

VILLAGE OF THE DAMMED: UPPER DERWENT'S TIN TOWN AND PLANNED NAVVY SETTLEMENT

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"A chapter devoted to the . . . labourer may be regarded as intrusive by some, and as gossip by others: by a third class it may be considered repulsive. But the 'navigator' is necessary . . ."
(Francis 1851)

INTRODUCTION

From the late 18th century onwards, the needs of industrial cities increasingly influenced Britain's rural landscapes as urban demands for resources grew (Bevan 2003, 2004). Timber, stone, coal, farm produce, even the factory workforces, were pulled from the surrounding countryside. One need was for the large-scale supply of clean and plentiful water, and 19th century town planners in northern England looked to the rain-drenched Pennine valleys as their potential reservoirs. In 1830, the Sheffield Water Company was formed by Act of Parliament and began to build the first of many reservoirs to the west of the city with Redmires Middle dam, completed in 1836 (Hey 1998). Manchester Corporation Waterworks flooded Longendale below a chain of five reservoirs between 1848 and 1877. Huddersfield built dams in the Holme Valley and on Wessenden Moor between 1840 and 1906. Damming the valleys was the ultimate urban use of countryside as resource supply. In the 1890s, Leicester, Derby, Nottingham and Sheffield turned their attention to the Upper Derwent, so creating three reservoirs during the first half of the 20th century (Fig. 1). The first were Derwent and Howden dams, built between 1901 and 1916, followed by Ladybower between 1935 and 1944 (Plate 1). The Upper Derwent and Ashop valleys were attractive because of their narrowness and high rainfall (Robinson 1993). However, each city had drawn up separate plans for damming the River Derwent, which were compounded by declarations of interest in a share of the water by the county authorities of Derbyshire, Leicestershire and Nottinghamshire. After competing bills were presented to Parliament, a Parliamentary Committee decreed that only a joint bill incorporating claims all existing claims would be acceptable. Hence in 1899, the Derwent Valley Water Bill was laid before the House and became an Act in August the same year, so creating the Derwent Valley Water Board (DVWB).

The reservoirs transformed the Upper Derwent; flooding extensive valley areas and precipitating a fundamental shift in the social landscape by depopulating much of the existing dispersed settlements. Construction of Derwent and Howden dams also resulted in the temporary implantation of a new society living in the first nucleated settlement in the Upper Derwent. This was Birchinlee village — 'Tin Town' — the home to the navvies labouring on the dams, as well as their families, shopkeepers and a group of village officials.

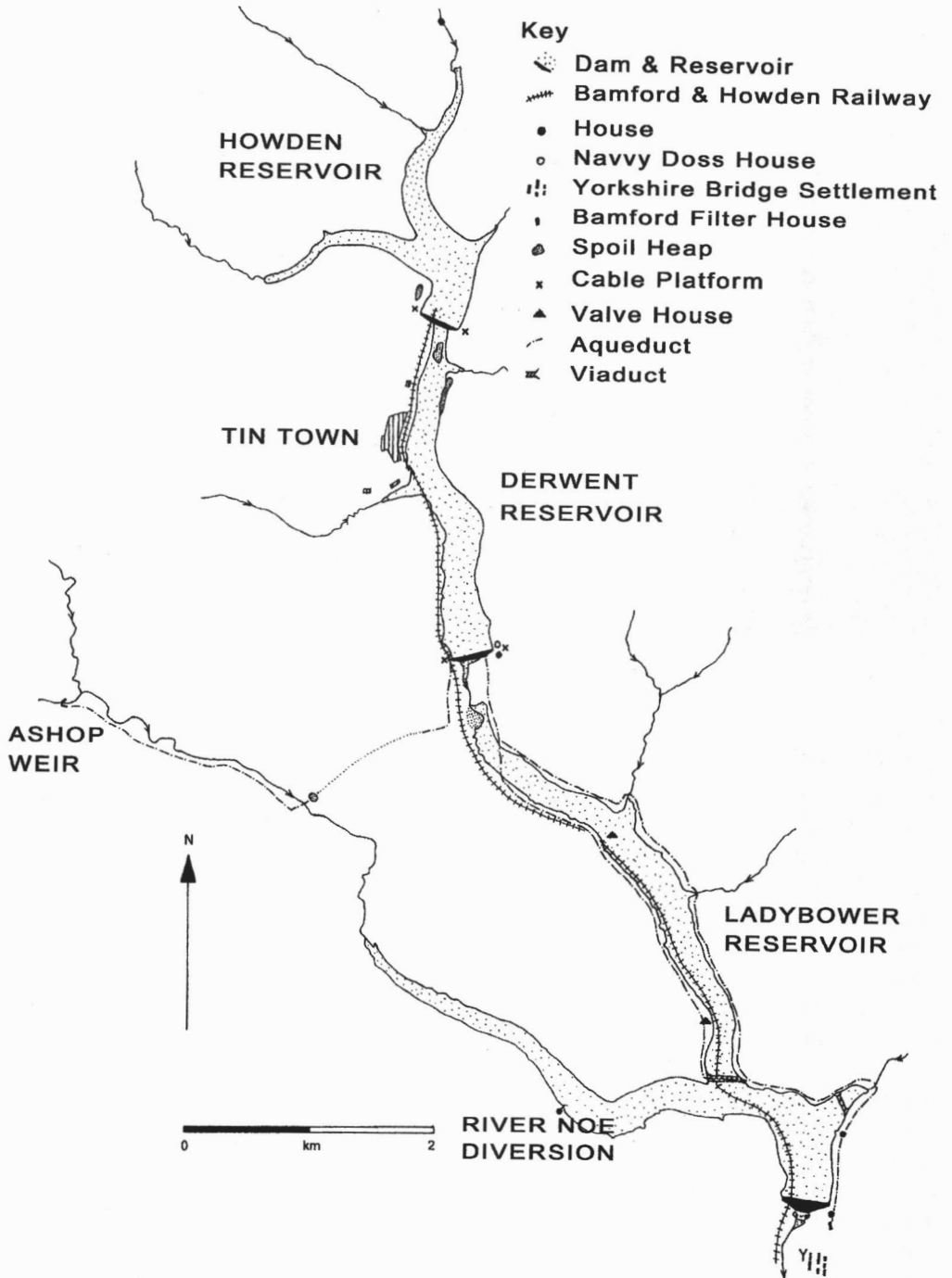


Fig. 1: Dams and associated features in the Upper Derwent.

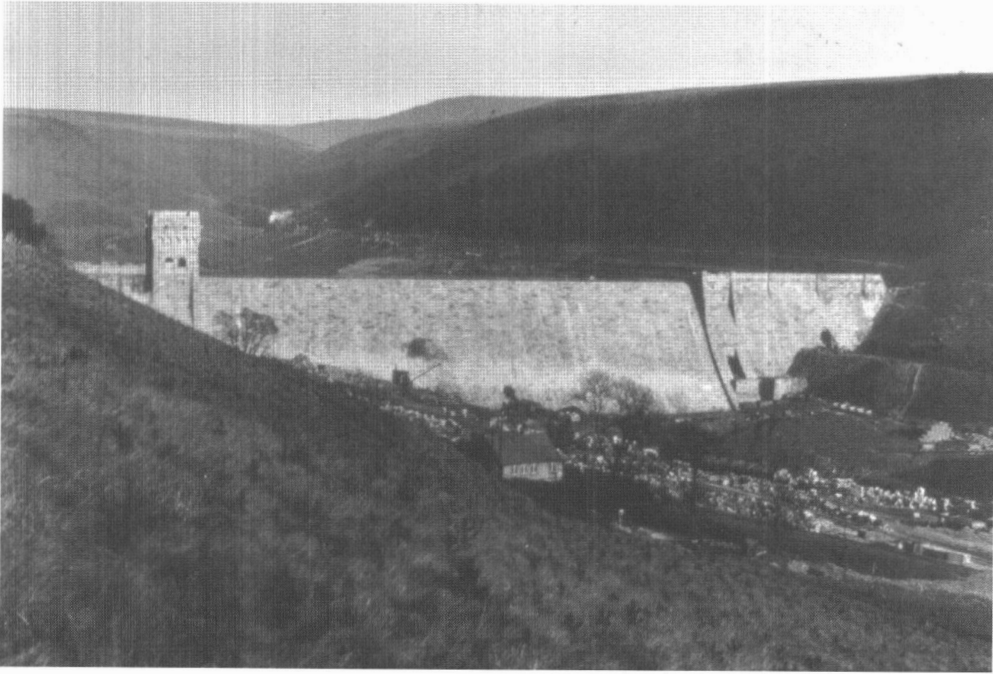


Plate 1: Howden dam during construction between 1901 and 1915. PDNPA Collection.

The Tramp of the Navigator

The skilled and unskilled workforce employed to create Derwent and Howden reservoirs were itinerant navvies, named after the navigators who built the canals during the 18th and early 19th centuries. By the mid 19th century, navvies had developed a distinct cultural identity, actively employing particular forms of language, dress, social ethics and working codes (Coleman 1965; Morris 1994). Identity was formed and reinforced by the close proximity in which they lived together, along with a corresponding social distance between navvies and contemporary 'mainstream' society. Large numbers of navvies roamed the country working on large engineering projects, such as canals, railways and dams. The walk from one construction site to another was known as the 'tramp'. They tended to live in close-knit groups in remote areas, occupying temporary settlements with little time to mix with surrounding permanent communities. Navy society was a nationally widespread culture that coalesced into distinct locally based on-site temporary communities. Navvies were treated with suspicion by local communities because of their socially peripheral conditions, 'strange' behaviour and unusual accents (Coleman 1965). General opinion characterised them as violent, drunken, immoral, spiritually destitute, revolutionary and terrorising local communities in gangs (Coleman 1965). This characterisation was often conflated with contemporary nationalist perceptions of the Irish, to such an extent that the DVWB train service was derogatorily nicknamed the 'Paddy Mail', even though the majority of the workforce was English and Welsh. The majority of contractors who employed navvies treated them as an

expendable commodity, often keeping no record of industrial injuries or deaths, and providing little or no basic services. As the contemporary account of mid 19th century railways included at the beginning of this chapter stated, navvies were necessary to the completion of large engineering projects, despite the perception of them as dangerous, deprived and repulsive.

A Chaos of Sods

Communal barracks had often been provided on canal construction sites in the late 18th century (for example see Hughes 1989). By the mid 19th century, most contractors left accommodation provision to market forces and overall working/living conditions were generally deplorable. In densely settled locations accommodation was mainly in lodgings and inns. However, in remote areas this was either possible or limited. This was also the period when navy cultural identity was at its strongest, with the greatest separation from mainstream society and a common rejection of the family as an organising unit of society. Navvies often lived together in communal accommodation, families sharing with single men. Unmarried relationships, prostitution and polygamous associations were common (Coleman 1965).

Accommodation, provisions and medical care either had to be acquired by the navvies themselves or from the contractors, sub-contractors, local entrepreneurs or gang foremen at a price (Coleman 1965; Handley 1970). Navvies often built their own huts then paid to sleep in them. On some projects, living conditions were so atrocious that epidemics of diseases such as cholera and diarrhoea were commonplace (Morris 1994). Clean water and sewage systems were either absent or supplied in amounts inadequate for the numbers, and such services as accident hospitals were non-existent. Settlements of the time were largely unstructured groups of simple turf, wood or stone-built huts, without any internal plastering or lining and with only a single wood-burning stove for heating and cooking. Huts were packed tightly with bunk beds, each occupied by more than one individual, either at the same time or alternating when there were different shifts. On the construction of the Caledonian Canal in the mid 19th century, 30 men were lodged in a house intended for the lockkeeper (Handley 1970). It was common for foremen to double as hutkeepers in contractor-provided accommodation. Provisions had to be bought from contractors' stores using tokens issued in lieu of wages — the infamous truck system. A series of 19th century laws had abolished this system in factories, albeit unsuccessfully, but they did not cover public works until one of the more respectable contractors supported the 1854 Payment of Wages Bill after becoming an MP (Coleman 1965). Often, truck store food was rotten, beer watered, and provisions sold in short-measures. A commission on top of the sale price was deducted from the value of his ticket for this privilege. Foremen and truck shopkeepers would often cooperate to take as much money from the navvies as they could through truck. Exploited navvies were in no position to complain when their job, accommodation and food relied on the foreman's word (Judge 1987; Morton 1997). Contractors often made more profits from the 'bowels of their navvies' than from the contractual work itself (Chadwick and Robertson 1846), sometimes obtaining contracts at low tenders knowing they would need to make their profits from providing accommodation and truck stores to their navvies (Coleman 1965).

One of the worst examples of mid 19th century navy conditions lies only a short distance to the north of Tin Town — the moorland settlement of the Woodhead railway tunnels. Built between 1839 and 1862 on the Manchester, Sheffield and Lincolnshire Railway, it is significant in relation to the development of Tin Town because it was one of a number of construction projects presented before a Parliamentary Select Committee to raise awareness of poor conditions. The Committee reported in 1846, leading to legislation that required construction contractors to provide appropriate accommodation for their workforces (Select Committee 1846).

The Woodhead tunnels ran through the Pennines, approximately 2.5km north of the Upper Derwent, to connect the steel mills and coal fields of the east with the cotton mills of the west. At the start of construction on Woodhead, the contractors provided only 40 purpose-built shacks for a workforce of over 1,000 men. Many navvies had to build their own makeshift sod huts on the moors. These congregated in irregular groups around the airshafts and tunnel entrances that were the access points to the construction sites. At Wike airshaft, the surviving foundations of contractor-built huts were closest to the shaft with a randomly dispersed scatter of navy-built huts further away (Morris 1994) (Fig. 2).

Huts were located in relation to shelter and dry ground with no formal alignment on each other. The layout of a two-room hut is well-preserved. Measuring 45m², it was

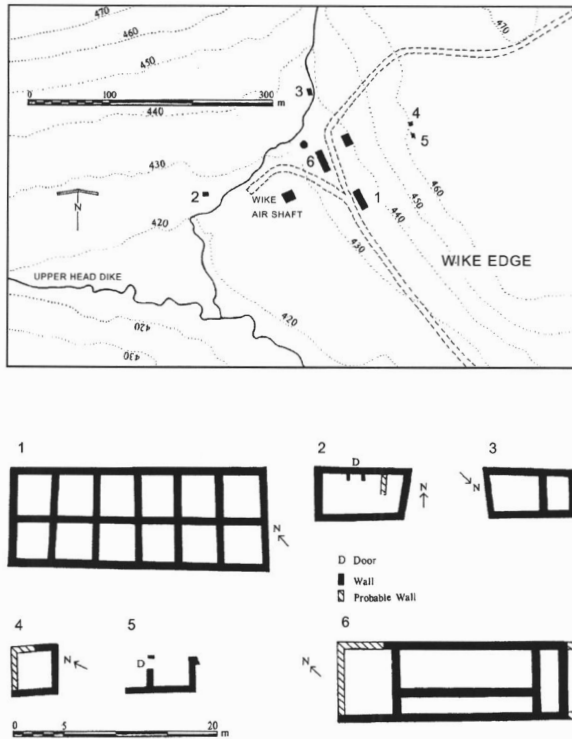


Fig. 2: Navy settlement at Wike airshaft on the line of the Woodhead Tunnel. From Morris 1994.

occupied by up to 15 navvies plus women and children (Chadwick and Robertson 1846; Morris 1994). Provisions and beer were provided through the token-based truck system at rates 20 to 50% above Manchester prices. Clean water was so scarce that dirty water was often drunk, causing epidemics of diarrhoea, while damp working and living conditions led to widespread bronchial problems. Navvies had to seek their own medical attention from a surgeon living over 12km away, whom they employed through a weekly subscription administered by the contractors (Coleman 1965). Following an accident, navvies would either make their own way on foot to the surgeon's house or wait on site while someone was sent to fetch him. While wages on the Woodhead tunnel were relatively good for labourers of the time, most navvies were left with little once the contractors had made deductions for truck tokens, beer tickets and medical contributions. The lack of concern for the navvies' safety is highlighted by the number of industrial injuries sustained, with over 30 deaths, nearly 250 major injuries and 400 minor injuries. A social commentator of the time compared this toll to that of a severe battle (*ibid.*).

From Garden Suburb to Tin Town

Widespread improvements were made after centralisation and collectivism became more dominant over entrepreneurial and market force ideals in the 1860s (Morris 1994; Perkin 1969). Social attitudes towards industrial production changed as the wider impact of the industrial revolution was felt. The rapid rise of industrialisation that occurred through the 19th century, changed Britain from a predominantly rural to an urban society. Houses for the growing urban working class were constructed to be cheap, quick to build and to fit large numbers of people into small spaces. Over time this created cramped, dilapidated and labyrinthine slum districts — places that were perceived as chaotic, disease-ridden and dangerous, difficult for police surveillance and breeding grounds for immorality (Ward 1976). Slum housing in early 19th century Manchester and Sheffield was perceived to encourage unruly behaviour because employers could not come into regular contact with their workforce to control domestic life and moral habits (Dennis 1984). The organisation of the Sheffield metalworking workforce into independent 'Little Mesters' rather than centralised factories, was seen as leading to a lack of appreciation of 'the value of time, or the effects of its misapplication' (Dr Holland 1839, quoted in Daniels and Seymour 1990, 510).

From the mid 19th century onwards, there were a number of public and private schemes to improve poorer urban districts (*ibid.*). Existing areas were redesigned and new expansions laid out with wide streets, public parks and more orderly housing estates. They were planned to fulfil certain ideals of how a settlement should function, applying rational thought to improve the living conditions of the occupants with the aim of producing 'better' citizens who could contribute more fully to society at large. Wider and regular street layouts enabled easier access to houses for the police and were equated with giving greater discipline and control over the working classes (Driver 1988). Some developments were overseen by freehold land societies who sold land to labourers in 'garden suburbs' at a distance from factories. Working families were empowered to build their own homes and earn the right to vote by taking out mortgages to become freeholders. This was how Walkley grew up between the 1840s and early 20th century on an area of fields to the west of Sheffield 15km from the Upper

Derwent. This movement also became expressed in the building of model villages and towns that used accommodation and services, architecture and layout as a form of social engineering, where the right social conditions would breed the right social and working attitudes to provide the perceived right environments for nurturing content, morally correct, economically productive and healthy citizens. Some were built by enlightened industrialists who felt there was a need to create better living conditions so that their workforces would be more content, morally correct, healthy and therefore more efficient. The most famous industrialist model settlements include Saltaire, Bradford, begun in 1853 by Titus Salt, Bournville near Birmingham started by the Cadbury brothers in 1879 (growing most rapidly at the same time Tin Town was occupied, between 1900 and 1914) and Port Sunlight near Liverpool, begun by William Lever in 1888 (George 1909; Pevsner 1959; Pevsner and Hubbard 1971; Pevsner and Wedgwood 1966; Reynolds 1983). This movement culminated in the 'garden cities' of the 20th century, such as Letchworth and Welwyn built by Ebenezer Howard in 1903 and 1920 respectively.

Against the background of social architecture, elements of the Select Committee's 1846 recommendations became incorporated into the Bills and Acts of Parliament that gave permission for large individual construction projects to go ahead. This resulted in the provision of planned, structured settlements with separate huts for married couples and families, and the inclusion of community services such as hospitals, missions, recreation or reading rooms, shops and clean water supplies. Through this process living conditions improved and navy culture became more incorporated into mainstream society (Morris 1994). Two of the first major construction projects where contractors provided such accommodation and services were the Forth Rail Bridge, built between 1883 and 1890 (Handley 1970) and the Manchester Ship Canal, built between 1887 and 1894 (Morris 1994). By the time the 1899 Derwent Valley Water Act was passed, provision of appropriate accommodation was generally accepted.

TIN TOWN

The DVWB's workforce comprised up to 2,500 individuals from across the British Isles. These included local and northern English farm labourers, navvies from the Burrator Dam in Devon, where the DVWB's chief engineer Edward Sandeman had worked, and navvies who had recently built three dams in the Elan Valley, Wales. The Devon and Welsh dams were masonry built, the same as those chosen for the Derwent Valley, so the combined workforce had considerable experience of building this type of dam. Construction on the Derwent and Howden dams operated around the clock, with a day shift, night shift and an afternoon shift for pieceworkers (Sutton 1914).

A clause in the 1899 Derwent Valley Water Act stated that the DVWB were statutorily obliged to provide satisfactory accommodation. The DVWB undertook this by building a purpose-built settlement in Derwent, called Birchinlee Village after the neighbouring farm but widely known as Tin Town (Fig. 1; Plate 2). Over 500 navvies were based in the village, while the rest of the workforce were placed in lodgings in Bamford, Bradwell, Castleton and Hope. At its height, a total of over 900 people lived at Tin Town including wives, children and non-labouring village officials, as well as navvies. Tin Town was located approximately mid-way between the two dams. This

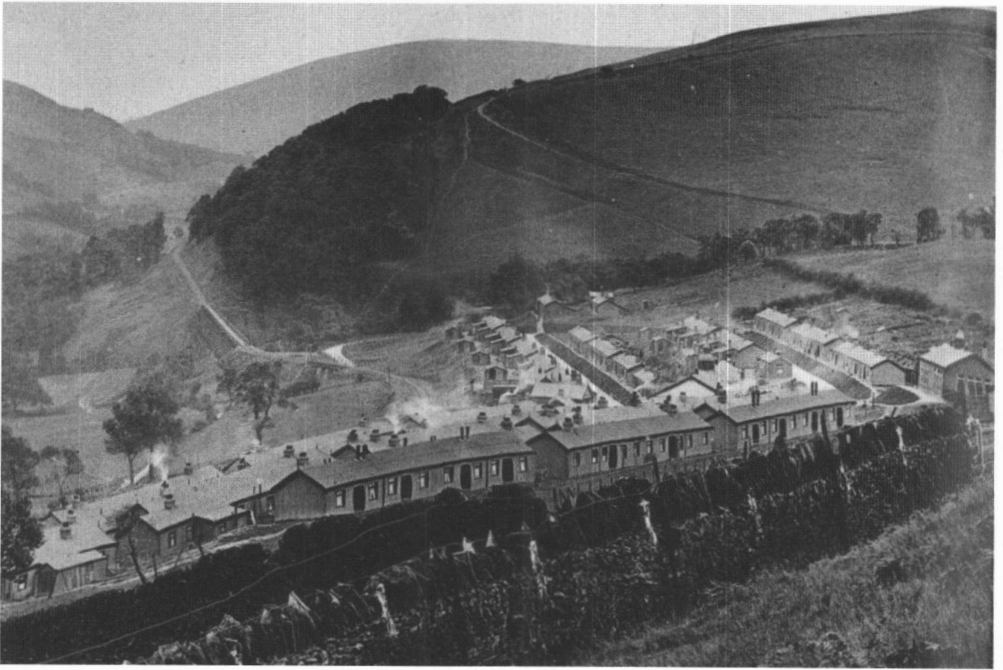


Plate 2: Tin Town looking south. Brian Robinson Collection.

was probably the result of a rational decision by the engineers to place their workforce conveniently for both sites, but it also meant that the sounds of construction; the hammers, winding wheels, steam engines and pile drivers, were a constant aural backdrop to life in the village day and night. The two dams were visible from the village. The fundamental reason for the navvies', and their families', occupation of the area was constantly reinforced in sight and sound, whether those people were at the workforce or not.

A brief for the accommodation at Tin Town was won by the lowest-cost tender (Robinson 1983). The majority of the buildings were purely functional — plain corrugated iron shells, wood-lined inside for insulation. This gave an appearance similar to contemporary army and prisoner-of-war camps, and to later early holiday camps. However, there were small scale architectural embellishments on two of the civic buildings, which show that some expectations of the existing social hierarchy of buildings were also taken into consideration. These embellishments include the cupolas of the school and recreation hall.

Rules and regulations for occupants of Tin Town, who were rent paying tenants of the DVWB, were drawn up by Edward Sandeman, and concentrated on health and safety matters. Different sets of regulations were produced for workmen's dormitories, married quarters and foremen. There was a basic set of rules to cover domestic cleanliness, sanitary arrangements and safety of oil lamps. The main differences were a set of six additional rules for the workmen's dormitories. Alcohol was restricted to the personal daily allowance at the canteen — presumably families and foremen were thought to be more responsible — the hutkeeper had to seek permission to be away for more

than one night and no overcrowding was permitted. Infringement of the rules would result in a warning then ejection from the hut and village. There was no mention of misconduct or violent behaviour. Tin Town was a model settlement provided with services deemed essential to the well-being of the occupants by the Water Board (Fig 3). It was laid out on rigorously planned formal lines based both on a functional engineering basis and the belief that settlement organisation could improve workers' morals and behaviour. Tin Town was abandoned in late 1912 and the huts were either sold or demolished over the next two years (Robinson 1993). Many were reused during World War One as a POW prison.

Before anyone employed by DVWB could take up residence in Tin Town, they had to spend a night at the doss house (Fig. 1). The house was opened in 1903 and provided accommodation for up to 40 men situated at a distance from the village. If they were successful in gaining employment the following day and wished to live in Birchinlee they had to spend a week of 'quarantine' in the doss house where their clothes were disinfected and they received a bath.

The short life of Tin Town, occupied for just 14 years, has left not only a rich folklore behind but also a well preserved archaeological site. When the corrugated iron buildings were removed, their footprints remained as earthworks or brick and stone foundations. These, the terraces on which they were built, DVWB plans and contemporary photograph postcards allow us to interpret the layout of the settlement and its relationship to the landscape.

While aesthetics tended to be central to the ideals of the enlightened industrialists who created 'model' workers' settlements, Tin Town was engineered as a more utilitarian version. The aims were the same, to produce specific living conditions that would encourage better motivated and more efficient workers. Brian Robinson has conducted a large amount of research on photographs and DVWB documents of Tin Town, and the publication of his photographic collection has informed descriptions of all buildings in the village (Robinson 1983, 1993, 2002). Brian's mother was born at Tin Town and this motivated him to find out more about her life as a child there and to take her back in her 80s to the site of her birth. Descriptions of buildings in the following tour are based on the photographs published by Robinson. The locations of buildings are interpreted by comparing the DVWB village plan with the surviving archaeological features and photographs (DVWB 1901).

Tour of Tin Town

Today, we approach the village along the main valley lane from the south, much as someone entering the village would have done at the time (Plate 3). Birchinlee Lane was the original route, crossing the River Derwent from the east side of the valley over Ouzelden Bridge and running past Birchinlee Farm to continue along the valley to Ronsley Farm. As it approached Tin Town, the lane took a large right-hand bend to climb the valley side at a gentle gradient. During the occupation of Tin Town, Birchinlee Lane was bridged by the Bamford and Howden railway line and the action of passing under the bridge was an act of moving from the valley's rural landscape of fields into Tin Town. You then entered the village along the southern end of a street which soon branched into two, known as the upper and bottom streets. This interpretation of the village is presented as an imaginary tour:

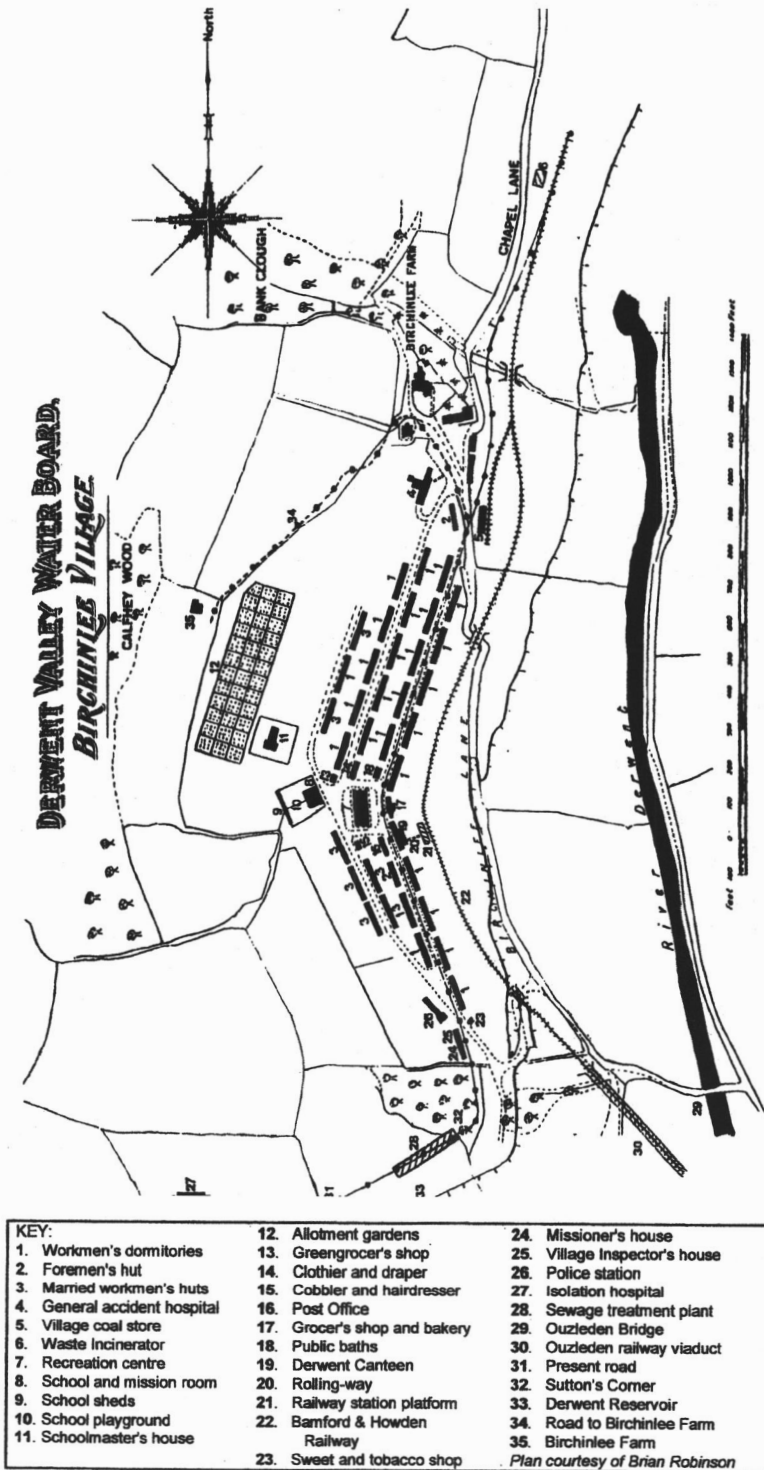


Fig. 3: Interpretative plan of Tin Town navy settlement, Upper Derwent, based on the original DVWB's pre-construction plan. © Prof Brian Robinson.

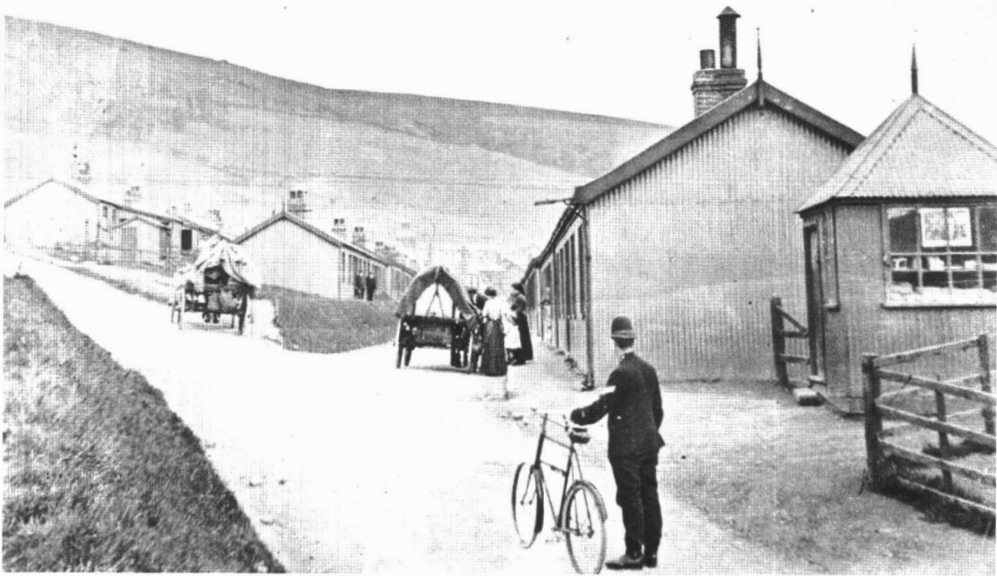


Plate 3: Looking north towards Tin Town. From Birchinlee Lane between 1901 and 1915 (above; © Prof Brian Robinson), along the upper street in 1999 with the terrace for the married quarters (below; PDNPA).

The buildings are arranged in formal rows around a total of three village streets, the upper and bottom streets, which are through-roads, and a higher cul-de-sac, known as new street, which is built as part of village expansion. The through-roads have the appearance of many Pennine urban roads: they are surfaced with gritstone pitching covered with limestone chippings and edged with gritstone blocks.

Most of the buildings occupy large artificial terraces that follow the valley contour. They are simply grassed without artificial surfaces or revetments. All of the workmen's and married couple's huts, one of the two foremen's huts, the canteen, public baths and shops all stand on these terraces. The village inspector's house, police station, school, school master's house, recreation centre, general hospital, and the other foremen's hut are situated on their own, small, terraces. For these, their separation from the general run of workmen's hut terraces helps to define their specific roles and perceived higher status within the settlement.

Officer suburbia

The first buildings come into sight as you round the bend into Tin Town. Two huts set slightly apart from the rest of the village look down from higher ground. This mini 'suburbia' houses the village inspector, policeman and missionary. This spatial reinforcement of social hierarchy reflects Britain's highly stratified class society. Each hut has an inside toilet, a distinction compared to the workmen's communal outside toilets. The officers have a commanding position which overlooks the approach to Tin Town, allowing them to monitor 'outsiders' entering the settlement.

The inspector and missionary each occupy their own semi-detached houses. The inspector maintains the physical structure and services of the village, such as coal deliveries and the sewage system, while the missionary looks after the spiritual social well-being of the navvies. After two short-lived incumbents of the inspector post, W.S. Lelliott of Langsett has been appointed, who will hold the position until the demise of the village. It is for his responsibilities over sewage that he is nicknamed 'Shit House Dick', suggesting that he is not held in the highest regard by the villagers.

Missioners became common on large public works after the founding of the Navy Mission Society in the 1870s. The Society approached contractors to allow a missionary, usually an ex-navvy, on site and this was generally accepted because it was seen as beneficial to the moral development of the workforce. George Sutton is Tin Town's missionary. He makes daily rounds to visit the sick in their huts and the hospital, and uses the school as a Sunday mission room (Robinson 1983). He is planning to write a book about Tin Town and has already penned a title — *The Story of Birchilee: a memento of 12 years in the workmen's village, Derwent Valley Waterworks, Derbyshire* (Sutton 1914). One day it will become one of the main sources for interpreting Tin Town.

Adjacent to the first hut is the police station, with its policeman's house and a cell. Neil McLean of the Derbyshire Constabulary is resident policeman. However, the cell is rarely used and will be converted to married workmen's accommodation. This suggests that there is little crime in Tin Town. Edward Sandeman believes that there was less crime than there is usually in an ordinary village of the same size. There is very little crime, but then brawling is not perceived as such unless serious. Reputedly, when workmen begin any altercation in the Canteen, the policeman takes them to a field to get on with it.

Sweet shop and tobacconists (Fig. 3, feature 23)

The next building is the small sweet and tobacco shop on the right-hand side of the road. Run by Bessie Bateman, it was originally a news stand, but now an evening newspaper called *The Star* is delivered every weekday.

Unmarried workmen's huts (Fig. 3, feature 1; Fig. 4)

Continuing along the bottom street brings you into one of four main blocks of accommodation huts, which form the bulk of the village. A total of 52 dormitories house unmarried workmen in regimented rows of externally austere barrack-like buildings facing both sides of each street. Each hut is approximately 55.5m² in area and divided into three sections; two communal areas and a private area restricted to the hutkeeper and his family (Fig. 4). In the hut keeper's section there is a living room with fireplace and a bedroom, while the public area consists of a communal living room, dormitory, scullery, pantry and a fireplace with range. Up to eight men can be accommodated in each unit, if the hutkeeper has a family, rising to ten if the hutkeeper isn't married. This is a far greater amount of space for a smaller number of people than the huts of previous works on the Woodhead Tunnel and the Hawick line of the North British Railway (Morris 1994). The design of the blocks allows for a minimum of 432 single navvies to be accommodated, rising to a maximum of 540, if all the hutkeepers are bachelors.

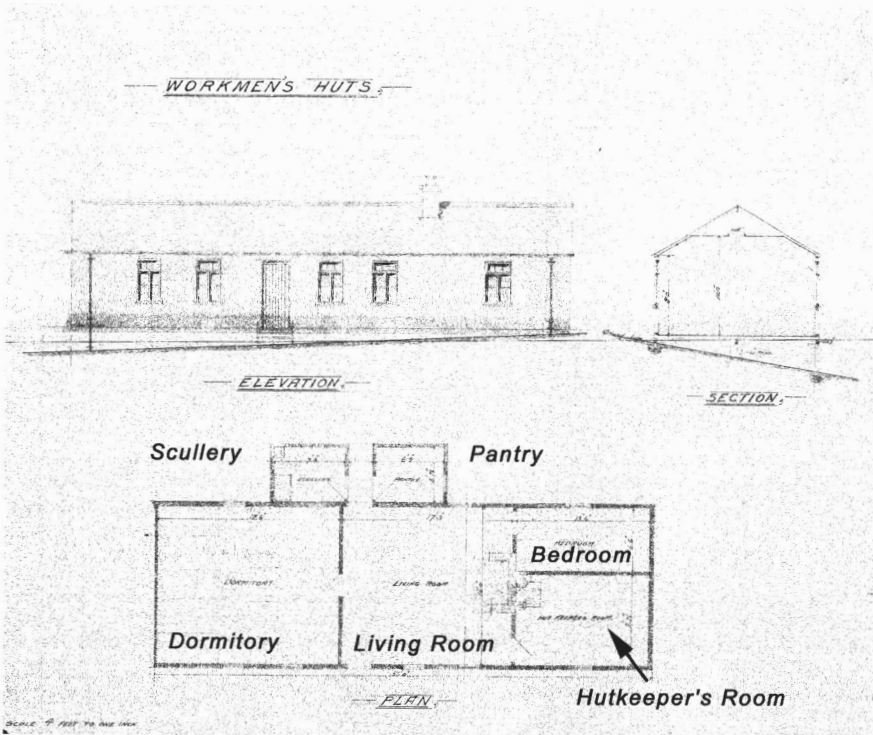


Fig. 4: Plan and elevations of navy dormitory, Tin Town. From DVWB n.d.

Behind each hut are the outside toilets and the network of informal paths visible as slight terraces and hollows, that snake between them and the huts.

The huts are raised above the ground through a combination of sunken hollows and raised concrete and brick rafts with brick fireplaces.

The austere external walls, bare outline of dimensions and the stark regulations belie the homeliness of the interiors (Plate 4). They are lined in a mid-tone varnished wood and personalised by the occupants with such ornaments and décor as framed prints, net curtains, mirrors, pot plants, budgerigar cages and gramophones. Tables are covered with linen tablecloths and the forms with embroidered cushions. Fine bone china dinner services are brought out for Sundays and special occasions.

Derwent canteen (Fig. 3, feature 20; Plate 5)

Passing the first rows of dormitories brings one to the edge of the physical and social centre of the village.

On the right is one of the most important social buildings, the all-male preserve that is the public house, the Derwent Canteen. Situated approximately mid-way along the bottom street, it is a low, long hut with living space for the 'landlord' at the northern end. Double the width of the accommodation huts, it accommodates the bar above the beer cellar (Plate 6). The cellar is connected to the railway line by a rolling way and an elevated railway platform to enable the easy movement of beer barrels transported in and out of the valley by train (Fig. 3, feature 19). The bar and cellar have been enlarged



Plate 4: Interior of a navy dormitory, on the occasion of a wedding feast, Tin Town. © Prof Brian Robinson.



Plate 5: The Derwent Canteen during construction work to extend it. © Prof Brian Robinson.

twice due to overcrowding, and now a second bar is provided for such people, including women, not requiring alcoholic drinks (Robinson 1983).

The canteen is managed by Henry Matthews and operated by the People's Refreshment House Association Ltd., a 'reformed' public house trust which promotes sobriety. Matthews is the latest landlord, his 'temperate' predecessor having left due to harassment by the men. He was thrown out of his canteen for refusing to serve a drunken navvy, but now knows better (Batty [n.d.]). The canteen is now a dedicated drinking house. The DVWB says that it allows them to assert control over the amount of alcohol consumed and prevents extortionate profiteering (Robinson 1983). If the men are working well at the construction sites, then the canteen is an important social outlet.

Railway line (Fig. 3, feature 22)

The railway line and embankment pass the east side of Tin Town. It is carried to the village across Ouzelden Clough on a towering stone and timber viaduct and above Birchinlee Lane on a stone bridge. The Birchinlee Lane bridge is a significant feature of roughly hewn gritstone blocks topped with flat dressed coping stones.

Post office (Fig. 3, feature 16)

Facing the canteen from across bottom street is the post office. This is tenanted by Mrs Hebzabad Clark.

Recreation centre (Fig. 3, feature 7)

Just beyond the Post Office is the most dominating building of bottom street, the physical and social centre of the village — the recreation centre. This large building, situated



Plate 6: Derwent Canteen beer cellar, now (above; PDNPA) and then (below; © Prof Brian Robinson).

on its own terrace between the bottom and upper streets, is one of the largest buildings in the village. Its large roof-top bell tower and imposing front façade incorporate eight tall windows, a set of large doors and three brick-built external chimneys. Its impact is heightened by the bright white paint on the walls.

The centre is host to billiards, dances, concerts, cinema shows, whist drives, dinners and an annual horticultural show of produce grown in the village allotments. Men and women attend these events and dances attract young people, especially women, from throughout the Derwent and Hope valleys. This demonstrates that the village is not a totally closed community, though we can guess as some fathers' views about their daughters visiting the village.

Ringing the recreation centre are four roads with most of the other village services: the shops, post office, public baths, canteen and school. This creates a centre akin to a village green or town square, where a great deal of informal social interaction happens as part of the day-to-day routines.

Shops and public baths (Fig. 3, features 13, 14, 15, 17, 18)

The shops sell provisions independently of the works contractor, thus by-passing a major source of navy exploitation in the 19th century. Located opposite the front of the recreation centre and next to the canteen is the grocer's shop. A bakery was added to the rear of the premises in 1905. The tenants are the Gregory brothers from Manchester. The public baths are adjacent to the north end of the recreation centre, occupying a small hut with water heated in a coal-fired stove. Charges are 2d per person. The greengrocer's is located to the north-west of the recreation centre, at the junction of the middle and upper streets, and tenanted by George Street of Sheffield. Harry Oliver's clothier and draper's shop is to the north of the recreation centre, with a fine sign on the southern gable that reads 'tailor & outfitting shop'. Located to the south of the recreation centre on the eastern side of the middle street is the cobbler and hairdresser, home to 'Cobbler Bob'.

Foremen's huts and coal store (Fig. 3, features 2, 5)

Continuing our journey along the bottom road and between further ranks of workmen's huts, we come to the northern end of the village. Here is one of two huts built to accommodate the site foremen. Each is strategically placed in separate parts of the village. This one overlooks the village coal store. Coal is used for all heating and cooking in Tin Town, and is handed out in measured quantities. It is brought up the valley by train, then delivered to the huts by Tom Fletcher. The village inspector has overall supervision of the use of coal and its security. Separate foremen's huts are a welcome departure from previous construction projects, where the foreman doubled as the hutkeeper (Coleman 1965). This separation also signifies the different status of the foremen to the other workmen, and prevents the exploitation. Rules and regulations are identical to those for married workmen, so there is no limit on alcohol allowed in the huts.

Birchinlee Farm

Here the village street turns upslope and forms the upper street beside, the still occupied, Birchinlee Farm. Beyond the farm is Bank Clough, dammed to provide piped

water to the village. Tin Town has a most advanced water supply and waste system, appropriate for a village built by a Water Board. Rather than earth closets, there are actually flushing water toilets.

Accident hospital (Fig. 3, feature 4)

At the northern end of the upper street is the accident hospital, another imposing building with a high roofline. Only the school and the recreation centre are bigger. The hospital was restricted to caring for industrial injuries sustained by DVWB workmen until 1908 when non-employee accidents and serious illnesses could be treated for a fee. The ward is light and spacious, and adorned with potted plants. A medical officer and two nurses are in attendance. The Board only set up the post of medical officer after the local doctor in Hathersage charged expensive call-out fees.

Upper street is lined with further dormitories, and walking south along it leads to the rear of the central recreation centre. Here is the junction with new street, which runs upslope before turning to run parallel with upper street. A single row of married quarters and workers' dormitories face onto new street, beyond which are the allotments. Nearer to the recreation centre are the school and school master's house.

School (Fig. 3, features 8, 9, 10)

The school was opened in September 1902 and run by the Derbyshire Education Committee from September 1903. It was a substantial building occupying a visually prominent location to the west of the centre of the village. Its upslope position, height and incorporation of a bell tower made it one of the two most prominent buildings in the village, along with the recreation centre. The school was divided into two — infants and elder children — and in 1902 had 110 pupils. Behind the school was a small playing field, again divided into lower and upper school, with wooden sheds to the rear. Behind this were vegetable growing allotments for Tin Town.

School master's house (Fig. 3, feature 11)

A school master is employed to run the school, and lives in a separate hut for himself and his family adjacent to the school. This has three bedrooms, a sitting room, living room, scullery, larder, coal store and inside toilet. The external doors face towards the school itself, reinforcing the master's connection with his work and the employment-based identity of his social role in the village. There has been a succession of four different school masters.

Married workmen's huts (Fig. 3, feature 3; Plate 7)

Upper street continues south beyond the school, through the main concentration of married quarters huts and the second foremen's hut. Seven huts are each subdivided into four separate 'houses' providing private accommodation for each family. This is effectively a married quarter of the village. This demonstrates that the DVWB has not been intent on maximising the number of working men per accommodation block, for they could have provided for a total of 32 men if they had constructed unmarried dormitories instead. It also shows how more acceptable it now is for navvies to move with their families than 50 years before. The rules and regulations for married workmen's huts are similar to those for single men with one notable exception — again there is no limit on alcohol allowed in each hut.

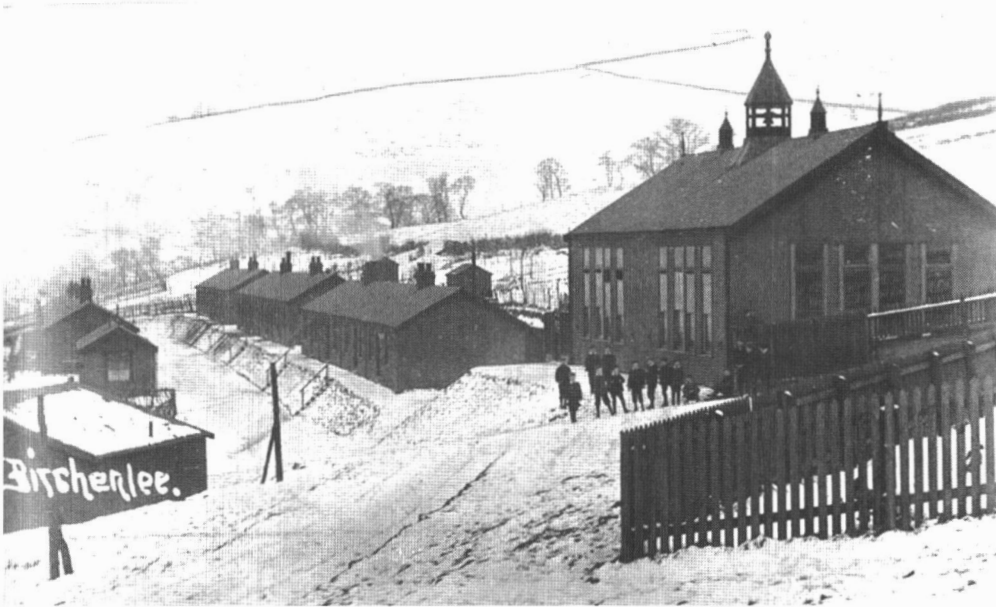


Plate 7: Tin Town's school with the married quarters in the background. © Prof Brian Robinson.

Distant structures: Dirt and disease

Here our tour returns to where we started. The only elements of the village we have not passed are the isolation hospital situated over 300m to the south-west, the sewage farm located somewhat closer but behind a shoulder of the hillside, and the brick-built waste incinerator to the north.

The sewage plant uses a bacteriological system and receives all toilet waste in water (Fig. 3, feature 28). A report from the village medical officer in 1908 claimed that Tin Town was free of insanitary diseases — 'splendid evidence of the value of the water-carriage system of excrement removal in the prevention of filth disease'. The isolation hospital has been provided for infectious diseases and is mainly used for children suffering from scarlet fever (Fig. 3, feature 27).

Abbey sports field

From the village it is possible to look out across Derwent Valley to a field near Abbey Farm used as a sports field. Regular sports events are organised and the village football team plays its home matches in the Sheffield Amateur League (Plate 5.1). The football team provides a group identity with huge support amongst the villagers. The team telegraphs back results when playing away, and once took a homing pigeon for a crucial game in 1912 where no telegraph was present (Robinson 1983). Here, the village celebrated the coronation of Edward VII in 1903 with a traditional tea and sports day, which has since become an annual event.

Taming the navy

Tin Town was the ideal of improvement and rationality expressed through the creation of a highly structured social dwelling space. It comprised utilitarian layout and

construction materials linked to Edwardian ideals of social engineering. The formal rows of similar, 'barrack-like', accommodation blocks emphasised conformity at some expense to individual identity. However, beyond the plain accord of the buildings, highly stratified contemporary British notions of social status were evident in the layout of the village. These ideals were expressed in the zoning of accommodation to segregate single workmen, foremen, families and village officers, and the differing regulations for each group. Further spatial reinforcement of social hierarchy is evident in the separation of accommodation and provision of inside toilets for the village officers.

The social welfare of the workmen and their families was provided for by the missionary, school master, policeman, doctor and the shops. Hygiene was given special attention with the construction of the enclosed water-borne sewage system, leading to a treatment plant, and a waste incinerator. These 'dirty' activities were housed in structures placed at some distance from the settlement itself. The civic buildings — the school (which doubled as the mission), recreation hall, accident hospital and public baths — dominated the village through their locations, physical stature and such adornments as the cupola on the recreation hall.

Of the range of civic buildings, the dominant communal halls — Recreation Hall and School — contrast greatly with all of the accommodation huts. They, along with the public baths, were placed centrally in the core of the village. They were imposingly large buildings topped by small cupolas, the only architectural embellishments in Tin Town and the closest thing to a grand expression of civic pride made by the DVWB. They provided arenas for social cohesion. Areas around them formed public spaces by default. Plates of Tin Town suggest that all the streets were public places, where groups of people would congregate, chat, and children would play. However, those larger areas and their associations with public buildings were social focal points, akin to village greens. Referencing the ideal village format was further emphasised by positioning most of the shops in the adjoining vicinity. The other major communal building was the Derwent Canteen, emblematic of navy culture. It was situated centrally on the north-south axis of the village, close to the other communal buildings. The accident hospital was another civic, though less public, building which also dominated the village through its large size and imposing roof.

Tin Town was not static throughout its life and though extensively planned out in advance did not come into being ready formed. Most of the civic buildings and services were built over the years following the first occupation of the accommodation. George Sutton, the missionary, instigated a Sunday School and brought baptisms to the village rather than a nearby church (Sutton 1914). Sutton also commented that in the early years there was a lack of mutual knowledge and trust amongst the navvies, but that this grew as they got to know each other and as they settled into the routines of living in such a settlement as Tin Town. As an example, an attempt to form a Minstrels group in 1902 failed and was then resurrected successfully in 1912. Many navvies may have been initially wary of or in opposition to such planned social groups and events at the Recreation Hall, especially if this was the first time they had worked and lived in such a social context. Over time, first aid courses, a fire brigade, Bible reading union and a football team were founded, providing planned opportunities for social involvement.

The structures and routines created by work, village layout and the organised events, as well as the explicit shared aim of contributing to a huge construction project, were

important in forming the social group identity of the Tin Town occupants. Within an overall village community, individuals were members of numerous communities based on gender, age, social interest and work role. This was a society comprised of wives, husbands, bachelors, foremen, experienced workers, novices, professionals, hutkeepers, shopkeepers and children. These identities were reworked through social contact with each other at times and places structured by the village and the construction sites so fostering social bonds of 'shared experience'.

As has been discussed above, zoning of the village created areas where specific social groups, for example families or foremen, would have the most immediate and frequent contact with each other. Women washed clothes on the same day of the week at communal outdoor laundry areas or met in the shops (Sutton 1914). For bachelor navvies, the most fundamental social experiences were related to work gang and dormitory cohabitant, as well as drinking partner and billiards opponent. Gangs laboured together as teams on the same workface where they shared responsibility to the foremen and engineers for completing the task to schedule. It appears that these gangs were not housed in the same dormitory, where social responsibility was to dwelling in the same space with each other. This included cleaning the hut, buying food for communal meals and helping each other out when money was tight (*ibid.*). Humour and games, such as cards and dominoes, would have had a strong influence on creating social bonds. An idea of how the dormitories, and also the married quarters, were more than just a functional sleeping place is given by photographs of the interiors (Plate 4) and Sutton's following commentary:

"It is nearly always amusing to watch the faces of visitors to our village, when they enter our workmen's homes. . . . Perhaps they did not expect to see the piano, and sideboard, and those 'fine art' pictures, neatly framed, and the brilliantly polished copper kettles and brass ornaments."

(Sutton 1914)

The huts were bound up with the social identities that navvies chose to signify through buying and displaying material culture, which for the most part would be expressed to themselves and colleagues rather than the outside world.

Social identities, in turn, influenced the ways navvies and their families interacted with the planned society and how they perceived it. A member of the Bible society is likely to have had a very different experience to a regular heavy drinker at the Canteen. So would the children born at Tin Town, home to everything they knew, compared to the young navvies who had left agricultural villages for the first time in search of higher wages in the Upper Derwent. It is unlikely that all would have conformed in their attitudes to living in such a structured place, and within the apparently tightly knit community there would have been a complex of highly defined social identities.

The social impact of Tin Town was not confined to the village itself. Locally, the arrival of the navvies and their families changed the social structure of the valley. Tin Town was the largest settlement in the area and the first significant nucleation of a population. Where previously the majority of people lived in dispersed farmsteads and the small Derwent and Ashopton hamlets, here nearly 1,000 people occupied a village. As far as the Upper Derwent was concerned, this was a new way of living and, in effect, the planned nature of the village was the plantation of urban ideals into the countryside

combined with the rationalisation of the landscape that had begun with agricultural improvement in the 18th century.

Within and beyond the valley, the constant coming and going of navvies looking for work, and those going on rambles, picnics and shopping visits would have vastly increased the number of people travelling across the landscape. Provisions were brought from the surrounding towns, villages and farms so increasing the economy of the area. The static and travelling shops were operated by existing shopkeepers in Bamford and Sheffield, while milk was supplied by Crookhill Farm. Events at the Recreation Hall also attracted people from Bamford, the Derwent Valley to the south and Hope Valley. Many of these were young women and there are a large number of Welsh and Irish surnames in the locality, which local folklore attributes to navvies marrying local women and settling in the region after the dams were completed. The two elder daughters of David Wain, who lived at Birchinlee Farm when Tin Town was occupied, married DVWB employees (Robinson 1983). The football team was another major point of contact and did a lot to improve the navvies' social standing. Those who died at Tin Town were buried in Derwent churchyard, then moved to Bamford churchyard after the flooding of Ladybower Reservoir. At both graveyards, burials were made in areas set aside for navvies and their families so incorporating them into the wider local community but only through a degree of separation. This was a reworking in death of the social place of navvies and Tin Town in the local area during life.

The occupants of Tin Town were the labour who transformed the Upper Derwent according to the needs of the nearby cities. It was they who arrived in a pastoral upland valley, where the largest building was Derwent Hall, and left a landscape dominated by gigantic water reservoirs contained behind huge mock-gothic stone walls. The progress of this transformation, and so the finite time span of their own occupation in the valley, would have been evident from the village, as the dams increased in height. When the job was done the village was cleared away and sold. One of the married quarters still survives and is now a hairdresser's in the nearby village of Hope. Today it is mainly host to women having their hair styled and set, so playing a role as a focus for gendered social gathering in a very different landscape.

Where did the navvies and their families go after Tin Town? As mentioned above, some evidently settled in the area and stopped being itinerant labourers. Others would have moved on to other construction projects. One of these was Sheffield Corporation's Ewden Valley Dam where a smaller settlement was provided and laid out along similar principles to Tin Town, after which some navvies settled permanently in the area and found employment in the steel industry (Robinson 1983). There is a chance that some men also volunteered, or were conscripted, to fight in the trenches during World War I. Wherever they went, they would have carried forward with them some of the social attitudes and identities formed during Tin Town, to be reworked in new contexts.

One question to answer is whether the highly planned experiment in Edwardian social engineering worked in meeting the aims of the Derwent Valley Water Board? It did provide comfortable and safe accommodation, relative to working-class housing of the time, for a population which completed the dams to schedule and appeared to have lived hard but enjoyable lives, again relative to contemporary working classes. So the answer from that point of view is yes. Would the answers be the same from the people who lived there? Those are unfortunately lost because the opinions of all but one person

went largely unrecorded. The exception was the missionary, George Sutton. He certainly painted a glowing report in his *Story of Birchinlee*, and held a unique position as someone who had been a navy, with acquaintances from previous projects, yet was working to promote the DVWB's social structure to the navvies. His eye-witness testament suggests that many would also answer yes.

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