itself was disposed of in 1997. Some production in rented space continued until 2004 and warehousing of imported products until 2006, when British Bata finally went out of business.

Although technically a separate company, British Bata was always essentially an offshoot of the main corporation.[59] Thomas Bata junior spent a period of time as assistant general manager at East Tilbury in 1935, and the management of the UK business continued to have a distinctly Czechoslovakian slant. The level of involvement was always close; in 1938 Jan Bata personally participated in discussions with the

Figure 17 Coloured perspective by Bronek Katz, 1958 (© Bata Limited)

Figure 18 Coloured perpective by Watkins Gray International, (undated, *c*1967) (© Bata Limited)

Trades Union Congress over union recognition and, after the Second World War, Thomas Bata junior made regular visits to East Tilbury and was often present at the opening of new buildings.[60] Although Bata abandoned its uniform approach to building design at the end of the Second World War, the same architects were used by both the parent and secondary companies. For example, the British-based architects, Bronek Katz (1912/3-1960) and Watkins Grey International, designed post-war developments in Africa, Greece, the West Indies and East Tilbury for both Bata and British Bata (figs 17-18).[61] Being part of a global organisation also brought benefits for its workforce, including opportunities for overseas travel, and the community at East Tilbury could claim an international character that few, if any, Essex villages could equal.

The development of the settlement

In October 1931 the Bata Shoe Company advertised for a 600-acre site on which to locate a new Thameside complex. It was to this advert that Mr William W Wilson, owner of St Clere's Hall in East Tilbury and 'well known farmer and expert in the cultivation of potatoes', replied.[62] Wilson's estate, which ran from the railway line to the river, seems to have been chosen for a number of reasons.[63] One was its geology: the gravel below the marsh facilitated construction as it removed the necessity to drive piles for foundations. Another reason was the high unemployment in Tilbury, a consequence of the contraction in shipping and dock work, which provided a potential pool of labour.[64] But the deciding factor may have been the location - the site had a mile and a half frontage to the Thames, adjoined a railway line and had road access to Tilbury docks - all of which made the site 'easily accessible to all forms of transport'.[65] Thomas Bata personally approved the site following a visit to East Tilbury in December 1931. The sale of the land went through on the 18th January 1932 and Bata took possession on the 25th March.[66]

Bata's proposals were for nothing less than a 'gigantic new industrial centre which is to contain no fewer than forty different factories and the houses of the workpeople, together with a railway station, riverside jetty, shops, aerodrome, swimming baths, theatre, dance halls and cinemas'.[67] The intention was to manufacture not just boots and shoes but other leather and rubber goods (handbags, coats, toys etc). The scheme also encompassed a new railway station at Low Street, a siding from the railway line to the works, and a river jetty for small craft supplying coal and commodities to the factory (the docks at Tilbury were 'quite close enough' for

exporting the finished goods).[68] The principal property on the estate, St Clere's Hall, was to be retained as the 'English residence' of Bata when he was in East Tilbury overseeing the work.

Work was due to start in March 1932 but did not; no reason was given to the press other than 'Mr Bata wanted to be sure of his markets before commencing work'.[69] A more potentially serious setback occurred when Thomas Bata was killed in July 1932. However, assurances were given that the East Tilbury development would go ahead. Shiploads of girders from Czechoslovakia were evidently on the site by July 1932 and construction of the first factory commenced in January 1933.[70]

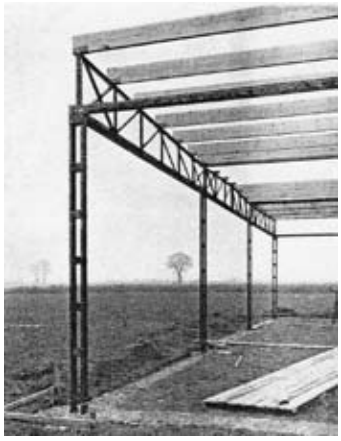

Figure 19 First building under construction, illustrated in *Building* May 1933

Figure 20 Rubber factory (now Nelson House) under construction, illustrated in *Bata Record*, 23 September 1938 (© Bata Limited)

The initial building was a rubber factory (fig. 19), equipped with machinery and a conveyor from Zlin.[71] A 'spreading house' and chemical mixing building (for the rubber compounds) followed, along with a boiler house (subsequently rebuilt elsewhere on the site) and, in 1934, a leather factory. Construction of the housing went hand-in-hand with the factory; the first accommodation was completed between 1933 and 1935 on Bata Avenue. Sports facilities, including a pavilion, were also provided in 1934. Construction of the initial phase of development - which by 1934 comprised a factory of less than two acres and 20 semi-detached houses - was undertaken by local builders working to designs from Zlin. The houses were finished with Czech fittings.

From the 1935 or thereabouts construction work was undertaken by British Bata's own building department and development continued at a steady pace. Between 1936 and 1938 a second leather and a rubber factory were erected (fig. 20), as well as a

garage servicing the fleet of company lorries. The social facilities were expanded by a large building known as the Community House (1935-36) containing shops, restaurant, a gymnasium and hostel accommodation. An outdoor swimming pool, tennis courts (both 1936) and cinema (1938) followed. At the same time a whole new residential area was begun. The Second World War significantly slowed the rate of progress but houses continued to be built until 1941. The company farm, established on land not immediately required for development, to supply food and milk to the growing community, was rebuilt in 1942.[72] A school was erected in 1943 at the eastern edge of the housing district, followed by a technical college, which opened in 1948.

Figure 21 Recently constructed housing on Gloucester Avenue, illustrated in *Bata Record* 20th January 1956 (© Bata Limited)

When the house building programme resumed after the war it initially continued to use pre-war models (fig. 21). These were only abandoned in the mid 1950s, when a new design was produced for what became the final phase of residential development. When the last of these houses were completed in 1966, the Bata estate contained some 362 houses. This was never sufficient for the entire workforce and public transport serving the wider area had to be laid on. From 1950 the factory development also began to pick up with a new boiler house (1956), a hosiery factory (1952-54), plastics department (1958 and 1966-67), wholesale warehouse (1960-61), fire station (1958) and, lastly, computer centre (1967). Responsibility for the design of all of these buildings lay with architects commissioned directly by British Bata or with the company's building department.

Since the early 1970s responsibility for development has shifted away from British Bata. Land was sold to the private developers Fairview for a sizeable residential estate and Essex County Council built new schools for the settlement. The gradual withdrawal of the company from the settlement resulted in the demolition of the farm, school, technical college and swimming pool. The loss of buildings, including some of the earliest housing on Bata Avenue, and the gradual erosion of its character through piecemeal change, prompted Thurrock District Council to designate the Bata settlement a conservation area in 1993 and for a number of buildings to be listed.

The planning of East Tilbury

Bata's vision for East Tilbury seems to have already been partly formed at the time of his visit in December 1931, when he stood at the window of St Clere's Hall to show the owner Mr Wilson 'how he intended to plan out the estate practically on the same lines as that at Zlin'.[73] Detailed plans for the settlement would have been drawn up soon after; usually attributed to Vladimir Karfik, these do not seem to have survived.[74] The plans would have defined the basic layout and the placement of the factory and first housing on Bata Avenue, and may have established the street layout of the main residential area including an eastern roadway (still reflected in the alignment of Queen Mary Avenue) to a proposed railway station. In 1935 a revised plan for the housing and civic areas was drawn up (fig. 22), possibly the work of another Bata architect,

Figure 22 General plan of East Tilbury dating from 1935. The existing buildings are shown in black. (© Bata Limited)

Antonin Vitek.[75] This scheme has housing radiating out across the marshes, with a formal central axis containing a Y-shaped building, perhaps conceived along the same lines as Karfik's similarly shaped hotel at Bat'ov of 1933-6. This was a proposal of some ambition but the plan does not incorporate all of Bata's initial vision, omitting, for example, the riverside jetty, railway siding and aerodrome. Because the settlement at East Tilbury never grew as large as was intended, little if any of the scheme ever came to fruition.

A revised plan for the entire settlement was produced, in 1945 (fig. 23). Whether this came from the head company, based at this time in Canada, or was produced

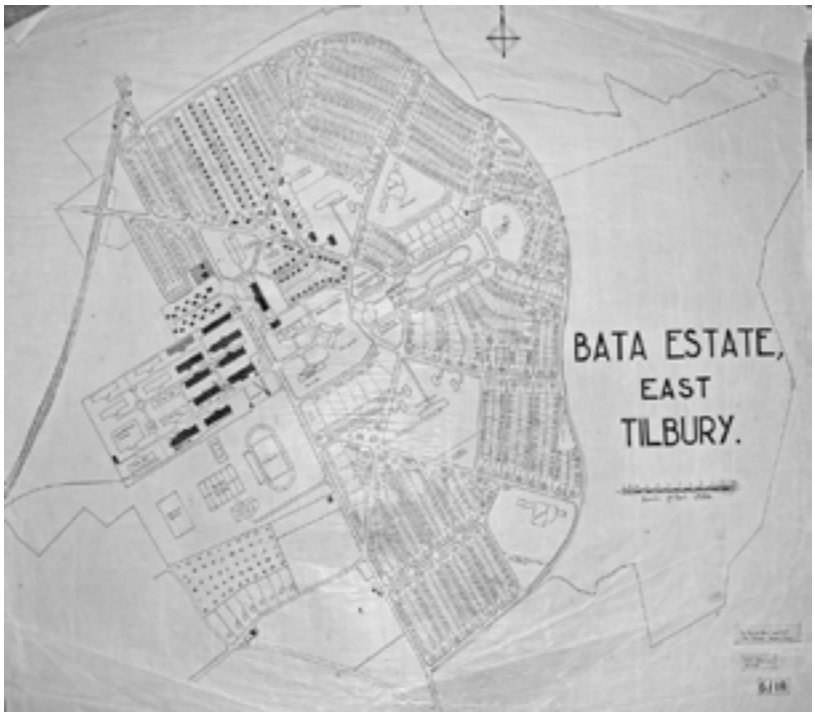

Figure 23 A revised plan of the Bata Estate, this version dating from 1947. The existing buildings are shown in black (© Bata Limited)

in-house within the building department at East Tilbury is unclear.[76] Designed on a scale comparable to the 1935 plan, it differs in its street layout and distribution of elements, for example the formal axis concludes in a church rather than a sports stadium. Unlike the earlier scheme, it shows a proposed expansion of the factory, including additional multi-storey blocks.

British Bata seems to have continued producing plans for future development, including a scheme for an eastern extension to the residential area dating from 1962 (fig. 23). The earmarked land was subsequently sold for private development in the 1970s, marking the abandonment of company control over the future planning of the village.

Figure 24 Plan of proposed development, 1962 (© Bata Limited)

So while East Tilbury is manifestly the product of a planned development following a well-defined set of architectural principles, it is not the result of a single, rigidly adhered to master plan. This is unsurprising, perhaps, given the extended period over which development took place and the vagaries of Bata company history. Therefore, modification and adaptation has also played a role in the evolving form of the settlement; the most obvious example being, perhaps, the abandonment of the road to the railway station in the 1950s, no longer required after the present station was constructed on a different site.

CHARACTERISATION

East Tilbury is composed of three separate elements: the village and defensive sites; the Bata settlement; and the broader landscape in which these lie. The two areas of development are geographically separate and have quite different characters, the key elements of which are described below, but share a unifying estuarial setting of fields and salt marshes.

EAST TILBURY VILLAGE

East Tilbury village retains much of its rural character. The historical pattern of its growth - as a single linear development extending northwards from the parish church and a scatter of outlying properties, mostly farmsteads - has remained essentially unchanged. The formation of its main street is presumably derived from the route of the ancient causeway and river crossing. However, the character of its buildings has undergone considerable change in recent years. Although the village retains some historic structures, most notably its parish church, the great majority of its houses date from the late 20th century. The erosion of East Tilbury's historic fabric seems to have been well underway by 1951, when it was observed that, though 'a village of considerable antiquity', it retained few old buildings; 'some have been pulled down, others have been renovated beyond recognition'.[77]

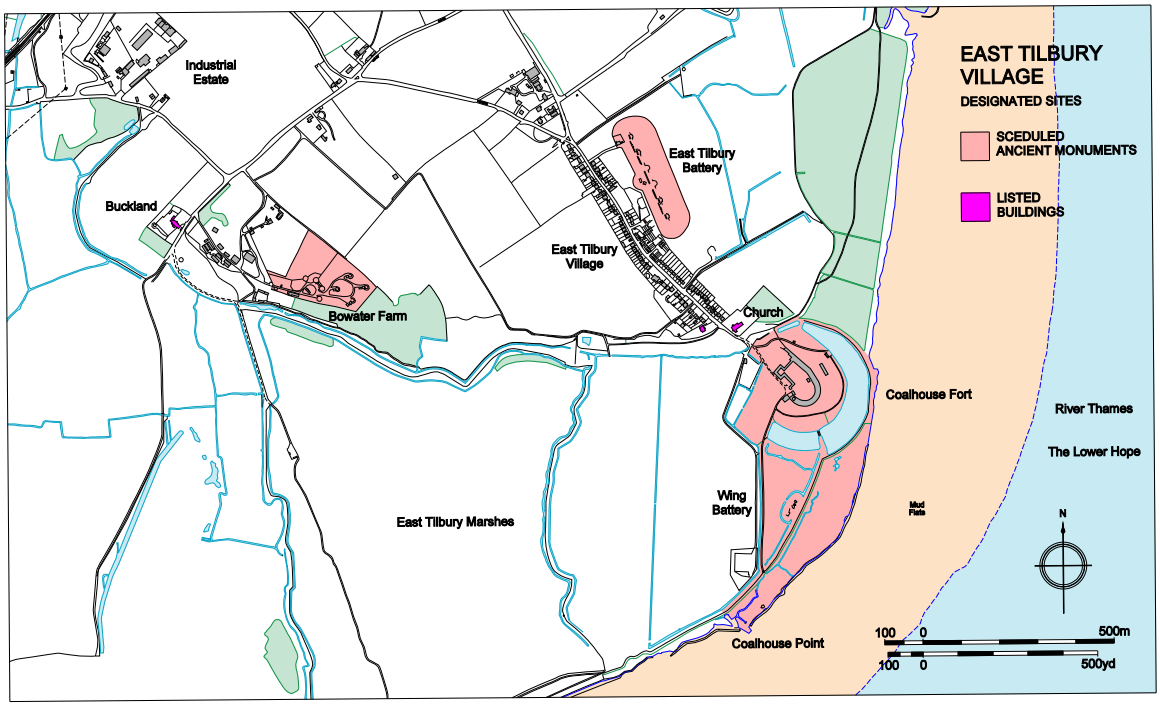

Figure 25 Map of East Tilbury village (© and database Crown Copyright and Landmark Information Group (All rights reserved 2007) Licence numbers 00394 and PT0024)

The main village street is now almost completely developed, although it retained sections of open land until the 1960s. At the south end is the Church of St Catherine (fig. 26), a flint and rubble building that retains a considerable amount of medieval fabric (listed Grade I). It was restored in 1906 and in 1917 it gained a vestry, created from the remains of a failed attempt to rebuild the tower, which had been demolished in 1707. To the west of the church is the Rectory, a handsome three-storey house of stock brick, reputedly built in 1834 (listed Grade II). These buildings, along with Coalhouse Fort to the south, form the most historically significant group in the village, enhanced by the setting of riverside park and churchyard.[78] To the north lies the main street, built up with low-to-medium density houses; a mixture of cottages, detached bungalows and semi-detached houses, ranging in date from the early 19th century to the late 20th century.

Figure 26 (top left) St Catherine's Church (DP040065); figure 27 (top right) Black Cottage (demolished) and the main street of the village in 1922 (©Crown copyright.NMR); figure 28 (bottom right) 5-10 Princess Margaret Road (DP040048); figure 29 (bottom right) 1-2 Hope Cottages (DP040049)

Until the early 19th century the village buildings would have been predominantly of timber construction, some of them thatched and clad in weatherboarding. A few examples of such vernacular houses survived until the mid 20th century(fig. 27). The only remaining example may be 1-2 Hope Cottages (fig. 29), of early 19th century

appearance but probably with earlier origins.[79] The brick houses that started to be built in the 19th century have fared rather better. There is a modest row of four brick houses, Tyas and Potter Cottages, dated 1837, and another pair, Rose Cottages, appear to be a similar age.[80] These older properties retain features such as sash windows and slate-tiled roofs. Several other small developments, including Mariners Cottages and Fairview Cottages date from the end of the 19th century, although these buildings have experienced a greater degree of alteration and window replacement. The site of the Ship Inn contained a public house in the 18th century but the present building dates from the mid 20th century.[81]

Orsett Rural District Council (later Thurrock Urban District Council) built five pairs of council houses in the late 1930s or early 1940s, to typical inter-war designs (fig. 28). These pitched-roofed, semi-detached brick houses, some with pebble-dash render, derived from the domestic revivalist models of Parker and Unwin, make an interesting comparison to the contemporary Bata housing nearby. Further council housing provision for elderly people, St Cedd's Cottages, was made in the 1950s or 1960s. There are a number of inter-war and post-war bungalows. From the 1960s more intensive development has occurred along the street; on formerly open ground, cleared plots (for example, on the site of Castle Farm) and on back lands (Gordon Close and Linley Close). These are mostly conventional small-scale developments of two-storey, pitched-roofed, red-brick houses. Many of the front gardens are now used for car parking. There has also been an incremental loss of locally significant buildings, such as the village school, a simple flint and brick structure of 1855, demolished in the 1970s and the Methodist Chapel, cleared in 2005.[82]

Among the outlying buildings of the village there has been a similar erosion of historical character. The best preserved property is Buckland, a late 18th or early 19th century two-storey house of grey gault brick (listed Grade II). Goshem's Farm has been heavily altered and its outbuildings cleared in the late 20th century; Bowater's Farm has lost its farmhouse and the remaining structures are in poor condition; and Gravel Pit Farm and East Tilbury Place have been demolished.[83] Some piecemeal post-war residential rebuilding has taken place, at the junction of Love Lane and Station Road.

The military defences

East Tilbury retains a notable variety of military structures around the periphery of the village and along the foreshore, many of which are scheduled ancient monuments.

Figure 30 Casemates of Coalhouse Fort (DP040046)

Figure 31 Concrete observation tower with the moat of Coalhouse Fort behind. (DP040070)

The most substantial site is Coalhouse Fort, a large structure of granite-faced gun casemates (fig. 30) with iron shields and basement magazines beneath with a J-shaped plan.[84] This is linked by two-storey ranges of barracks and an entrance gateway, of brick construction faced in Kentish Rag stone, to form a single enclosure. Built in 1861-74, its construction was protracted because its foundations suffered from shifting and cracking. The roof of the fort was modified and strengthened in 1902-3 and the whole complex has undergone incremental change to accommodate changing military technologies. The fort retains its defensive outworks, including a broad water-filled ditch, together with a World War Two concrete observation tower (fig. 31), which controlled an electrically fired minefield in the river. Sold to Thurrock District Council in 1962, the fort underwent some conservation in 1983.[85]

Also included with the scheduling of the fort are a number of other defensive features in its vicinity. To the south is Wing Battery, which dates from between 1889 and 1893. Originally armed with quick-firing guns, intended for small craft such as torpedo boats, it consists of four concrete gun emplacements, ammunition stores and the remains of two later Defence Electric Lights. These were erected over one of the gun batteries between 1902 and 1905 to improve night-fighting capability, and are in a good state of preservation.[86] Other sites include a hexagonal brick, concrete and steel radar tower, thought to be one of only three surviving examples of its type in the country. Built in 1940, it has two levels, the upper supported on steel framework. Its function was probably intended to help friendly shipping negotiate the channel.[87] On the foreshore are the timber remnants of Coal Wharf Jetty. Although present by the late 18th century, and presumably built to land coal, the surviving fabric probably dates from the mid-to-late 19th century when it was used to transport materials, guns and equipment during the construction of Coalhouse Fort. A short tramway was erected from

the wharf to the fort and extended in 1897; the embankment and some sleepers survive.[88]

Figure 32 Aerial photograph of East Tilbury Battery taken in 1953 (©English Heritage (NMR) RAF Photography)

To the east of the main village street are the remains of East Tilbury Battery. Built in 1889-90 and modified in 1903, it forms an elongated oval in plan and has sunken concrete gun pits with ammunition stores beneath.[89] A cookhouse and battery office were located behind the battery and may still stand.[90] The gun emplacements and underground magazines, stores and workrooms were still visible in 1962 but all was derelict and overgrown by 1974.[91] The site is privately owned and has no public access.

The other scheduled site at East Tilbury, Bowaters Farm Anti-Aircraft Battery (fig. 33), also has no public access. Located just to the north of farmstead, it is formed of two groups of four concrete gun emplacements, connecting roads and vehicle parks, a magazine (added ***c.***1942), a command post, power house and other ancillary buildings and a barracks. The site, officially known as Buckland (after the nearby house) or N13, was established in 1939

Figure 33 Aerial photograph of Bowaters Farm Anti-Aircraft Battery taken in 1953 (©English Heritage (NMR) RAF Photography)

and provided with concrete emplacements in 1940, which were altered in 1944. It is a well-preserved example of its type retaining most of its structures, including the red-brick barracks on the north side of the site. Given a new fence in 1951, the site was maintained until its closure in 1956-57.[92]

THE BATA SETTLEMENT

In contrast to the informal, incremental and dispersed character of the village, the Bata settlement remains, as it was conceived, a formally planned, self-contained and relatively compact development. The settlement is bisected by Princess Margaret Road, with the Thames Industrial Park (the former Bata Factory) and a small amount of housing to the west and the bulk of the housing, village centre and community building to the east. The main residential area is divided into company housing, designed in a limited number of types and built between 1936 and 1966, and an adjoining large private development dating from the 1970s. At the south end of the settlement is a park, a school and a sports ground. Despite later additions and piecemeal alterations to many individual buildings, the Bata settlement retains a consistency of character that derives from the use of standardized building techniques, repetition of forms and a Modernist aesthetic.

Until the 1970s the settlement adhered to the tenets of town planning developed by Bata in Zlin during the 1920s and 1930s, and applied to all Company towns and international colonies. The basic model had separate residential, manufacturing and civic zones. In East Tilbury the factory was isolated from the majority of the housing by the road. Following usual practice, the key unit within the residential zone was the family house; respecting Bata's maxim to 'work collectively, but live individually'. The civic component, intended to provide the settlement with its symbolic axis, was edged on the west by the factory and the north by public buildings (the school buildings on the east side are a later addition).[93] Planting and landscaping were used both to enhance and unify the different elements, as it

Figure 34 Landscaped area outside the factory and the Memorial Park (DP040057)

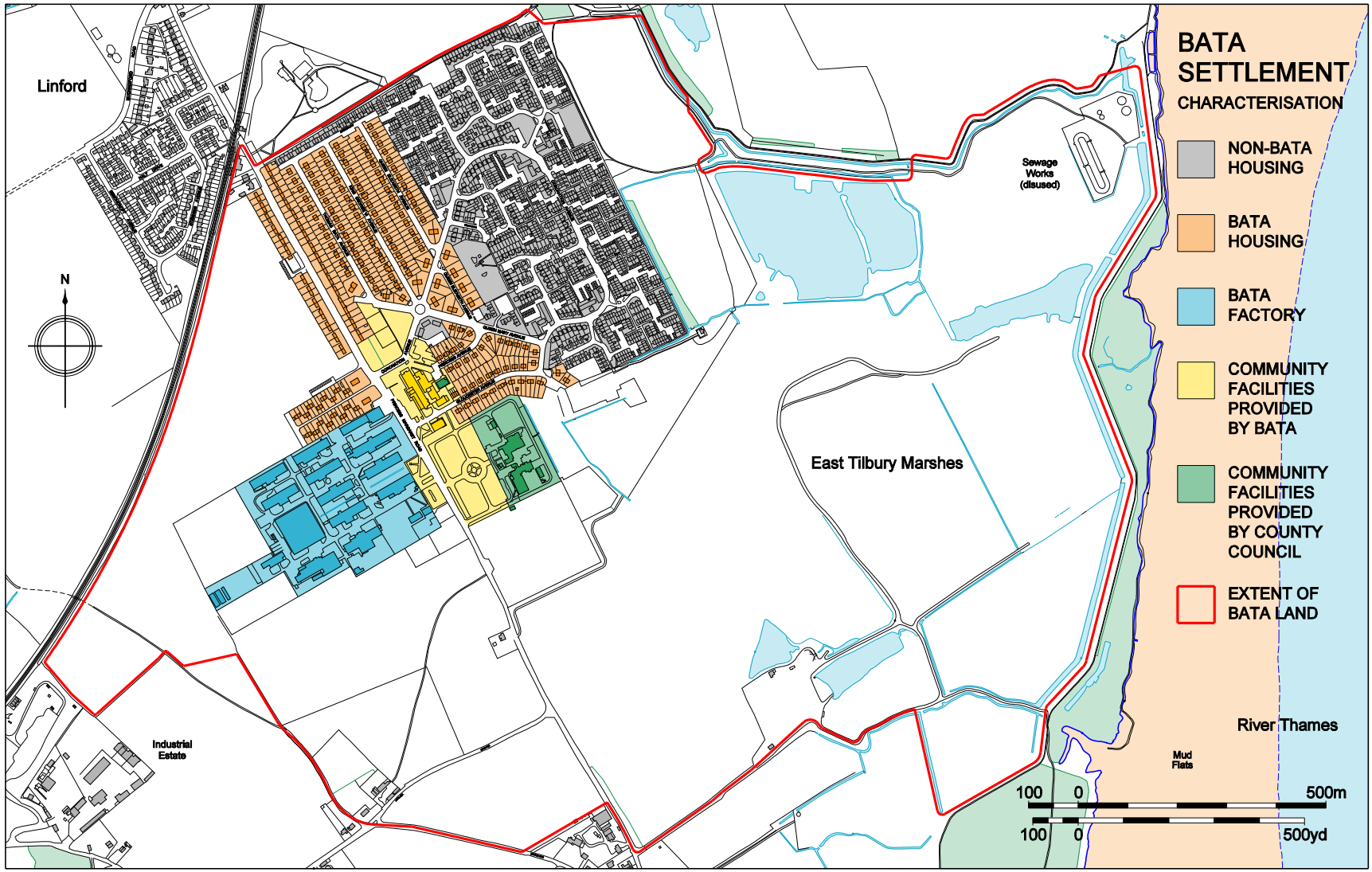

Figure 35 Map of Bata settlement showing different its different elements (© and database Crown Copyright and Landmark Information Group (All rights reserved 2007) Licence numbers 00394 and PT0024)

was believed that 'attractive surroundings form one of the most valuable incentives to successful work' (fig. 34).[94] The surrounding fields, once farmed by Bata, also functioned as a (non-statutory) green belt for the settlement.

East Tilbury was built using two construction methods: load-bearing walls for the family housing and framed structures for the manufacturing and communal facilities. The design of the buildings initially followed Czech models, but from the 1950s the architects employed by British Bata were able to exercise a greater degree of autonomy in the design of both the housing and factory premises.

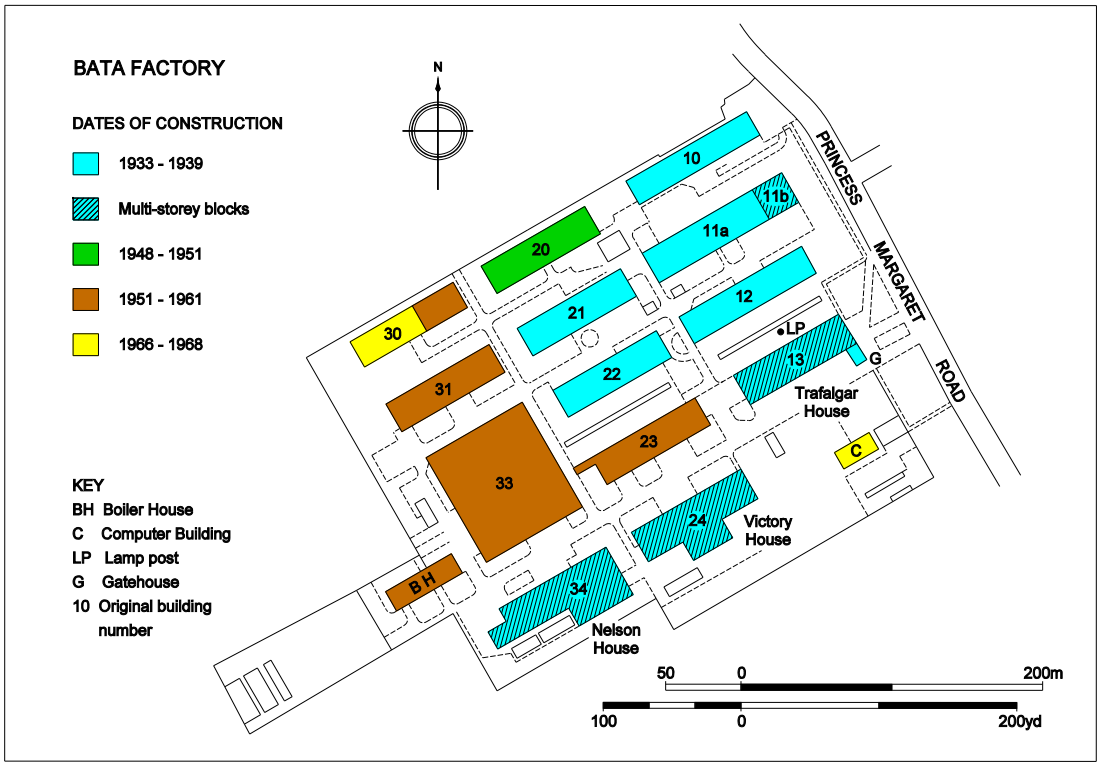

Figure 36 Phase plan of the Bata factory, with the original building numbers. (© and database Crown Copyright and Landmark Information Group (All rights reserved 2007) Licence numbers 00394 and PT0024)

Thames Industrial Park (the former Bata Factory)

The factory still dominates the settlement, its taller buildings (one topped with a water tank still bearing the Bata name) acting as local landmarks, visible for some distance across the flat fields and from the river. The factory was laid out on a grid pattern with an off-centre main axis running east to west, from the gatehouse to the boiler house (fig. 36).[95] The estate contains fifteen units, either single or multi-storey buildings (the latter grouped along the main axis) erected by British Bata between

1933 and 1968. Although sold by the company in 1997, the site remains reasonably well maintained, retaining grassed areas between the buildings and a number of trees (planted by Bata). The buildings, though now in a variety of uses, are mostly painted white with details such as the steel or concrete framing picked out in blue or black.

Figure 37 Building 12, the first of the single-storey factories (DP040054)

Figure 38 Trafalgar House (originally building 13), the first of the multi-storey blocks (DP040061)

Both the single and multi-storey forms were derived from rational factory planning as developed in the United States in the first two decades of the 20th century.[96] Built broadly from east to west, the first building was a single-storey steel-framed rubber factory (building 12), erected in 1933 (figs 37, 39-42).[97] Designed in Zlin, it was built using Czech steel, delivered in 'random lengths' and constructed 'without a single rivet or bolt'.[98] The main contractors were Walsham Limited, the welding and erection work was carried out by the Gravesend Welding and Electrical Engineering Works Ltd.[99] The 262ft long and 62ft wide structure is built of steel columns (formed of two channels) and roof trusses (with diagonal struts and made up of two shallow v-shaped sections) with reinforced concrete walls and welded Crittall sash side lights

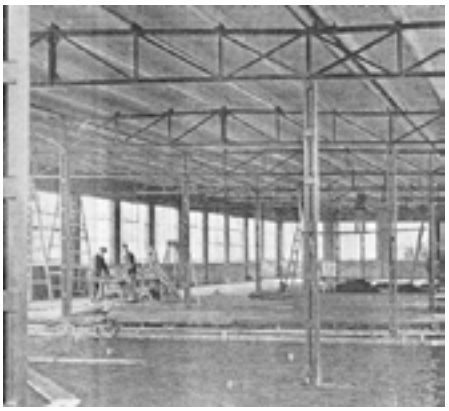

Figure 39 Building 12 under construction, illustrated in *Building,* May 1933

Figure 40 The interior of building 12 in 2006 (DP040053)

Figure 41 Detail of the construction of building 12, taken in 2006 (DP040052)

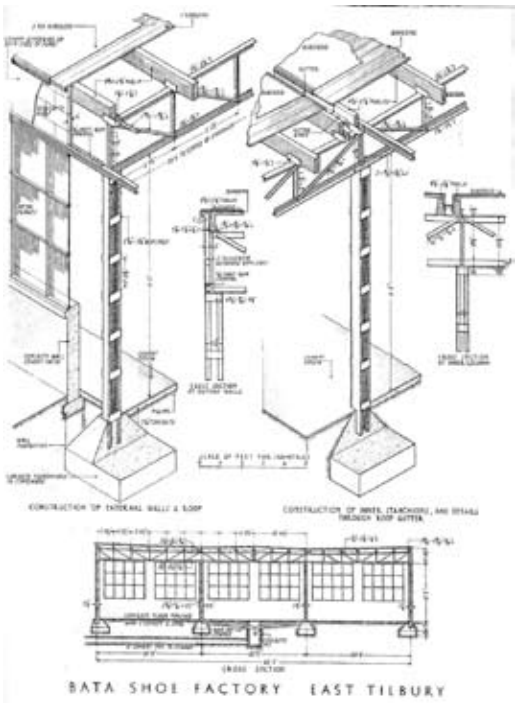

Figure 42 Drawings of the construction of building 12, published in *Building*, May 1933

or windows.[100] Erected in about 21 working days, *The Builder* noted that 'the extreme lightness of the trusses, and more particularly the columns, is an outstanding feature of the design'.[101] Credit was given to the District Surveyor of Orsett Rural District Council, G F Andrassy, for permitting welded construction, as opposed to the more traditional method of riveting. In Britain welded construction was, at this date, rarely approved by local authorities, including the London County Council, despite its advantages of speed and economy. Four factory buildings (originally numbered 10, 11a, 12 and 21) of this type were constructed at East Tilbury between 1933 and 1938. With the exception of the former garage (building 10) they remain little altered and are in a good state of preservation (figs 40-41).

The multi-storey buildings, three five-storey blocks and one three-storey range, were erected between 1934 and 1938. These were built with reinforced-concrete frames in modules of 6.15m, on a system evolved by the architect Frantisek Gahura and builder/engineer Arnost Sehdal in 1927 for Zlin.[102] Earlier versions of the design have a square or rectangular section column (in East Tilbury the column width varies - diminishing in size progressively as the building rises). This type ceased to be built in Zlin from around 1930 but continued to be used for the overseas satellites or colonies, including the first two multi-storey blocks erected in 1934 at East Tilbury (Trafalgar House,

originally building 13, and building 11b, built as a leather factory and chemical mixing house respectively) (figs 38 & 44). The contractor was J L Kier Ltd. The other two buildings, Victory House (originally building 24) and Nelson House (building 34) were constructed as a leather factory and rubber factory respectively (fig. 43). Erected in 1936-38, they are both built using circular columns, of uniform diameter on all floors, designed to enable travelling steel formwork to be used.[103] The more distinctive circular column type is perhaps the better known of the two forms because of its widespread use for a range of different building types in Zlin.

Figure 43 (top left) Exterior of Nelson House and Victory House (DP040067); figure 44 (top right) Third floor, Trafalgar House (DP040042); figure 45 (bottom right) Stairs, Nelson House (DP040043); figure 46 (bottom left) Stairs, Trafalgar House (DP040041)

The three five-storey buildings conform to the standard 'unit', that is 13 bays by 3 bays, with a projecting circulation and sanitary block of 3 bays by 1 bay in the centre.[104]

The three-storey block, which is connected to a single-storey steel-framed range, has 3 bays squared. All of the exteriors are extensively glazed, the panels formed by the external framing filled with steel-framed windows and painted brick. A degree of alteration and extension has occurred to the blocks, as the standardized modular construction anticipated, with side and back additions to Nelson House and a rear extension to Victory House.

The interiors of all three blocks have undergone recent change, including subdivision into smaller units to accommodate new occupants. All evidence of shoe manufacturing (fig. 44) has gone although until August 2006 British Bata continued to rent warehouse space in Nelson House. The blocks retain the original stairs, with tubular steel handrails and a dividing balustrade to each flight, incorporating a down pipe as a support (figs 45-46). Trafalgar House (listed grade II), which contained the offices, shoe sales rooms and a general conference room, retains a wooden panelled and glazed entrance on its east side. This arrangement possibly dates from the 1950s; if so it was presumably designed and built by British Bata's own in-house shop-fitting department.[105]

The other factory buildings are single-storey structures, either steel or concrete framed with brick infill and steel-framed windows, dating from 1948 to 1952. Most are similar in appearance to the 1930s blocks. However, several blocks at the north-east corner of the site do vary from this pattern. Building 90-95 (originally building 30) was constructed for the plastics department in two phases, 1958 and 1966-67 (fig. 47). This steel-framed structure has a sawtooth roof, described while under construction as 'different and more modern in style than any of the previous buildings'.[106] The large structure to its south (building 70-76; originally building 32-33) was designed as an equipment store, tea centre and wholesale warehouse. It was also built in two stages, 1957 and 1960-1, and has projecting roof lights, tubular-steel roof trusses and an unpainted brick exterior. Both buildings were designed by the architect Bronek Katz, of Katz and Vaughan, who in 1958 also reworked the Bata garage building (originally

Figure 47 Building 30 in 2006 (DP040056)

Figure 48 Gatehouse in 2006 (DP040051)

Figure 49 Former boiler house in 2006 (DP040044)

building 10 and part of the factory, this structure is no longer included within the Thames Industrial Park).

The other buildings within the complex include a single-storey brick gatehouse, surmounted by a clock (fig. 48). This probably dates from the late 1930s or early 1940s when the factory entrance was moved to its present position. The former boiler house (fig. 49), at the west end of the site, was built in 1956.[107] This brick-built structure, with projecting concrete-framed windows, was designed as a cutting edge facility 'providing heat and power under the most advanced conditions known to modern industry'.[108] Now lacking its power-generating machinery, the building has also lost its tall chimney stack, originally painted with the company name. This structure replaced an earlier boiler house (dating from 1933); its site was reused for a fire station (building 60), which opened in 1958.[109] The last building to be constructed on the factory site was the computer centre, to the south of Trafalgar House. This single-storey steel-framed structure, clad in grey brick walls and darkened glass, was designed by Watkins Gray in 1967 and erected the following year. The use of well regarded firms such as Katz and Vaughan and Watkin Gray are indicative of Bata's continuing commitment to good quality architectural design.

Figure 50 Factory lamppost in 2006 (DP040055)

Within the landscaped setting of the factory there remains a solitary original lamppost (fig. 50), located between Trafalgar House and Building 12. Built of concrete, with a polygonal shaft, and a curved neck

with a pierced flare or crest and metal light fitting, it has a mildly Expressionist quality that suggests a Czechoslovakian rather than English design.

Housing

The residential zone of the settlement is essentially rectangular in shape; the western half by company-built housing constructed in stages between the 1930s and the 1960s, to which a few late 20th century developments have been added, the eastern half formed of a single 1970s private development by Fairview Homes. All the housing is low-to-medium density and is almost entirely brick built (although the initial phase of Bata housing was of concrete).The basic unit of the Bata accommodation is the semi-detached house, while the private estate is mixed, combining blocks of flats, terraces and semi-detached groups. The difference between the two parts is most clearly represented in the different approaches to street planning: the Bata estate has a more formal and geometric arrangement whilst the Fairview estate is a maze of cul de sacs. The treatment of the houses is also dissimilar. The company housing is uniform and regular, built over an extended period to a limited number of designs with a simple Modernist aesthetic (although mixing flat and pitched roofs). With the private housing there is more consciously designed variety in its mixture of detailing, building types and layout.

The Bata estate

This is principally laid out around two roads, which meet at a rond point, with residential streets running off them (linear to the north and curving to the south). The street names are derived either from the company or from the British royal family. As built the company housing represents only a fragment of the much larger intended scheme, adapted over the decades in the light of an evolving general plan.[110] Almost all of the houses are grouped into the residential zone: there is only one anomaly, Bata Avenue, which is both a cul-de-sac and situated on the west side of Princess Margaret Road.[111]

Built in 1933-34, Bata Avenue was East Tilbury's first company housing to be built (fig. 52), and is constructed with slightly different materials, plan form and layout from the rest of the estate. The two-storey, semi-detached, flat-roofed houses are arranged on a chequerboard plan (used by Unwin and Parker at Letchworth Garden City); that is, set at alternate ends of the plots to maximise the garden space between the houses.[112] They were erected by local contractors Walsham Limited to Czech designs,

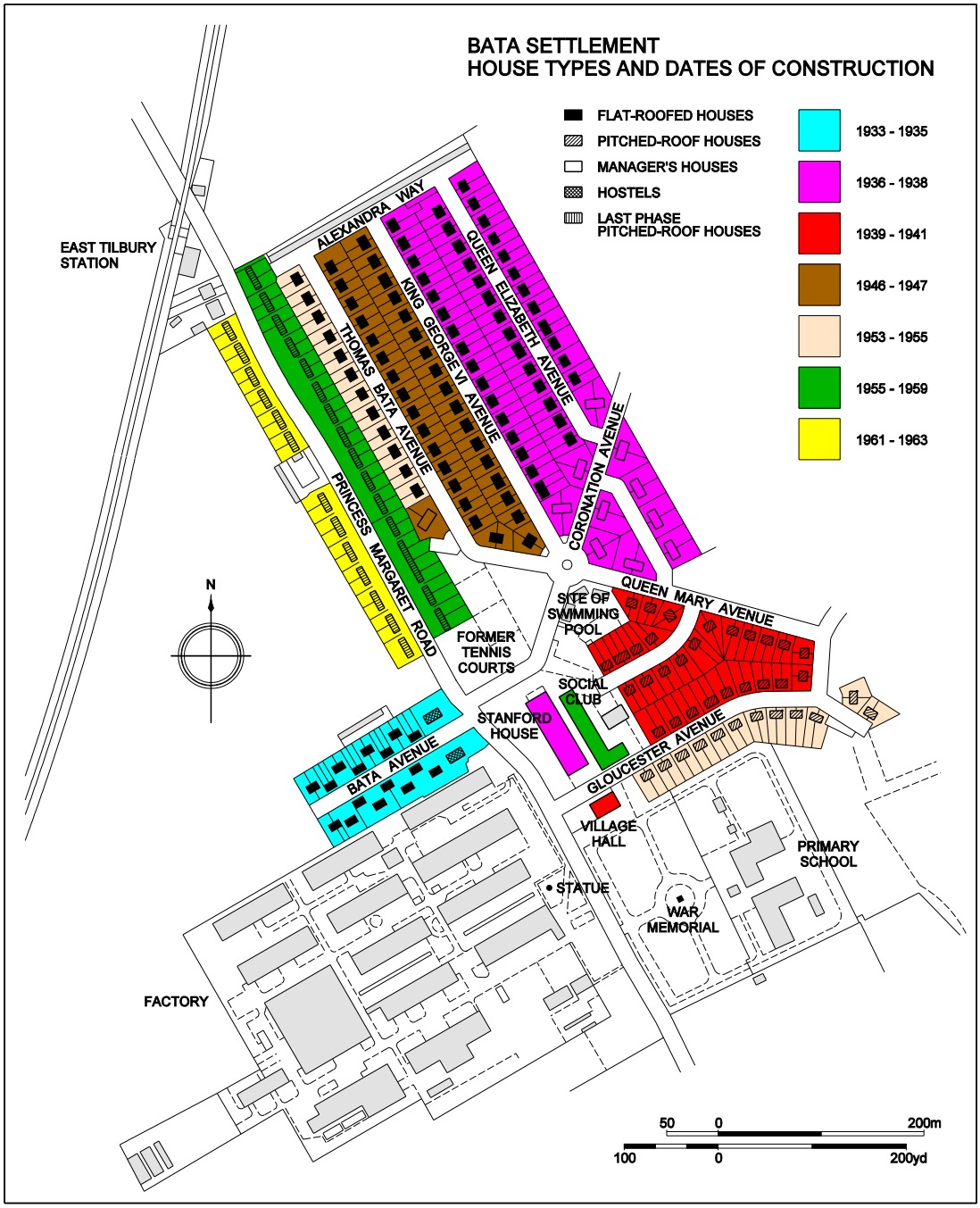

Figure 51 plan of the Bata housing (© and database Crown Copyright and Landmark Information Group (All rights reserved 2007) Licence numbers 00394 and PT0024)

indicated by the use of side entrances (the usual arrangement in Zlin, as Bata thought separate entrances, rather than fences, made 'a good neighbour') and standardized fittings from Zlin (which is presumably why the windows have wooden rather than metal frames).[113] The houses were constructed from a mixture of concrete, for the roofs, and brick for the walls.[114] Attributed to Vladimir Karfik and Frantizek Gahura, the Modernist handling is characteristic of Bata, with unadorned elevations, flat planes

Figure 52 Bata Avenue, viewed from the east, in 2007 (DP040059)

interrupted only by the straight lines and rectilinear forms of the downpipes, windows and door canopies, and contained by the projecting eaves of the flat roofs. Just visible above the roofs are the shared central brick chimney stacks. A number of the houses are listed grade II (nos 4-18 and 24-34), all on the north side of the street. In the 1980s several of the other properties were demolished and rebuilt as facsimiles. The original buildings, which include 13-17 and 31-33 on the south side, can be identified by their bell-shaped rainwater hoppers rather than the simple box-shaped hoppers of the replacements. The two buildings at the east end of Bata Avenue, designed in a similar manner, were intended as hostels for single workers. No. 2, on the north side, is listed grade II, but No. 1 has been reworked to provide basement access.

The great majority of the 362 company houses were constructed in phases between 1936 and 1955 (fig. 51) in two basic forms, flat-roofed and pitched roofed, and a variety of sizes, for managers and workers (with either two or three bedrooms). All were built of brick, usually rendered or painted. The combination of different types and finishes was not a concession to English building practice and conditions, but typical of Bata planning.[115] However, it is likely that the design of the workers' houses, although probably derived from Czech models, was modified by the building department at East Tilbury from the mid 1930s.[116] The flat-roofed type of workers' housing, used on all the streets north of Coronation Avenue, was probably designed in 1936 and continued to be built, with further modification, until 1947 (on Thomas Bata Avenue and the west side of King George VI Avenue). It was designed as a parlour house with two or three bedrooms (fig. 53). It differs externally from the Bata Avenue housing by having front entrances (and side doors) and a simple level of detailing: a cornice band beneath the roof eaves and a projecting or recessed surround to front doors and windows (depending on the date of the house). Since the sale of the houses in 1980 there has been considerable piecemeal alteration, most

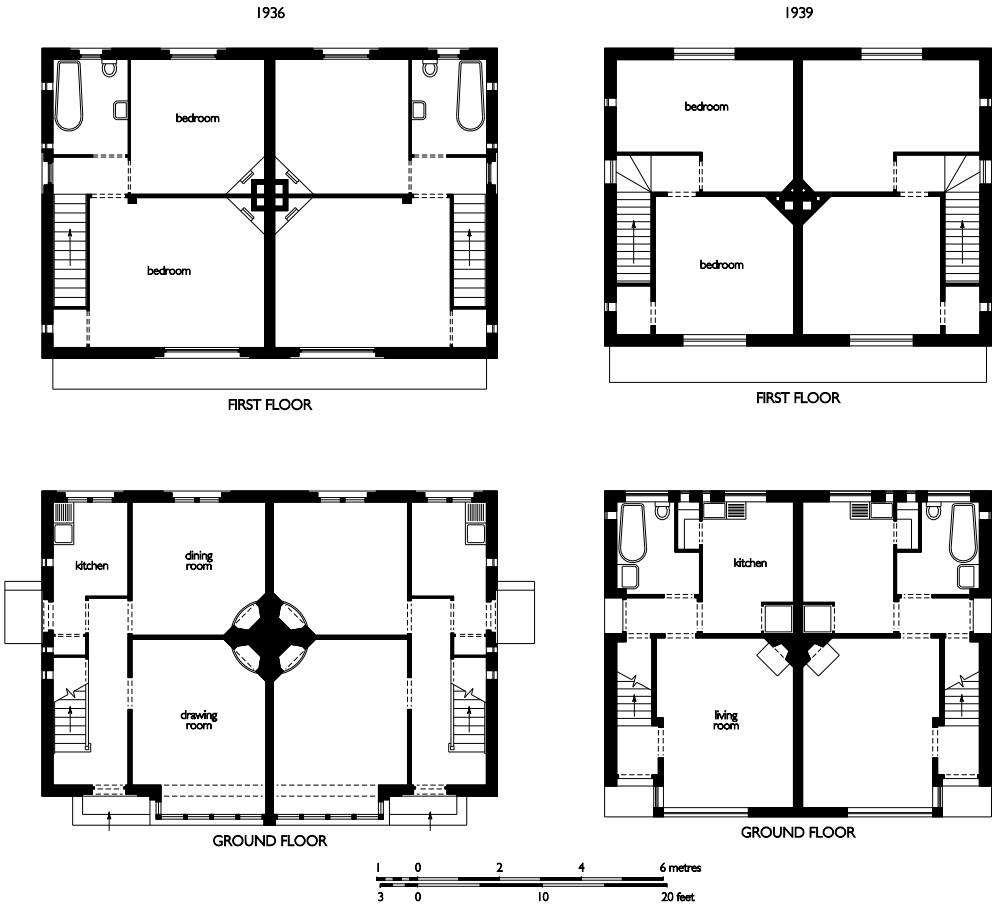

Figure 53 Pairs of semi-detached, two-bedroom houses; those of 1936 (left) have flat roofs while those of 1939 (right) have pitched roofs. Redrawn from original drawings by the Building Department, British Bata Shoe Company Ltd.

particularly door and window replacements, additions and side extensions. Originally they were provided with steel-framed Crittall windows, the only surviving example of which is a side light at No. 19 King George VI Avenue. However, a number of houses retain the low brick front garden walls (side fences were not allowed), and wrought-iron gates.

The pitched-roof type, used for the streets to the south of Coronation Avenue built up between 1938 and 1955, would appear to have been designed slightly later.[117] These houses also came in two- and three-bedroom versions (fig. 53), differentiated by the number of upper-floor windows. They were, at least initially, planned as non-parlour houses with bathrooms on the ground floor. In addition to the tiled pitched roofs, with tall brick chimneys (the three-bedroom houses having side stacks and well as the usual centre stack), they also vary from the previous type in the external




Figure 54 (top left) King George VI Avenue (DP040035; figure 55 (top right) Gloucester Avenue (DP040064); figure 56 (bottom right) 1 & 3 Farm Road; figure 57 (bottom left) Queen Elizabeth Avenue with view through to KIng George VI Avenue (DP040034)

finish and some of the detailing.[118] Some houses were only partly rendered with the brickwork left exposed and several properties on the south side of Gloucester Avenue retain this arrangement (fig. 55). A similar level of alteration, through side extensions, front porches and window and door replacements etc, has taken place. However, a small group of houses on Farm Road (fig. 56) retain a number of original features; Nos 1, 2 and 4 still have their original Crittall windows, while Nos 3 and 4 retain their original front doors, with green margin glazing.[119]

The larger houses for managers (fig. 58), placed diagonally at the ends of the streets and along the southern end of Queen Elizabeth Avenue, were mostly built in 1938. They are essentially expanded versions of the flat-roofed workers houses, with built-in garages and covered terraces above (this latter detail was omitted from the pair at the south-west end of Thomas Bata Avenue, built later between 1946-47 and incorporated a doctor's surgery). The most distinctive details are the square openings

along the base of the terrace balustrades. Several different examples of managers' houses with garages were built in Zlin, some as a result of a competition held in 1935.[120] Although possibly adapted by the building department at East Tilbury, it seems likely that the design of these larger houses came from the head office. As they were intended for managers, it is also probable that many of the initial occupants were Czech.

Figure 58 Managers' houses, 1-2 Queen Mary Avenue (DP040036)

Figure 59 Princess Margaret Road housing viewed from Thomas Bata Avenue (DP040037)

The last phase of Bata housing, constructed in two stages (1954-58 and 1959-66) to either side of Princess Margaret Road (fig. 59), represents a clear break with the pre-war types. They were almost certainly designed by R S Fraser, ARIBA for British Bata.[121] These long but narrow two-storey houses have brick exteriors with pitched roofs and small brick chimneys. Laid out as semi-detached pairs and one group of four. The exteriors mix red and yellow brick, used variously for the end walls and front panels, and are detailed with a wide band of render, concrete window boxes, a pattern of projecting headers to the ground floor and glass-block surrounds to the front doors. However, some elements from the earlier houses were used, including Crittall windows, flat canopies over the side entrances, and front doors of dark wood and green margin glazing. But, as elsewhere, these features have been subject to replacement; the least altered externally is now No. 203.

Fairview estate and later housing

The large private development, built in the 1970s on land sold by Bata, contains a mixture of bungalows, two-storey houses and three-storey blocks of flats. These are named after British rivers, arranged in a network of cul-de-sacs that run off a looping access road (a continuation of Coronation Avenue). They are standard designs, with a mix of brick walls, tile-hanging or board cladding and tiled roofs. Two late-20th-century

developments have occurred within the area of the Bata estate. Kensington Gardens, built on the site of the company swimming pool, comprises three blocks of flats with central gables. These have rendered walls and windows with glazing bars, presumably intended to harmonize with the Bata housing. Similarly a row of semi-detached houses at the north end of the estate, Alexandra Way, would appear to have been designed to blend in with the existing housing (although they have pitched rather than flat roofs).

Community Facilities

What was originally conceived as the 'civic zone' at the south end of the settlement today encompasses the Thomas Bata Memorial Park and, immediately outside the factory, a small garden. To the north of the park lies the Village Hall, erected as a cinema in 1938. North of this is Stanford House, built as the Community House in 1935-6 and then adapted to form the Bata Hotel in 1957-59. There is also a separate recreation centre and shops, opened in 1959, and a library dating from 1975 (not constructed by Bata). On the east side of the park is East Tilbury County Primary School, built by Essex County Council in the 1970s with later additions.

Although intended as the key symbolic axis of the settlement, the open ground to the east of the factory was only formally laid out in the mid 1950s, as a much reduced version of what had originally been conceived as a town square. The landscaped element has two parts, a strip of land immediately outside the factory gates and a larger park across Princess Margaret Road. The factory garden has, on one of its diagonal pathways, a bronze statue of Thomas Bata (fig. 5) The full height figure, sculpted by Joseph Hermon Cawthra, was unveiled in 1955. The Thomas Bata Memorial Park has as its centrepiece a war memorial dedicated to the Second World War dead of the British Bata Shoe Company (fig. 60). The monument, a bronze urn and flame with an altar, plinth and lofty rectangular surround of polished stone, also dates

Figure 60 The war memorial in the Thomas Bata Memorial Park (DP040047)

from the mid 1950s. Both parks retain the original scheme of grassed areas lined by privet hedges and planted with a variety of trees. However, the Memorial Park has been reduced in size, its eastern half used as the site for a school.

Although Bata opened its own school in 1943, many children from its estate had to attend the old village school and from the 1950s the company was agitating for a new County school to be built on their lands.[122] In 1970 the plans for East Tilbury Junior School were finally drawn up by Essex County Council under the County Architect Ralph Crowe. By 1975 an L-shaped one-storey range of grey brick with timber detailing had been constructed. Soon after it was enlarged by a one-storey system-built concrete block to the north, designed by Jonathan Barham of the Architects' Department in 1974 as an infants school and nursery.[123] The group has subsequently been enlarged by a two-storey flat-roofed building.

Figure 61 The former Bata Cinema in 2006 (DP040039)

Built as the Bata Cinema in 1938, the village hall (fig. 61) is a simple rectangular building with an uncompromisingly blocky outline. Constructed with a steel-frame and brick infill walls, it has a two-storey front, stepped out at the ground floor, with a shallow projecting section on the first floor. Behind lies the single-storey hall. The building has plain walls, detailed principally by the structural elements and the arrangement of window and door openings, with a projecting flat roof. Although designed using the same architectural vocabulary as the housing and factory it deviates from the standard building system, as was often the case in Bata developments with one-off buildings such as cinemas and churches. Presumably the product of the Architects' Department in Zlin, the building functioned as a cinema from its 'gala opening' in October 1938 until 1965. There were seats for 350 people. In 1967 it was converted into a village hall, refurbished in 1997. As a result the exterior has lost its original signage (the Bata logo surmounting the roof and the word Cinema in letters across the band below the cornice) (fig. 7) and front doors, and a strip of windows has been inserted at the front on the first floor. But internally, the hall area retains a

number of original fittings, including coving and light coverings to the side walls and projections opening in the back wall as well as original doors with diamond-shaped bevelled-glass windows. Additions include a shallow stage, projecting into the hall and a wooden floor.

Figure 62 The former Community House, now Stanford House, in 1938 (©Crown Copyright. NMR)

Stanford House is a five-storey, 13 x 3-bay, concrete-framed block, built to the same functional modular design as the multi-storey factory buildings, in this instance using the circular column model. Started in October 1935, and completed the following year, it slightly predates Victory House, the first factory building at East Tilbury of the circular-column type. It was designed as the Community House, a key building in all Bata settlements and towns. Acting as a focus for public and social life, the community houses were of great importance in engineering the company spirit. Today the building functions as a block of flats with ground-floor shops, the consequence of a conversion in 1982 by local architect D Belsom.[124] Originally it accommodated a wide range of facilities, including ground-floor shop units, a ballroom, restaurant and works canteen, dormitory accommodation for workers and, on the top floor, a gymnasium. At night the building was floodlit, 'a landmark for miles', the yellow light of its windows contrasting with the bright red neon of a 'huge surmounting' Bata sign (fig. 62).[125] In

1957-59 the building was converted into the Bata Hotel by Bronek Katz. The single-storey front entrance, projecting side stairs, and front canopy with circular openings all date from this phase of work. Further alterations occurred in 1982, including the sub-division of the former ground-floor ballroom into shop units (one of which still retains part of the original parquet flooring). However, despite the degree of change and loss of signage, it remains easily recognisable as a 'Bata' building.

Figure 63 (top) The interior of the social club, used for an advertisement in *Bata Record* 19th June 1959 (© Bata Limited

Figure 64 (bottom) East Tilbury Library in 2006 (DP040069)

To the east of Stanford House is the single-storey Recreation and Sports Club, built in 1959 and designed for Bata by Bronek Katz. The building has a steel frame, with walls of grey brick and black wood cladding, and is roofed with pre-stressed concrete beams.[126] It now has a plain appearance. Internally the lounge area was designed with a slatted ceiling, fluorescent lighting troughs and individual lamps, and provided with tubular chairs, reminiscent of Katz's shop interiors for Bata (fig. 63). [127] The erection of a small block containing an expresso bar on Gloucester Avenue was part of the same programme of work as the club and hotel conversion. Its exterior was described by Ian Nairn as 'beautifully detailed and of a showy crispness just right for a coffee bar'.[128] .The modest cluster of community buildings was expanded in 1975 by a small library (fig. 64), probably built by Essex County Council, designed in a similar manner to the Club. In 2002 space was made within the library for the Bata Reminiscence Centre, an important resource containing images, documents, books,

ephemera and oral-history records relating to the British Bata Shoe Company.

Of the once extensive sports facilities provided by Bata, there are now only remnants, principally the overgrown site of the tennis courts to the north of Stanford House and a sports field to the south of the Memorial Park.

The landscape setting

Landscaping and planting were important to Bata, and, true to its garden-city principles, the company took great care with the open space around the factory (fig. 65) and estate. This involved the creation of grassed areas and planting of flower beds, shrubs, privet hedges and trees (by 1955 over 100 trees, mainly Lombardy and Black Poplars, had been planted).[129] Until the 1960s or 1970s these areas were maintained by the garden section of the building department. In addition, company houses were provided with cherry trees, and annual competitions were held for the best garden in the estate and in the factory (the different departments within the factory were encouraged to maintain gardens beside their buildings). Since the withdrawal of Bata there has been the inevitable loss of grassed areas and flower beds for car parking (both in the factory and in front of Stanford House) but many trees and privet hedges remain and the Memorial Park continues to be maintained by Thurrock District Council.

Figure 65 Remaining planting in the former Bata factory in 2006 (DP040045)

THE WIDER SETTING

The low-lying river plain in which East Tilbury is situated, with its mixture of open fields, salt marshes and mudflats, bears the evidence of centuries of human intervention and industrial activity. The current pattern of land use remains varied - encompassing farmland, allotments, areas of gravel extraction, landfill, recreational grounds and maintained parkland.

The remains of an earlier history are present in the form of the field enclosures, the mound of a long demolished windmill (to the west of the junction between Station

Figure 66 Tilbury Power Station, as seen from Coalhouse Fort car park (DP040066)

Road and Princess Margaret Road) and the old highway known as the 'Coal Road' (surviving to the west of Station Road as a trackway).[130] Several 'Red Hill' salt-production sites have been identified at Bowater's Farm and west of Coalhouse Fort.[131] Mid-to-late 20th century interventions include large-scale gravel extraction to the northeast of the village, landfill sites and overhead power lines and pylons distributing electricity from the power station at Tilbury (fig. 66) (the first phase of which opened in 1958, followed by a second phase in 1969).[132]

Figure 67 Sunset on the marshes, East Tilbury, taken from Donald Maxwell 1933 *A Detective in Essex* (London: John Lane)

Since the 1950s East Tilbury has lain within the metropolitan Green Belt, resulting in restrictions on new development in the area.[133] The value of the landscape as a public amenity has been enhanced by the creation of two areas of parkland by Thurrock Urban (now Borough) District Council. The landscaping of the area around Coalhouse Fort was undertaken in the 1960s, following its sale by the Ministry of Defence. In addition to recreation facilities, this modestly sized public park has sweeping views across the river to Kent and across the marshes to the power station. Since 2004 further recreational space has been created between the railway line and the Bata estate, named Gobions Park after the farm that once stood here.

These current uses are all consistent with Green Belt policy, as they allow the landscape to retain its most important attribute — openness.[134] As a consequence the broad sweep of East Tilbury marshes still possesses something of the vision evoked by William Morris: 'the wide green sea of the Essex marshland, with the great domed line of the sky, and the sun shining down in one great flood of peaceful light over the long distance ....and the river and the craft passing up and down'.[135]

SIGNIFICANCE

Although East Tilbury and its immediate landscape retains a number of sites and structures of historical importance, it has two areas of special significance: the military sites and the Bata settlement.

The number and variety of military facilities at East Tilbury are indicative of the area's key role in the Thames defences from the mid 19th to the mid 20th century. That the area has a military heritage of national significance is reflected in the number of scheduled sites. The presence of such a range of defensive structures in a relatively small area has even prompted suggestions that a centre for the study of the history of the defence of the Thames could be sited here.[136]

The significance of the Bata Settlement is both international, as one of an unparalleled global collection of Functionalist satellites or colonies, and national, as a rare example of an inter-war planned industrial village and an uncommon ensemble of Modernist buildings. Zlin is acknowledged as an important centre of Czech Modern Movement architecture and a leading example of inter-war rational industrial planning. That this prototype was then used for the construction of industrial settlements on several continents was even more extraordinary. It appears to have no equivalent among other multi-national companies of the period. It is beyond the scope of this report to discuss the present condition of the other Bata satellites but it seems likely that East Tilbury is one of the better preserved examples.[137]

A number of other model or company villages were built in England in the inter-war years. These include Stewartby, Bedfordshire (built by the London Brick Company from 1927), Kemsley, Kent (for Bowater paper manufacturers, 1925-6), Betteshanger and Aylsham, Kent (colliery villages of the 1920s) and Kirk Sandall, South Yorkshire (for Pilkingtons, from 1922).[138] Designed on garden-city principals, the style of the housing was traditional, although masking some concrete construction at Aylsham.[139] The only industrial village to combine Garden City planning and Modernist design was Silver End, Essex. Built for the window manufacturer Francis Crittall

Figure 68 Modern Movement houses, Silver Street, Silver End, Essex (DP040058)

between 1926 and 1932, the village was planned with separate zones and, like East Tilbury, was intended to be self-sufficient, with its own power supply, not-for-profit farm and communal facilities. It too had Modern Movement houses (fig. 68), designed by a team of architects that included Thomas Tait, C H B Quennell and James Miller, although these only constitute one-third of the housing stock (the majority have pitched roofs and neo-Georgian detailing).[140] But, unlike East Tilbury, Silver End was unique, not one of a number of similarly planned satellites. There are other points of difference: at Silver End the lay-out is centred on the recreation ground and village hall, the factory is less dominant (and its functionalism finds no equivalent in the community buildings) and the street pattern is more 'picturesque', with more curving roads and cul-de-sacs. Silver End has an essentially English sensibility, whereas East Tilbury has a middle-European one: here is garden-city planning, redone by the Czechoslovakians and brought back to England.

There are several instances of multi-national companies building factories in Britain, sometimes importing their own building designs and planning philosophies. An early example is British Westinghouse Electric and Manufacturing Co, which built its Manchester works at Trafford Park Industrial Estate in 1900-2. Although the Manchester architect Charles Heathcote was involved in the design process the offices are a 'virtual replica of those in Pittsburgh'.[141] The Arrol Johnson motor-car plant at Heathall, Dumfries has a concrete-framed factory of 1912-13, designed and built by Truscon, the British representative of Albert Kahn's concrete construction system.[142] In the inter-war period three European motor-car manufacturers built plants around or near London, partly to avoid having to pay import duties. The companies were Citroen (Slough Trading Estate, 1926), Renault (Western Avenue, 1927) and Fiat (Wembley, 1937).[143] More famously, the Ford Motor Company, established their first British plant at Trafford Park in 1911 and built an extensive works on a Thameside site at Dagenham in 1929-31, eventually expanding to 600 acres. The original steel-framed factory was designed by Charles Heathcote and Sons.[144] Like Bata, Ford was drawn to the location by the river access, nearby railway line and availability of labour. However, Ford preferred not to build any workers' housing, utilising the nearby London County Council 'cottage estate' at Becontree, under construction from 1920, and a private development at Rylands Farm by Costains, built 1931-34.[145] This was also the case with the other foreign companies, with the exception of Arrol Johnson who built 34 workers houses (of an intended 300).[146] Although all examples of functional design and rational planning, these complexes lack the social and philanthropic dimension of East Tilbury.

Although Modern Movement buildings were being built in England from the mid 1920s, they were not commonplace: the group of 150 houses at Silver End has been described as the 'most complete estate' of its type in the country.[147] Other buildings in this style in Essex include the seafront café at Canvey Island (1932-33) and a group of houses by Oliver Hill at Frinton on Sea. The number of Modern houses designed by foreign architects (as opposed to emigre architects working in England) is even smaller, the most notable example, perhaps, being New Ways, 508 Wellingborough Road, Northampton designed by the German architect Peter Behrens, and built in 1925. The Bata Avenue housing at East Tilbury, whether designed by Karfik or another company architect, is therefore relatively rare. The pure use of functional design for the multi-storey blocks at East Tilbury is also noteworthy. While not the equal of the best of England's inter-war industrial design, such as Owen Williams dramatic Boots 'Wets' Building, Beeston, Nottingham (1930-32), they remain interesting and important examples of their kind.

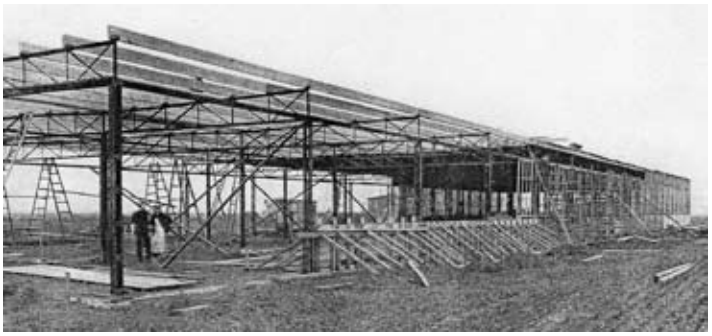

Figure 69 Building 12 under construction, illustrated in *Building* May 1933

The factory buildings at East Tilbury are significant in one other regard; for their innovative use of welded-steel construction (which became the norm for steel-framed buildings in the 1960s). By the 1930s this technology, which allowed for lighter structures, required less steel and permitted truss or girder forms that were difficult to rivet, was in use on the Continent and in America but not in Britain. Bata used the method in 1933 at East Tilbury because it was their standard building practice. The first welded steel-framed building in England is often erroneously given as the De La Warr Pavilion, Bexhill, built in 1936. It is unclear when the first example was built, but Murex Ltd erected an all-welded building in Walthamstow in 1932 (this firm specialised in welding processes and supplied the equipment used at East Tilbury).[148] As this building does not appear to have survived, the first single-storey factories at East Tilbury (originally building 12) must now be one of the earliest extant examples of welded-steel construction in Britain.

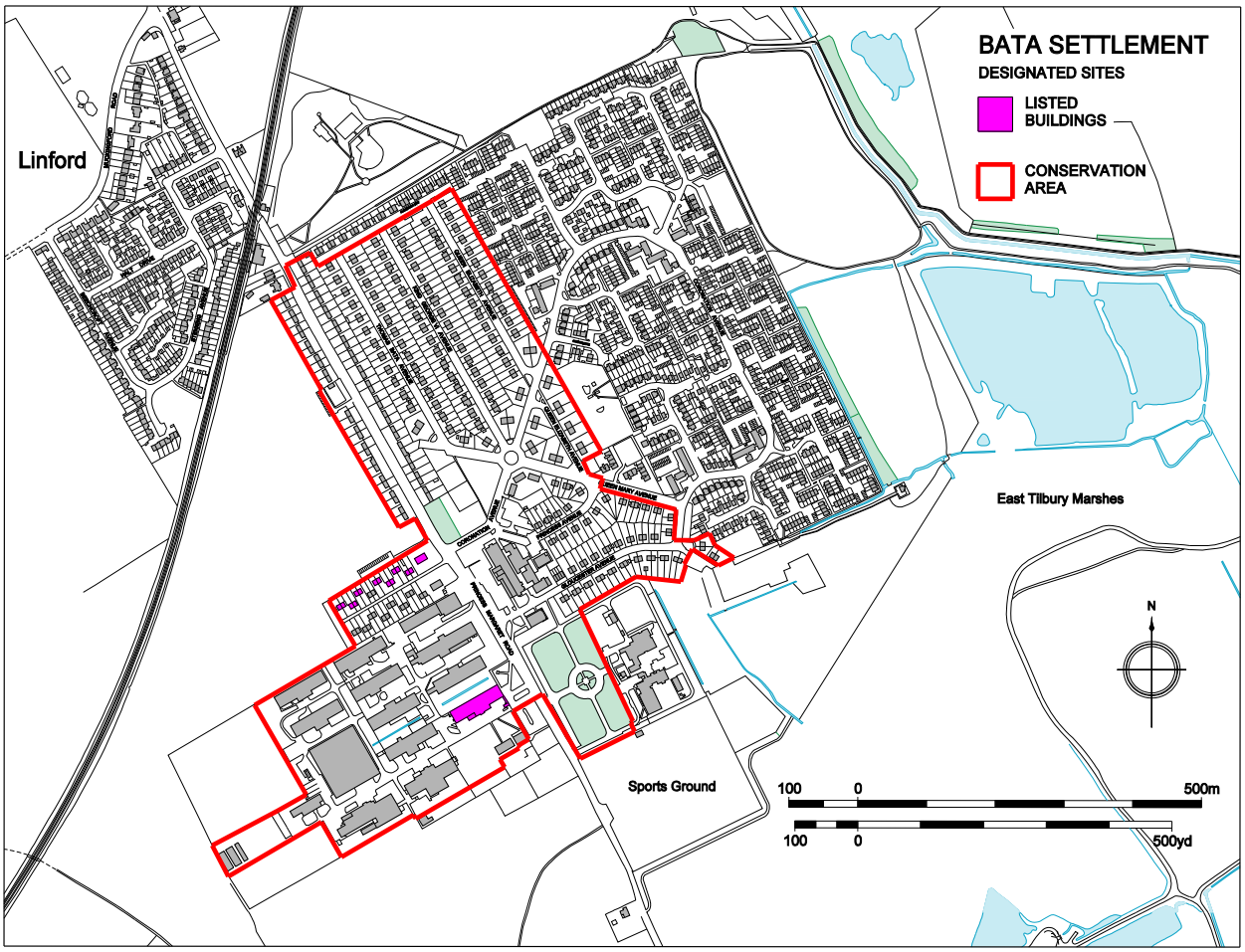

Figure 70 Designations in the Bata Settlement (© and database Crown Copyright and Landmark Information Group (All rights reserved 2007) Licence numbers 00394 and PT0024)

The status and importance of the Bata Settlement has been recognized by the designation of a conservation area in 1993 and the listing of the houses on Bata Avenue and one factory block, Trafalgar House (fig. 70) . It is has also been sustained by the creation of a Reminiscence Centre in the Library and the funding of an art project in 2003, resulting in the film 'Bata-ville: We are not afraid of the future'.[149] Media coverage and a growing literature on Bata and its satellites (see bibliography) have also contributed to a greater public awareness of the unique character of this Functionalist industrial village and the history it embodies.

One other aspect of East Tilbury that is subject to increasing recognition is the surrounding countryside, valued both in its own right and as part of a broader appreciation of the landscape of the Thames estuary. Indeed, it has been argued that different epochs favour certain kinds of landscapes and that, since the Second World War, attention has focussed primarily on working landscapes and coastal or

estuarial vistas.[150] This has led to a greater recognition of such marginal landscapes as wildlife habitats and, as a consequence, the intertidal zone at East Tilbury, extending northwards from Coalhouse point, has been designated a Site of Special Scientific Interest and a Special Protection Area and RAMSAR site. In some senses East Tilbury also falls within the category of a post-industrial space, and is therefore subject to the ongoing debate about the need to expand the concept of landscape to encompass and value these kinds of areas.[151]

The landscape also plays an important role as counterpoint to the rational form of the industrial community at East Tilbury. This was a feature of other Bata towns including Zlin, where it was observed in 1947 that : 'At its outskirts the rough country road turns into a concrete highway, over which one rolls into a lively twentieth century industrial city. Here is electric power, here are assembly lines turning out cheap shoes, here are prefabricated houses and multi-story (sic) buildings..... Here is order.... the achievement of advanced methods of planning and construction applied to industrial plant and housing alike'.[152] The kind of culture shock induced by this juxtaposition was also noted at Silver End, where it was said that 'there was no more surprising sight in rural England in the 1920s, than to round a bend in the narrow lanes between Braintree and Witham, plumb in the middle of the Essex countryside, and come face to face with 150 Early Modern Movement houses'.[153] Both Silver End and the Bata settlement retain this frisson of the unexpected when first encountered.

Figure 71 The former Bata Factory, viewed across a field of rape, in 2007 (DP040060)

CONSERVATION ISSUES

Over the last half century East Tilbury has experienced a steady attrition of its historic fabric. In the village there has been a loss of pre-19th century vernacular buildings and social infrastructure - principally the school and chapel. The withdrawal of the British Bata Company has removed the raison d'etre for its settlement, and resulted in demolition, neglect and piecemeal alteration as well as in a diminution of public-realm maintenance. The lack of employment opportunities and under investment has affected not just the company settlement, but also the village and wider area. Furthermore, the surrounding countryside has been damaged by gravel extraction and landfill activities (fig. 72). But since the 1950s, and particularly in the last 15 years, the area has been the subject of an increasing number of preservationist controls, from its inclusion in the Metropolitan Green Belt to the designation of individual sites and a conservation area. This has limited residential expansion to the Bata settlement and north of the railway line, ensured the survival of the areas important military heritage and permitted a greater degree of planning control over the company village. However, there are particular issues relating to the condition of the areas historic fabric, its level of protection and future development proposals.

Figure 72 Entrance to gravel extraction site, East Tilbury village (DP040068)

Figure 73 Housing, East Tilbury village (DP040050)

CONDITION

The degree of piecemeal change to the Bata housing has been considerable, except on Bata Avenue, which contains the only listed houses. Among the later phases of housing, few windows and doors have escaped replacement. The survival of Crittall windows is rare (limited to Farm Road and Princess Margaret Road), and there is neither consistency of design or respect for the original form and

proportions amongst the (often plastic) replacements. The spaces beneath flat door canopies at the front and sides of the houses have proved particularly vulnerable to enclosure for porches, as have the recessed doorways of the Princess Margaret Road houses. Extensions have been made at the side or rear of a number of properties, or detached garages built between the houses. There is also a disparity in external finish, in respect of colour, treatment (some houses have, for example, picked out the window and door surrounds in white) and finish (smooth render or pebbledash). Front garden walls, hedges and fences have often been changed, sometimes unsympathetically. While the personalisation of the former company housing is indicative of continuing upkeep and a pride in home ownership, it is at odds with the original uniform character of the residential districts. In this regard the Bata conservation area has fared less well than its equivalent in Silver End, which was designated earlier, in 1983, and has an 'Article 4' direction on enlargement, replacement of doors, windows, roofs etc, external wall colour, fencing and parking spaces.[154]

Figure 74 Concrete spalling in Trafalgar House (DP040040)

Within the factory there has also been loss of features (for example the chimney of the boiler house), alterations to the buildings and evidence of neglect, notably concrete spalling to the multi-storey blocks (fig. 74). But although the buildings have been emptied of their machinery and, in some instances, their internal arrangements reworked, there has been no widescale replacement of original windows. Many of the buildings have undergone only minor change and are well-maintained, as, for example, is the case with Building 12. But the multiple occupation of the complex is perhaps beginning to compromise its architectural consistency and visually significant features, such as the 'Bata' water tank on Nelson House or the concrete lamp post to the north of Trafalgar House, are vulnerable to removal.

The community buildings and public areas have perhaps suffered the highest degree of change but the surviving buildings, principally Stanford House and the village hall, have found new uses and continue to be maintained. Although their facilities are limited and the setting is now rather drab and functional, they remain the heart of the settlement. The Memorial Park and factory garden are important public spaces that have been

kept up (supplemented by the recent creation of Gobions Park to the north of the settlement), but sporting facilities such as the tennis courts have not.

A considerable number of trees, grassed areas and privet hedges planted by Bata across the settlement remain, reflecting the company's 'factory in a garden' ethos. But some of these areas are proving vulnerable to demands for outside storage, car parking and ease of access to buildings.

With the recent demise of the British Bata Shoe Company, the village's ageing population and the gradual loss of features such as company signage on buildings and around the settlement (fig. 75), there is also a risk that in time the connection between this place and the business that founded it, controlled its activities and shaped its development will be effaced.

Figure 75 Signage in East Tilbury (DP040071)

DESIGNATION

The East Tilbury area contains three scheduled monuments, a number of listed buildings, three in the village and eight in the settlement, and a conservation area. But while the level of designation within the settlement recognizes its importance there is some inconsistency in the listing of its buildings. On Bata Avenue the houses and hostel on the north side are listed (with the exception of 20-22 which has been rebuilt), but on the south side the original properties at 1, 15-17 and 31-33 are not. In the factory only one building, Trafalgar House, is listed. Given that all of the inter-war factories are Czechoslovakian designs, the selection of only one building for designation seems slightly arbitrary. Therefore, all the surviving 1930s buildings should be considered for designation, including the original phase of single-storey welded-steel-frame factories and the two multi-storey blocks (on the circular-column model). The power station, the statue of Thomas Bata, the least-altered houses and the community buildings could be considered for inclusion on a local list of buildings of interest within the conservation area.

FUTURE DEVELOPMENT

Government-sponsored initiatives for sustainable communities and regeneration and growth within the Thames Gateway have focussed on Thurrock as a priority area. Even if the Thamesgate proposals are not executed, some new development at East Tilbury appears inevitable and proposals for a new container port (the London Gateway scheme) at Shellhaven Oil Refinery site are also likely to have an impact. Any new scheme that intends to do more than pay lip service to the distinctive character of East Tilbury should take certain factors into consideration.

- The existing settlements are geographically separate and very different in form and development, although both have a relatively low density.

- There is a strong functional, rational and Modernist aesthetic to the design of the settlement buildings, realised in brick (often rendered) and reinforced concrete. East Tilbury village, however, has a very different character, with a historic settlement pattern, variety of building materials and types and a wider range of construction dates. Any development that linked the two would need to be sensitive to these differing characters.

- The Bata settlement (with the exception of the Fairview estate) is the product of a clear set of design principles based around a separation of areas by function, a semi-formal pattern of streets, a difference of scale between the housing and the non-residential components and a landscaped environment. Consideration would need to be given to how the new and existing developments would be integrated. The masterplanning of any new expansion could include the refurbishment and enhancement of the existing settlement to promote a new sense of joint ownership and interdependency between the different phases of East Tilbury.

- At present the multi-storey blocks dominate the landscape, particularly the factory buildings. This dominance would be lost if development in their immediate vicinity was equivalent in scale and massing.

- The Bata settlement has a purposely designed civic zone, in which its community buildings are focussed, and a separate factory zone; both of which were deliberately planned with expansion capacity. This original planning concept could be used to inform future development. Lost landscape elements such as the tennis courts could

be reinstated or form the basis for new facilities in a revitalised public realm.

• The transition between the built-up area of the settlement and the surrounding fields is abrupt, significantly contributing to its visual impact. The protection of key views from the settlement to the countryside (and river) would help to maintain the relationship between East Tilbury and its setting.

Lastly, the wider landscape has been shaped by centuries of human intervention. While this assessment has discussed the development of the built heritage, buried archaeology and landscape archaeology have only been superficially addressed and would require further research and possible recording prior to any large redevelopment

East Tilbury is a unique place. What its future planning deserves is imagination and vision, equal to that of Bata's founders. As the broadcaster and arts administrator John Tusa, son of the managing director of British Bata, observed: 'Today, the Bata Estate at East Tilbury survives, a physical reminder of the brave days of benign vision in the 1920s ...embodying a community of responsibility, discipline, self respect, hard work and achievement. ...It could yet form the twentieth-century core of a twenty-first century Thames New Town. If so, I hope that it is incorporated with a proper sense of history, the values, and the aesthetic that it once embodied'.[155]

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1 Catton, Jonathan PJ 1984 'E.T. - B.C. A popular view or archaeological notes on the parish of East Tilbury'. *Panorama* **26**, 47.

2 Catton *ET*, 51-2

3 The first point at which such a crossing tis thought to be possible and may have been used by the invading enemies of Emperor Claudius in 43AD. Catton *ET,* 55.

4 Roof tiles have been recovered from the vicinity of the church, which incorporates Roman fabric in its walls. Catton, *ET,* 56.

5 In the Doomsday survey it was noted that the people of Higham, Kent had pasture for 200 sheep on the marshes at East Tilbury. Saunders, Aubrey 1970 'Chapel - Hospital – Blockhouse'. *Panorama* **13**, 7.

6 English Heritage 2003, Coalhouse Point: Archaeological Features in the Inter-tidal Zone, East Tilbury, Essex, Archaeological Investigation Report no: 7/2003, 7.

7 This appears to have been the main route from East Tilbury to Grays during the medieval period, relegated to a trackway by improvements in east-west connections between East Tilbury, Chadwell and West Tilbury in the 18th century. Bingley, Randal 1982 "'The Coal Road" - A Highway in Decline'. *Panorama* **25**, 54.

8 Defoe, Daniel 1971 *A Tour through the Whole Island of Great Britain* (First published 1724-26. 1971 edition London: Penguin Books) 51. Anon 1793-8 *The Universal British Directory of Trade, Commerce, and Manufacture*, Vol **3,** part 1. London,164.

9 Catton, *ET,* 48.

10 Bingley, *Coal Road*, 50-52.

11 Coller, D W 1861 *The People's History of Essex*. Chelmsford: Meggy and Chalk, 506.

12 From the 1880s, after the construction of a more direct route along part of the line, the section serving Tilbury became a branch or loop. See Basildon's Railway Stations at www. basildon.com.

13 Smith, Victor T C 1985 *Coalhouse Fort and the Artillery Defences at East Tilbury*. Thurrock: The Coalhouse Fort Project, 4.

14 Little evidence for the destruction by the Dutch has been discovered; in 1707 the structure of the church was in decay, the stone tower had collapsed and cannon shot was found in the fabric. Subsequently the explanation of its destruction by the Dutch has become the accepted one. Thompson, Christopher 1967 'The Dutch and the Destruction of East Tilbury in 1667'. *Panorama* **11**, 11-13.

15 Smith, *Coalhouse Fort*, 5-9

16 Quoted in Saunders, A 1995 'Thames Fortifications during the 16th to the 19th centuries', *in* RCHME, Thames Gateway Recording Historic Buildings and Landscapes on the Thames Estuary. London: RCHME, 24.

17 English Heritage 2003 Survey Report: Wing Battery, Coalhouse Fort, East Tilbury, Essex, Archaeological Investigation Series 6/2003, 6; Smith, *Coalhouse Fort*, 16-7, 34.

18 Smith, Victor C 1995 'The Defences of the 20th Century' *in* RCHME, Thames Gateway Recording Historic Buildings and Landscapes on the Thames Estuary. London: RCHME.

19 The comparison has not always been favorable. 'Nowadays the modern, well-planned Bata factory and estate tend to divert one's attention from the shabby little village of East Tilbury' Morgan,Glynn 1951 *Forgotten Thameside*. Essex: The Thames Bank Publishing Company Limited, 158.

20 Basildon's Railway Stations at www. basildon.com.

21 According to one source is was the largest. *Business Week,* 23rd October 1937, 19-20.

22 Pokluda, Zdenek 2005 *From Zlin into the World - the story of Thomas Bata.* Czech Republic: Gaspo/Zlin State Gallery, 2-4.

23 Pokluda, *From Zlin*, 7.

24 Pokluda, *From Zlin,* 39.

25 Pokluda, *From Zlin*, 31.

26 Pokluda, *From Zlin*, 35.

27 In Britain there was considerable alarm about foreign firms building factories in the UK. A correspondent to the *The Times* observed that this was a testimony 'to the value attached to the British market by foreign manufacturers, and their determination not to be deprived of it by either depreciation of sterling or imposition of tariffs'. *The Times*, Friday 5th February 1932

28 Pokluda, *From Zlin,* 37-8. Cekota, Anthony 1968 *Entrepreneur Extraordinary; The Biography of Thomas Bata.* Italy: EIS, 347. Cohen, Jean-Louis 1997 'Zlin. An Industrial Republic'. *Rassegna* **70,** 43.

29 Ibid 57.

30 On his death it was discovered that Thomas had agreed to sell the Bata factories in Czechoslovakia and a minority interest in the overseas companies to his step brother Jan Bata. National Archives, BT 271/51 Report by the Trading with the Enemy Department, Board of Trade, February 1945.

31 Ibid

32 Jan Bata had initially been based at a Bata colony at Belcamp, Maryland, USA in 1940. National Archives, CO 852/478/12, Memorandum 22nd July 1940. The organisation continued to supply both sides for the duration of the war, supposedly with 'bilateral approval' according to Vladimir Karfik. Quoted in Henrieta Moravcikova 'Batovany - Partizanske: An Exemplary Slovak Industrial Town' Momoneco Seminar 28/8/2003 available at http://momoneco.kitkafe/seminars_uk_03_Moravcikova.html.

33 Jan Bata only remained in control of the operations in Czechoslovakia and Brazil. Thomas was reported to have 'made good use of the possibilities afforded by Jan's misbehaviour' National Archives, BT 271/51 Report by the Trading with the Enemy Department, Board of Trade, February 1945.

34 Jenkins, Eric J 1999 'Utopia, Inc Czech Culture and Bata Shoe Company Architecture and Garden Cities'. *Thresholds* **18**, 60-3.

35 Cekota *Entrepreneur Extraordinary,* 52-53, 74, 90.

36 Moravcikova 'Batovany - Partizanske'.

37 Cohen, 'Zlin. An Industrial Republic', 42.

38 Jenkins, 'Utopia, Inc', 63.

39 This did not extend to drinking establishments Bata was a staunch teetotaller and non-smoker, and did not permit the sale of tobacco in his shops and restricted the issue of drinks licensess when mayor of Zlin. *Grays and Tilbury Gazette*

40 Musil, Jiri, Slapeta, Vladimir and Novak, Jarolslav 1984 'Czech mate for Letchworth'. *Town and County Planning* vol **53** November 1984, 314.

41 Kotera was probably exposed to the movement when he travelled to London in 1905. He was first invited to Zlin to design a family house for Bata in 1911.

42 Musil, Slapeta and Novak, 'Czech mate', 315.

43 Thomas Bata is said to have returned from his visit in 1919 with a plan of an American factory that was used as a model. Slapeta, Vladimir 1991 *Bat'a: Arckitektura A Urbanismus.* Zlin: Zlin State Gallery, 108.

44 The motto was 'we have no right to make the customers pay one single cent more for shoes because of our buildings'. Bata is said to have devised a system of building with gangs of 18 men, working with standardised and interchangeable units, and an organised schedule of deliveries of materials, that enabled a standard factory of about 50,000 sq ft to be constructed in five weeks. Cekota, *Entrepreneur Extraordinary,* 223, 225.

45 Ricketts, Shannon 'Batawa An Experiment in International Standardisation'. *Society for the Study of Architecture in Canada Bulletin,* vol **18,** September 1993, 80-87.

46 Pavitt, Jane 1994 'The Bata Project: a Social and Industrial Experiment'. *Twentieth Century Architecture: The Journal of the Twentieth Century Society* **1**, 33.

47 Andrew Ward Assessment of Garden City Planning Principles in the ACT at http://www.environment.act.gov.au/ .

48 Slapeta, *Bat'a,* 106.

49 There does not seem to have been a policy of allowing individual responsibility for whole satellites or colonies. Moravcikova 'Batovany – Partizanske'.

50 See the account of the construction office, Batovany at http://momoneco.kotka.fi/bat_nayttely_uk.html.

51 Cohen 'Zlin. An Industrial Republic', 44.

52 Pavitt, 'The Bata Project', 34. Cekota, *Entrepreneur Extraordinary*, 382.

53 Pavitt, 'The Bata Project', 34.

54 British Bata Shoe Co. Ltd. 1964 *British Bata East Tilbury* (unpaginated pamphlet)

55 *Bata Record*, 13 December 1957, 7.

56 British Bata, *British Bata*

57 Factories were built at Cite Bata, near Dakar, Senegal (1950s) and at Ikeja, Lagos and Kano, Nigeria (1960s and 1970s).

58 Patrick Wright, *The River: The Thames in Our Time* London: BBC Worldwide Ltd, 59.

59 In 1940 58% of British Bata shares were owned by the Swiss Trust and Westhold Inc, the holding companies set up by Thomas and Jan Bata. National Archives, BT 271/51.

60 For an account of the dispute see National Archives, LAB 10/84.

61 Katz was a Polish-born architect, recommended by the wife of Tomas Bata for his work at the Festival of Britain in 1951. Pavitt 'The Bata Project', 43. Appointed to design a new prototype Bata store in the early 1950s (in Cyprus), the firm was given responsibility for new stores (notable the refitting of the Oxford Street store in 1956) and 'some well-designed flats and houses in West Africa' i.e. the bachelor hostel and houses at Cite Bata, near Dakar. *Architectural Design*, October 1953, 292-3; obituary by Maxwell Fry, *JRIBA*, May 1960, 248-9. Watkins, Gray & Partners were working for Bata from the early 1950s and went on to design a range of buildings for the parent and subsidiary companies: including a shop and office, Georgetown, British Guiana (1953); warehouses for the British Bata Show Co. Ltd., Port of Spain, Trinidad (1958); and for the Bata Shoe Co (Nigeria) Ltd a factory, entrance, clinic and canteen, Ikeja, Nigeria (1963); warehouse and factory extension, Lagos (1968) and a factory, Kano (1976). *Architectural Design,* October 1953, 285; *The Architect and Building News*, 23rd July 1958, 137; *The West African Builder and Architect*, July-August 1965, 76-8; Watkins Gray International Biography File, RIBA, British Architecture Library.

62 Potential sites included one at Shorne, Kent. *Grays and Tilbury Gazette*, 12 January 1932.

63 The size of the estate was given as 600 acres in 1933, approximately 650 acres in 1954 and 670 acres in 1964.

64 The company policy seems to have been to situate new settlements in economically depressed areas.

65 *Grays and Tilbury Gazette*, 12 January 1932.

66 *Grays and Tilbury Gazette*, 16 July 1932.

67 *Grays and Tilbury Gazette*, 12 January 1932.

68 Ibid.

69 *Grays and Tilbury Gazette*, 16 July 1932. It would appear that Bata wasn't assured of sufficient markets for his goods in Essex and he couldn't get the Northampton manufacturers to take the 'uppers' from his factory. Essex Records Office, cuttings, 15 January 1932, 5 March '32, 15 July, 1932.

70 Ibid

71 Probably one of the first uses of this type of production in Britain, using a 'conveyor system of moving forward at pre-determined sequences',. Most British manufacturers were still carrying the shoes through their workshops on shoe racks). British Bata, *British Bata.*

72 Leaflet produced by the Bata Reminiscence Centre, 2002.

73 *Grays and Tilbury Gazette,* 12 January 1933.

74 Pavitt, 'The Bata Project', 38. However, Karfik's level of involvement is difficult to gauge. Nor does is seem to have been usual for individual architects to be given complete responsibility for particular towns. Similarly, particular elements, such as housing or public buildings within the same colony or satellite, were sometimes given to different architects. See http://momoneco.kotka.fi/bat_nayttely_uk.html.

75 The signature is not very legible but it could be 'Ant Vitek'. Vitek assisted Gahura in drawing up an ambitious plan for 'Great Zlin' in 1934. He also designed the layout for Ottmuth, Germany, and Best in the Netherlands, and the arrangement of the central axis and the form of the residential streets is very similar to another scheme by Vitek for Mohlin or Ottmuth. Cohen 'Zlin. An Industrial Republic', 42; Slapeta, *Bat'a*, 55.

76 The plan appears to bear the name 'Sedlon E F' and 'Architect S T A'. A copy of this plan, dated 10th July 1947, is signed T C D Bannock.

77 Morgan, Glyn H, *Forgotten Thameside* Essex: The Thames Bank Publishing Company Limited, 163-4.

78 The churchyard was extended in 1932 and its grave mounds and hollows were filled in 1961. It retains a few pre-20th century graves, more recent burials reflect the international makeup of the Bata Settlement. Essex Record Office, D/C/C84/9; D/C/F100/101.

79 The upper floor is rendered and may therefore retain timber framing. The arrangement of the chimneys, a side stack at the south end and large rear stack to the north, suggest a complex and older history to the building.

80 They do not appear to be present on the tithe map of 1839 but were presumably built not long after.

81 Marked on an 18th century map of the Manor of South Hall, Essex Record Office, T/M 528/3.

82 The village school, built in 1855 and enlarged in 1901, consisted of three rooms and a school house. It was closed in 1972 and seems to have been demolished soon after. The Chapel was standing by the time of the first edition Ordnance Survey map of 1873.

83 Gravel Pit Farm was an early 17th century house and East Tilbury Place, probably dated from the early 18th century. RCHM 1923, *Essex vol iv.* London: HMSO, 41.

84 Smith, *Coalhouse Fort* .

85 Saunders, Aubrey 1985 'Coalhouse Fort, East Tilbury 1861 Folly? - 1985 Museum'. *Essex Journal* **20**, 6.

86 English Heritage, Wing Battery, 2-19.

87 English Heritage, Coalhouse Point, 17-20, 23.

88 Ibid

89 There were six long-range guns carried on 'disappearing carriages' that meant they were only visible briefly when firing, the battery being landscaped so as to be almost invisible from a distance in what is known as a Twydall Profile.

90 English Heritage, Wing Battery, 6.

91 Smith, *Coalhouse Fort,* 16-7, 34.

92 Smith, *Coalhouse Fort*, 35. RCHME 1994 Second World War Anti-Aircraft Batteries at Bowaters Farm, near East Tilbury, Essex: A Survey by the Royal Commission on the Historical Monuments of England.

93 In 1937 a book was produced by the Bata architectural department entitled 'The Ideal Industrial Town'. Although never published it laid out the principles of town planning as developed by the Bata team. http://momoneco.kotka.fi/bat_nayttely_uk.html.

94 *Bata Record*, 22 June 1956.

95 The original entrance was between Building 11 and 12.

96 The multi-storey reinforced-framed 'Daylight' factory emerged in 1903 and 'reached a startling and precocious maturity by 1910 or 1911'. By 1917 'the Daylight factory was on the point of being replaced by a new and even more radical type of factory, the single-story, steel-framed workshed' Reyner Banham 1989 *A Concrete Atlantis* Massachusetts: MIT Press, 29.

97 It is pictured under construction in *Building*, May 1933, 216; *The Builder* 26 May 1933, 864.

98 Ibid.

99 The equipment was supplied by Murex Welding Processes Limited (of Walthamstow).

100 The columns are made up of two channels battened on the flanges by plates forming a box section, the internal columns being almost identical to the outside columns. The roof has wooden purlins, the original covering being wooden boarding covered in "Ruberoid".

101 *The Builder*, 26 May 1933, 863.

102 This was dictated by machinery layouts in the shoe factory and structural considerations. Pokorny and Hird, 'They planned it that way', 74.

103 See Architecture & Urbanism section at www.zlinbata.com/. The ground-floor columns of Nelson House are thicker although this may be a later alteration.

104 That these buildings were designed in Zlin is confirmed by the construction drawings for building 34 which is annotated in Czech and English. Drawing held at the Bata Reminiscence Centre.

105 *Bata Record*, 4th December 1964.

106 *Bata Record*, 14th February 1958.

107 *Bata Record*, 7th December 1956.

108 British Bata, *British Bata*.

109 *Bata Record* 16th May 1958.

110 For example, the alignment of Queen Mary Road was dictated by the intended road to the railway line and beyond. This had been abandoned by the time Princess Margaret Road was laid out with housing. Similarly Princess Avenue and Gloucester Avenue are laid out differently from the 1935 plan.

111 This may reflect the initial planning of East Tilbury.

112 This arrangement was used in Parker and Unwin's design for semi-detached cottages exhibited in 1903 at the Northern Art Workers Guild. Andrew Ward 'Assessment of Garden City Planning Principles in the ACT' at http://www.environment.act.gov.au/ .

113 Cekota, *Entrepreneur Extraordinary*, 232.

114 The use brick rather than concrete for the walls was noted in a letter from the Engineer and Surveyor of Orsett Rural District Council . Thurrock Musuem, ORDC Minute Book 22nd November 1933.

115 Pavitt, 'The Bata Project', 43. It was also present in Zlin and other satellite towns. For example, Batovany, Slovakia built 1938-48 see http://momoneco.kotka.fi/batovany partiznske.html.

116 It seems that the company satellites were allowed a degree of autonomy in matters of design, construction materials and detailing. For example, at Batovany, Slovakia, the local construction office was allowed to make improvements and alterations to projects - in 1941 it was claimed that they changed the housing types 'every year' drawing on their experience, and decided on the appearance of a broad range of family houses. Moravcikova 'Batovany – Partizanske'

117...Different versions, numbered from Type 1 A to 1 F, exist. These date from 1936 to 1954 and include two- and three-bedroom house designs and flat- and pitched-roof house types. (Drawing held at the Bata Reminisence Centre).

118 For example the ground-floor bay window has a corner pier of brick.

119 Externally the best preserved house is No. 3, as No. 4 appears to have had a side extension.

120 Slapeta, *Bat'a*, 59-67.

121 By this date the head company was based in Canada and the satellites were exercising a greater degree of architectural autonomy.

122 The school, along with a separate technical college, stood to the east of the housing estate and was demolished in the early 1970s for the Fairview development. See also the letter to Reverend Whitwham from John Tusa, director of British Bata Shoe Co Ltd, 1955. Essex Record Office, C/DA 1/137.

123 Essex Record Office, C/DA 1/137.

124 Pavitt, 'The Bata Project', endnote 23

125 *Bata Record*, 25 November 1938.

126 *Bata Record* 29 August 1958.

127 .*Bata Record*, 1st May 1959, 3.

128 Pevsner, N and Radcliffe, E 1979 *Buildings of England: Essex.* (First published 1954, revised 1979 London: Penguin Books), 170 129 *Bata Record*, 22 June 1956, 2.

130 Catton, 'E T' 47.

131 Catton,'E T', 56.

132 See the report on Tilbury Power Station in RCHME 1995, The Power Stations of the Lower Thames, Historic Buildings Report.

133 The Essex Green Belt was defined in the early 1950s and 1960s; the boundaries for Thurrock, approximately 60% of which is covered by Green Belt, were last modified in 1991.

134 See section 1.4, DCLG 2001 *Planning Policy Guidance 2: Green belts.* (First published 1995, amended 2001)

135 William Morris 1893 *News from Nowhere* London, 101 quoted in Jonathan Scheer 2006 *The Thames England's River,* London: Abacus, 163.

136 Saunders 'Coalhouse Fort', 6.

137 For example, the factory at Belcamp, USA has been demolished, and the factory at Batawa, Canada, has been reclad.

138 Stratton, Michael and Trinder, Barrie 2000 *Twentieth Century Industrial Archaeology.* London: E & FN Spon, 27, 131. Darley, Gillian 2003 *Factory.* London: Reaktion Books, 172.

139 Stratton and Trinder, *Twentieth Century,* 27.

140 Crosby, Tony 1998 'The Silver End Model Village for Crittall Manufacturing Co Ltd'. *Industrial Archaeology Review* **20,** 69-82.

141 Edgar Jones 1985 *Industrial Architecture in Britain 1750-1939.* London: Batsford 210.

142 Stratton and Trinder, *Twentieth Century*, 65-66.

143 Stratton and Trinder, *Twentieth Century*, 70-1.

144 Stratton and Trinder, *Twentieth Century*, 68. Jones, *Industrial Architecture,* 210.

145 Stratton and Trinder, *Twentieth Century*, 68.

146 Stratton and Trinder, *Twentieth Century,* 65-66.

147 Crosby, 'Silver End', 80.

148 *The Engineer,* 18th March 1932, 311.

149 A documentary of a coach trip to Zlin by workers from East Tilbury and Maryport. Written and directed by Karen Guthrie & Nina Pope.

150 See the section 'Protean Places' in Orton, Jason and Worpole Ken 2005 *350 Miles: An Essex Journey* Essex: Essex Development and Regeneration Agency (unpaginated)

151 See, for example, the discussion relating to the post-industrial landscape park at Duisburg-Nord, Germany in Darley, *Factory*, 202-9; *Topos* 1999, 26. Munich; www.landshaftspark.de

152 Pokorny and Hird, 'They planned it that way', 68.

153 Cited in King, Susan 1996 *Voices from the Guv'nor's Village.* Essex: Silver End Worker's Educational Association, 11. Quoted in Worpole, Ken 2000 *Here Comes the Sun: Architecture and Public Space in Twentieth-Century European Culture.* London: Reaktion Books, 79.

154 Braintree District Council, Supplementary Planning Guidance, Silver End Conservation Guide 1999.

155 John Tusa, 'Shoemakers to the world: The Bata estate on the Essex marshes, 1939-60' Burrows Lecture, 21st May 2003, University of Essex. Transcript at http://www.essex.ac.uk/

APPENDIX 1 - The Bata factory: numbering and building use

Old number	New number	Date	Original Use	Type	Storeys	Architect
10	-	1938	Garage	WSF	1	
11a	15	1933	Rubber factory	WSF	1	
11b	10	1934	Chemical mixing house	RFC	3	
12	1/5	1933	Rubber Factory	WSF	1	
13	Trafalgar House	1934	Offices and factory	RCF	5	
20	30/35	1946-51	Chromium plant & Drawing office		1	
21	20/40	1933	Spreading House	WSF	1	
22	50/55	1938-44	Machinery manufacture & maintenance		1	
23	60/65	1958	Firestation		1	
24	Victory House 1936		Leather Factory	RCF	5	
30	90/95	1958/1966-7	Synthetics plant & Plastics Department	SF	1	Bronek Katz
31	80/85	1952	Hosiery factory		1	
32-33	70-76	1957-60	Tea centre	SF	1	Bronek Katz
		1960-61	Wholesale factory			
34	Nelson House	1938-39	Rubber factory	RCF	5	-
-		1956	boiler house		1	
-	-	1968	computer building		1	Watkins Gray Group1

KEY:

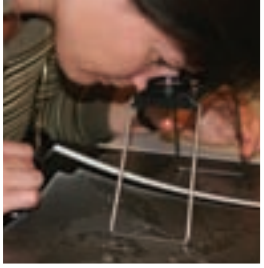
WSF = welded steel frame

RCF = reinforced concrete frame

SF = steel frame





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We make the results of our work available through the Research Department Report Series, and through journal publications and monographs. Our publication Research News, which appears three times a year, aims to keep our partners within and outside English Heritage up-to-date with our projects and activities. A full list of Research Department Reports, with abstracts and information on how to obtain copies, may be found on www.english-heritage.org.uk/researchreports

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