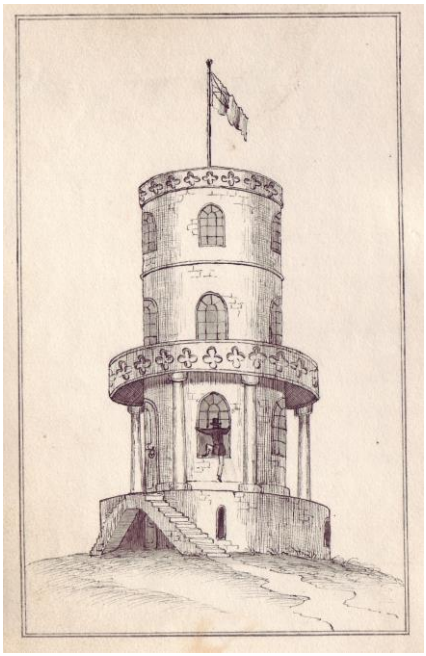
The Landmark Trust

CLAVELL TOWER

History Album



Written & researched by Caroline Stanford

August 2008

BASIC DETAILS

Built	**1830-1**
Built by	**The Reverend John Richards Clavell**
Builder/architect	**Robert Vining**
Owned by	**Smedmore Estate**
Landmark tenure	**99 year lease**
Listed	**Grade II**
Dismantled & re-erected by Landmark	**2006-8**
Opened as a Landmark	**August 2008**
Contractor	**Carrek of Wells**
Site manager	**Doug Brown**
Site foreman	**Steve Strode-Walton**
Joinery	**Robeda Joinery of Bideford**
Architectural adviser	**Andrew Thomas**
Building analysis	**Richard Morriss of RKM Associates**
Project Manager & Quantity Surveyor	**Adrian Stenning of Bare, Leaning & Bare**
Rectified photography	**Plowman Craven**
Project Evaluation & Conservation Statement	**Rodney Melville & Partners**

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Supported by The National Lottery® through the Heritage Lottery Fund | heritage lottery fund

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We are grateful to all these bodies and individuals, and also to the numerous other private donors who supported our appeal. Clavell Tower could not have been restored without their help.

BOOKS AT CLAVELL TOWER

We also acknowledge the generosity of Elizabeth & Richard Jurd, who donated the majority of the books at Clavell Tower.

Clavell Tower – Summary

Since 1830, Clavell Tower (listed Grade II) has stood sentinel on the Smedmore Estate above Kimmeridge Bay. It was built by The Reverend John Richards Clavell as an observatory and folly, and has served ever since as a feature in the landscape on this wide open sweep of coastline, familiar to all those who pass by it on the South West Coastal Path and to the sailors and smugglers who used it for navigation. The Smedmore Estate has been owned by the Clavell family since the 1420s (today, by marriage, the Mansels) and has been united with the manor of Kimmeridge since 1554. Its seat, Smedmore House, was built by Sir William Clavell in the early 17th century and added to during the 18th century. In 1774, George Clavell died without issue and the estate passed to his nephew, William Richards, on condition that he changed his name to Clavell. William had a younger brother, John, who went into the church and served quietly as rector for Church Knowle, Steeple and East Lulworth. In 1818, William too died without offspring and so The Reverend John Richards inherited the Smedmore estate as William's nearest kin at the age of 58. He too changed his surname to Clavell.

We know little about The Reverend John Richards Clavell. His signature appears faithfully through the decades in the various parish records and a silhouette of him at Smedmore House shows an unremarkable middle aged profile in a wig, at a date when such things were going out of fashion. He turned 70 in 1830 and it may have been this that prompted him to build his tower on the cliffs above Kimmeridge. An account in the *Dorset County Chronicle* for 21st July 1831 describes the newly completed tower as supposedly viewed from the fashionable Esplanade in Weymouth, calling it 'as elegant a building as the county of Dorset can boast of.' This article and building accounts held at Smedmore House also tell us that the builder of the tower was Robert Vining. Vining was a Weymouth man and associate of architect Willliam Hamilton, with whom he built the Esplanade there in 1795 (Vining would also rebuild it after the Great Tempest of 1824). Robert Vining also built the octagonal Spa House at Nottington, just north of Weymouth, in the same year as Clavell Tower. The tower was built of very local materials, some even quarried from the estate or taken from the beds at Kimmeridge Bay.

The Reverend John Richards Clavell died in 1833 and the estate passed to his niece, Louisa Pleydell Mansel. Smedmore House became a happy family home through the next decades, the tower a destination for picnics and family expeditions (and courting couples – Thomas Hardy drew the tower as a frontispiece for his *Wessex Poems* and may well have courted his sweetheart Eliza Bright Nicholl here, the daughter of a Kimmeridge coastguard). From the 1880s until 1914, the tower served as lookout post for the coastguards but was then left empty and increasingly derelict. Meanwhile, cliff erosion was taking its toll. Originally, it is said that a coach and four could be driven between the tower

Ivor Toms' winning entry for the art and photography competition to capture the tower in its original position before dismantling began. The competition was run in association with the Blackmore Vale Magazine.

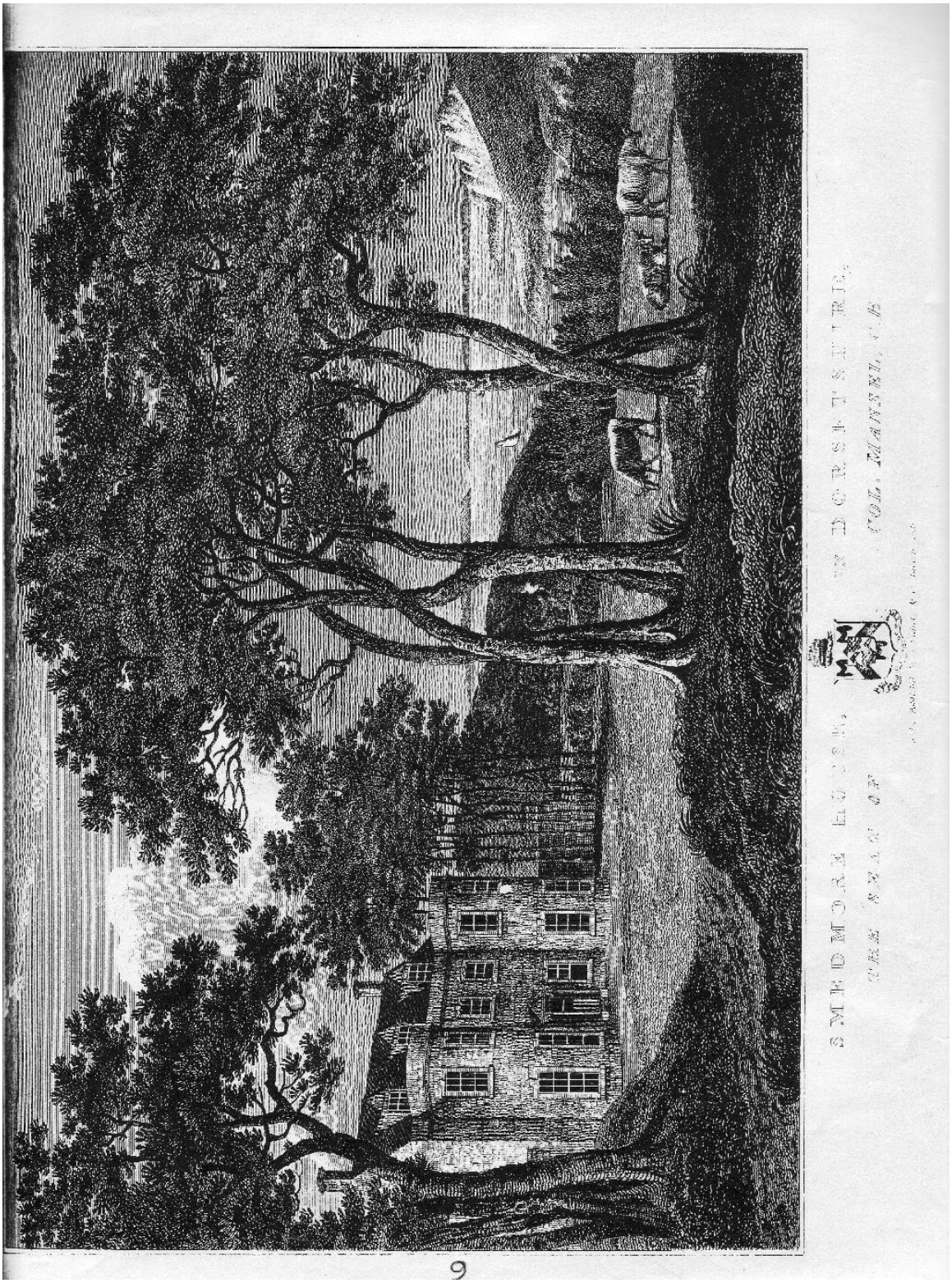
and the cliff's edge are continuously crumbling away here at an average of 13 metres every century. By the late 1980s the tower was in real danger of falling off the edge. Dr. Philip Mansel set up the Clavell Tower Trust and English Heritage agreed to the principal of relocation, but the project proved beyond the Trust's resources. In 2002, the Trust approached the Landmark Trust for help, whose Trustees gave cautious acceptance.

The tower's proximity to the cliff's edge meant that the project had particular urgency. Various solutions were carefully assessed, with the conclusion that the only way to save the tower was carefully to record and then dismantle it, and re-erect it further back from the cliff. Further consultation took place to determine the best position for reconstruction, one that both provided a sound footing and protected as many as possible of the original sitelines. There followed four years of fundraising, during which time it became clear that the project could not proceed without major support from the Heritage Lottery Fund, which was forthcoming late in 2005.

Work therefore began in Spring 2006 with contractors Carrek of Wells. The access track was put in and meticulous recording undertaken using rectified photography. The tower was fully scaffolded and dismantling began. The tower was marked into quadrants, and each piece was numbered and inventoried and then stored in wooden crates, which soon covered the surrounding site. Analysis of the fabric confirmed that most of the tower's materials came from very local sources, which helped in the selection of replacements.

Once the colonnade and outer drum were down, the new foundations were dug and filled with concrete on the new site, and the new tower began slowly to rise. The old foundations have been left in situ to record the tower's original position, at least for now. Carrek's masons moved on site to carve the many new pieces of stone required, since many pieces were missing through plunder or decay. We consulted Robert Vining's Spa House at Nottington for internal joinery details that were lost. The old tower had been coated in Roman Cement, a hard hydraulic cement made using septarian nodules that sets through chemical reaction and was commonly used in maritime situations at the time. Today, Roman Cement is no longer available but can be closely matched with a hydraulic lime hydrate and trials were conducted through the winter to find the best mix. The aggregate used in this render has the advantage of being pleasantly self-coloured.

The approach used to save Clavell Tower represents conservation at its most intrusive and it is not a methodology to be undertaken lightly. Today, Clavell Tower's position as land- and seamark on this World Heritage Site coastline is once more assured. Its new foundations and careful reconstruction mean that moving it intact would be an easier process should this become necessary again, but it is estimated that such a need should not arise for at least another two hundred years.



Engraving of Smedmore House from Hutchin's *History of Dorset* (1861 edition).

History of Clavell Tower and the Smedmore Estate

'For many of these old county families, Clavell Tower became a place of reflective retreat as well as a symbol of their devotion to Dorset.'

– T Hearl, William Barnes Society Newsletter, Nov 2005.

The Smedmore Estate, on which Clavell Tower stands, takes its name from Henry Smedmore, who sold it in 1391 to one William Wyot, a former tenant. In the 1420s, Wyot's daughter Johanna married a man called John Clavell. A William de Claville is recorded as a Norman tenant-in-chief in the area in the Domesday Book and John is likely to have been his direct descendant. Since John and Johanna's marriage the estate has, remarkably, remained in the ownership of this same family, who in the nineteenth century became Mansels through marriage.

In 1554, another John Clavell extended the estate by purchasing the manor of Kimmeridge, released from its previous ownership by the Abbey of Cerne by the Dissolution. The manor and estate have been jointly owned ever since. John Clavell's grandson William (1568-1644) was a man of many parts and great initiative. He was knighted for his part in suppressing Tyrone's Rebellion in Ireland, serving under the 7th Lord Mountjoy.[1] William Clavell went on to collaborate with Lord Mountjoy in experimenting with the production of alum from the Kimmeridge shales (see section on Kimmeridge).

Clavells and Pleydells, with whom they married in the nineteenth century, are scattered through Dorset's history. One exciting but disreputable relation during these years was Sir William's nephew John Clavell of Sherbourne (1601-43), a man of many parts who gained notoriety for his career as highwayman from 1624-5. His capture led to a death sentence being pronounced, but his long poem, *A Recantation of an Ill Led Life* gained him a reprieve and some renown as a poet (a copy may be found in the bookcase).

[1] This rebellion was part of the Nine Year's War 1594-1603 when the Irish chieftains rebelled against the extension of English Elizabethan rule beyond the Pale across the whole of Ireland. Mountjoy took over command of the English forces after Elizabeth's erstwhile favourite the Earl of Essex's campaign ended in his execution for treason in 1599.

John Coker tells us that in 1632 'Sir William Clavile...built a little newe house and beautified it with pleasant gardens', the beginnings of today's Smedmore House. The main family seat had been at nearby Barnston three miles away since the Middle Ages, but William clearly felt his position warranted something more up to date. Impoverished by his various schemes, he would end up selling Barnston and mortgaging much of the rest of his property but he kept Smedmore House and at his death in 1644 left it to a cousin, Roger Clavell.

Sir William's 'little newe house' remains within today's fabric, its main front facing southwest. To this front, Roger Clavell's grandson, Edward (d. 1738) added a pretty Queen Anne elevation with parapet, dormers and a heavy cornice around the entrance. Edward was probably also responsible for the jumble of kitchen, bakery, servants' rooms and stable block. There is a suggestion that Edward Clavell was a scholarly man - in 1741 Lord Macclesfield was a substantial buyer from 'the celebrated library of Mr Clavell of Dorset.' Edward's third son George inherited the estate in 1744, and in 1761 built today's principal elevation facing towards Kimmeridge. This has substantial bows and presents a confident to approaching visitors.

In 1774 George Clavell died without a direct heir. His sister Margaret had married William Richards, a gentleman farmer in the county, and their son William inherited the Smedmore estate, on condition that he changed his name to Clavell, which he duly did. William had a younger brother, John (1760-1833) who became a clergyman. In 1784 John was given the livings of nearby Church Knowle and Steeple and later became vicar of East Lulworth. He would remain rector of these parishes until his death in 1833, seemingly content to lead a quiet life as a Regency clergyman.

However, in 1818 John's elder brother William died without issue, and The Reverend John Richards, now in his late fifties, inherited the Smedmore estate in his turn. He too became John Richards Clavell as a condition of the inheritance, and in his seventieth year, he erected the tower that would

become such a lasting memorial to the family name. For all his long residence in this small corner of Dorset, it has proved remarkably difficult to catch a sense of the man. Kimmeridge Marriage Register for 1781 provides his earliest signature. In the Poor Book for 1795, he appears as Justice of the Peace. A small silhouette at Smedmore House, fashionable memento of the day, shows an unremarkable middle-aged profile, slightly plump and bewigged at a date when such things were going out of fashion. The Parish Poor Book for 1818 shows him rather endearingly practising his new signature 'J Clavell' in pencil. By the 1830s, he seems to have become increasingly infirm, and J. F. Barnes is signing 'for the Rev J Clavell.'

Indeed the only personal note comes from the engraving on a fine silver coffee pot, also at Smedmore House:

Presented as a token of gratitude and respect
to the Rev J Clavell 44 years vicar of
E Lulworth by Revd C Witt 22 years curate of the same.

Silhouettes of William Richards Clavell (left) and The Reverend John Richards Clavell (right) from Smedmore House.

Portrait of William Clavell, Esq who inherited Smedmore in 1774.

The Reverend Mr. Witt, at least, seems to have held his employer in some esteem to offer such an extravagant gift as a humble curate, but it has played its part well in commemorating this successful pastoral partnership. The jug is undated, but may have been presented in 1830, to mark The Reverend John Richards Clavell's three score years and ten.

The silver coffee pot presented to The Reverend John Richards Clavell by his curate, Mr Witt, in 1830

Robert Vining, Builder of Clavell Tower

It was in this same year, 1830, that The Reverend John Richards Clavell decided to build his tower. Oral family history suggests that in the 1820s, Miss Maria Sophia Richards, The Reverend John Richards Clavell's sister, was fond of being taken in a carriage from Smedmore House to Neptune's Seat, as she called it, on the far side of the bay above Broadbench. Perhaps Miss Richards had some influence on the siting of the tower.

There are two sources for the date of construction, the first a helpful account in the *Dorset County Chronicle* for 21st July 1831, which gives both the date when the first stone had been laid (21st July 1830) and the date of the builders' party to mark the tower's completion (15th July 1831). The second source, the building accounts held at Smedmore House, show that internal finishing works may have gone on beyond this date, with payments still being made into September. The Reverend John Richards Clavell's 70th birthday, if we are right in surmising that the tower was in some sense a celebration of this, was on 4th June 1830. The conjunction of all these various dates lend some weight to our building archaeologist Richard Morriss's observation that from its fabric, it almost seemed as if the tower had been finished in something of a rush and by builders not accustomed to building such polite and frivolous buildings. While of course accounts may have been settled retrospectively, was there perhaps a family picnic planned at the tower for the Reverend's next birthday in June 1831? If so, the interiors may still have been bare.

The *Dorset County Chronicle* also gives the only contemporary motivation for building the tower, which it suggests was an observatory, and that it 'forms a particularly fine sea and land mark.' At that date, the anonymous journalist

DORSET COUNTY CHRONICLE, 21st July 1831

WEYMOUTH:- Wednesday 20th Jul

'The *promenade soirée* of last Thursday was attended as before with a most interesting display of youth, rank and fashion, and went off with its wonted *éclat.*

Among the many interesting objects which present themselves to our notice on the *North* side of our beautiful bay, not one of the least is the OBSERVATORY, lately erected by the Rev. J. Clavell, of Smedmore, in the Isle of Purbeck; and, although at a greater distance than some, offers a most conspicuous *coup d'oeil* from our Esplanade. Its prominent situation and architectural construction display most prominently Mr. Clavell's taste in selecting such a spot, and reflect the highest credit on Mr. Vining, the architect, in the erection of it. This beautiful specimen of modern workmanship is built on the summit of the cliff, about half a mile from Smedmore House, and forms therefrom a very picturesque and pleasing object, it is placed upon the cliff two hundred feet above the level of the sea, at a proper distance from its precipitous termination, built Of Purbeck stone, the principal part dug on the manor of Smedmore, and of a circular form; a colonnade of twelve columns surrounds the *basement storey*, which is twenty-one feet in diameter, there are *two* above, diminishing in exact proportion, the whole forty five feet high, surmounted with a parapet with open fret work, exhibiting altogether as elegant a building as any the county of Dorset can boast of. It was lately finished - and to celebrate its completion the respected and worthy founder entertained the whole of the mechanics and labourers employed in the progress of the work, nearly fifty in number, on Friday last, the 15th of July, to a dinner, &c. in the true and genuine style of old English hospitality. The first stone of this building was laid with the customary honours on 21st of July,1830, and a brass plate with suitable inscription, commemorative of the event, and coins of his present Majesty deposited, with the ceremony usual on such occasions. – The Observatory forms a particularly fine sea and land mark.'

also considered the tower to be 'at a proper distance from [the cliff's] precipitous termination.' Anecdotal later evidence has it that a coach and four could be driven between the tower and the edge of the cliff although whether this ever happened or whether it was simply an estimate of distance is not clear.

Both sources confirm Robert Vining as the builder and architect of the tower. Vining was a local Weymouth builder who was also responsible for the Spa House at Nottington, between Radipole and Broadwey, today on the northern outskirts of Weymouth. Though this small octagonal building was not built until 1830, tracing its tale takes us to the heart of Regency Weymouth and reveals something of the life of Robert Vining along the way.

The Spa House was commissioned by one Thomas Shore to house a spring renowned for its medicinal properties in curing all sorts of complaints, including cancer. Its fame began around 1660, when a shepherd would drive his flock through the village, many of which were suffering from scab. As he passed the then open spring next to the road, many of the sheep drank and some walked through the pool that had gathered. Those who did were cured of the disease, a recovery attributed to the water. The spring's fame spread over the next two centuries and people came from far and wide to take the waters, including, in June 1791, George III and his queen, Charlotte. Demand grew for a proper spa house, and so the spring was sold by the Stewards of Nottington House to Mr Shore, who laid the foundation stone on Good Friday 1830, claiming he did so more for community benefit than financial gain.

A range of services were available at the spa: a cold marble bath for 2s, a cold shower bath for 1s or, for an extra 6d, you could have a cold shower bath with feet in warm water. Jets d'eau (a good hosing down?) were also available warm or cold and there were discounts for bathing more than one child at a time. The Pump Room was open from 6am to 8pm and stocked with 'the provincial papers and other interesting periodicals.' The establishment's popularity gradually waned and it had become a laundry by

the end of the nineteenth century, and became a private residence soon after.

George III's visit to the spring, long before the Spa House was built, came about as a result of his love for the resort of Weymouth, first discovered by his brother the Duke of Gloucester in the early 1780s. George himself visited often from 1784, eventually buying his brother's residence, Gloucester Lodge, on the seafront. The result of all this royal interest was a boom for the town's builders and a particularly elegant seafront, prompting Nikolaus Pevsner to exclaim with uncharacteristic rhetorical flourish, 'Has any coast town a more spectacular seafront than Weymoth, the terraces continuous for half a mile, fronting the expanse of Weymouth Bay?'

The Esplanade became an essential part of the scene, used by the Royal Family and other wealthy visitors to take the air and enjoy the views across the bay. A simple structure had been in place since the 1770s, but as the new houses sprang up, a need was felt to extend and improve the Esplanade. Chief among these local builders, often turned architects, was James Hamilton (1748-1829). In 1800 Hamilton was employed by the Borough Corporation with one Robert Vining, to build an Esplanade wall 'on an average six feet high and two feet thick from the road to the sands opposite the Shrubbery to Mr Ford's House in Gloucester Row.' (The Shrubbery was the garden to George III's Gloucester Lodge.) Hamilton had some experience in such projects, since it was he who had rebuilt the Cobb at Lyme Regis in 1795. In due course, it was Hamilton who oversaw the erection of the fine Coade stone statue of George III that stands 'as a patron saint' (Pevsner again) on the Esplanade and was modelled from life by Mrs Coade's partner, John Seeley.

Hamilton's partner for the Weymouth Esplanade was in all probability the same Robert Vining who built Clavell Tower. It has not yet proved possible to trace Vining's dates definitively but the 1807 Poll Book for Melcombe Regis (established as a separate borough in the 13th century but now a part of Weymouth) records a Robert Vining as freeholder in St Thomas Street. In 1809, he was made a Principal Burgess of the Borough. Pigot's *Directory of*

Dorset for 1830 lists Vining as a builder, still at 61, St Thomas Street, Melcombe Regis. Such a long working career means we cannot rule out that there were two Robert Vinings, father and son, but on balance it seems likely that the same man who built Clavell Tower also helped James Hamilton extend the Esplanade in 1800.

Unfortunately the Esplanade was always being damaged by storms and indeed was 'destroyed by a tempest' on 23rd November 1824, a storm so fierce that it breached Chesil Beach where one eye witness recalled 'Twern't a sea – not a bit of it – twer the great sea hisself rose up level like and come on right over the ridge and all, like nothing in this world.' At Weymouth the sea came over the Esplanade and engulfed the seafront hotels, cutting Melcombe Regis off. Within two years, the Esplanade had been rebuilt, by Robert Vining. Portland stone posts were installed along the sea front and two were engraved, one to commemorate the storm and the other a tribute to Vining's work: 'Rebuilt by R. Vining Builder April 13 1825.' This stone has since been lost and the tempest stone is much eroded. A replica tablet was unveiled in 1998, near the Tourist Information Centre.

The tempest stone in Weymouth, recording the great storm that hit the south coast in November 1824

Quite clearly, then, when The John Clavell approached Robert Vining to build him a tower on the cliffs at Kimmeridge, he chose a builder of considerable reputation and proven understanding of construction in maritime conditions.

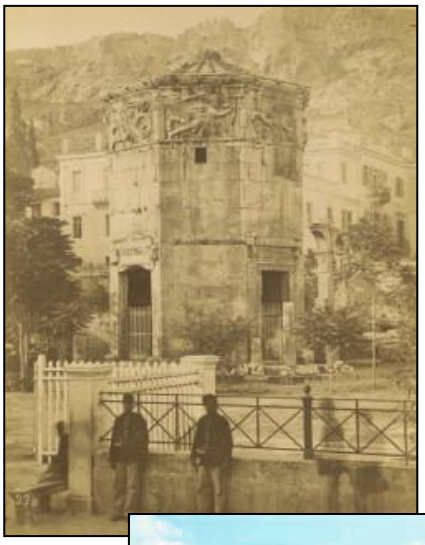
Detailed building accounts among the Smedmore papers list the various works, although work was also going on at Smedmore House 1830-1 and it is not always possible to determine where the work is being done. (During

the debate about whether the windows of the tower were curved or flat during the restoration process, the impressive curved bows at Smedmore House were considered as possible circumstantial evidence that those of the tower might also have been curved, although the physical evidence ultimately disproved this theory).

The building accounts do provide the names of the men who worked on the tower, under Jeremiah Bower who submitted the accounts. James Bower, John Bower, Emanuel Bower (a family firm perhaps and a name still current locally), Henry Curtis and Thomas Corbin each received 3 shillings a day, while John Wabber, Harry Lander and Richard Corbin got 2s 9d a day. Thomas Spencer and his men were responsible for plastering and stonework, for which he was paid by measured length.

Towers of the Winds?

The Spa House at Nottington, also built by Robert Vining in 1830. Notwithstanding 'B W C's' description of Clavell Tower as the Tower of the Winds (see below), this little octagonal building at Nottington looks more likely to have been a rather naïve reference to the original tower, shown below. The notice of sale for the Spa House in *The Times* for 1853 describes it as 'a substantial and well-built Spa house, with its valuable and medicinal hydrogen spring…the medical testimony in favour of this extraordinary spring exceeds belief in cases of gout, jaundice and other complaints.' It had a pump room, two bath rooms, a dressing room, two sitting rooms and six chambers. Pevsner described its walls as having 'a vaguely Soanic quality.'



An early photo of the original Tower of the Winds in the Roman Agora in Athens. It was built in the 2nd century BC by a Syrian astronomer with a water clock inside operated by a stream from the Acropolis. The tower became an important reference in British Classical architecture through the 18th century – the acroteria atop Beckford's Tower is another gesture in the same direction.

Another Tower of the Winds reference also provides a surprisingly early precedent for relocation of a much-loved land- and seamark. This is the tower at Bude, also known as Compass Point Tower. It is much smaller than Clavell Tower, a simple octagonal stone shelter, but was built in the same year, 1830 by Sir Thomas Dyke Acland. A compass point is carved along the cornice on each of its eight angles. By 1880, erosion of the cliff was endangering the tower and so it was dismantled and moved to a safer position along the cliff. Unfortunately, during the reconstruction the tower was rotated through 90 degrees, so that the compass points it was built to identify are no longer valid. Clavell Tower's windows also face the four cardinal points, and we have taken care that they still align today!

SELECTED EXTRACTS FROM THE BUILDINGS ACCOUNTS FOR CLAVELL TOWER, HELD AT SMEDMORE HOUSE.

Revd Clavell to Jeremiah Bower

To 145 days work from august 5th 1830 up to 22 Jan 1831 at 3s per day		21 15" 0
To Boyes 128 ½ days at 9d per day		4 16" 4 ½
To 126 days work James Bower at 3s per day		18 18" 0
To 138 days work George Corbin at 3s per day		20 15" 6
To 51 days work Richard Corbin at 2/9 per day*		7 0" 3
To 5 ½ days work John Bower at 3s per day		0 16" 6
To 58 days work Thomas Corbin at 3s per day*		8 14" 0
To 47 ½ days Robert Corbin 3s per day*		7 2" 6
To 71 days work Emmanuel Bower 3s per day		10 13" 0
To 71 ½ days work John Wabber 2/9 per day		9 16" 7 ½
To 36 ½ days work Henry Curtis 3/0 per day		5 9" 6
		115" 17" 0
To 6 ½ days work Harry [?] Lander 3/0 day**		0 19" 6
Bill of day work		116" 16 " 9
Bill of Stone 68 foot of string Course at 1/0 per foot Run		3 " 8 " 0
128 foot Cube of cornish [sic] at ½ per foot		7 " 9 " 4
86 foot of parapet at 1/0 per foot		4 " 6 " 0
28 foot of open work at 11/0 per foot		1 " 5 " 8
68 foot of capping at 8 ½ per foot		2 " 8 " 2
2 hearth paces [?] 10 ½ foot at 10 per foot		0 " 8 " 9
12 stone 42 foot cube at 1/0 per foot to go under the cullums [sic]		2 " 2 " 0
1 stone for a window 5 foot sacher [?] at 7 ½ per foot		0 " 3 " 2 ½
2 caps 1/6 each stone		0 " 3 " 0
2 do for the cullums to stand on 2/8 each		0 " 5 " 4
1 Landing 32 foot at 1/9 per foot		2 " 16 " 0
112 foot of rough paving at 12" 6 per hundred		0 " 14 " 0
576 foot of viranda [sic] paving at 7d per foot		16 " 16 " 0
212 foot of comon [sic] paving at £1 2s 6d per hundred		2 " 7 " 8
	£44 " 13 " 1 ½	

Brought over

Bill of Labour	116 " 16 " 9
Bill of Stone	44 " 13 " 1 ½
	161 " 9 " 10 ½
Cash Received at five different times	140 " 0 " 0
Balance	21 " 9 " 10 ½

Revd Sir Every thing is charged in the above account except 5 stones for the balcony cornish. I have charged 6 ½ days work for Harry Lander if he should have settled with your honour for it, it can be deducted from the above balance.
I am Revd Sir your most obedient servant Jeremiah Bower.

Also a further bill to Jeremiah Bower, mentioning most of same men dated July 7th 1831. Mentions 5 caps for the 'cullums', open work, strings, steps for the 'viranda.'.

Also various bills recording Day Work at the Tower during 1830 to Thomas Spencer, eg:

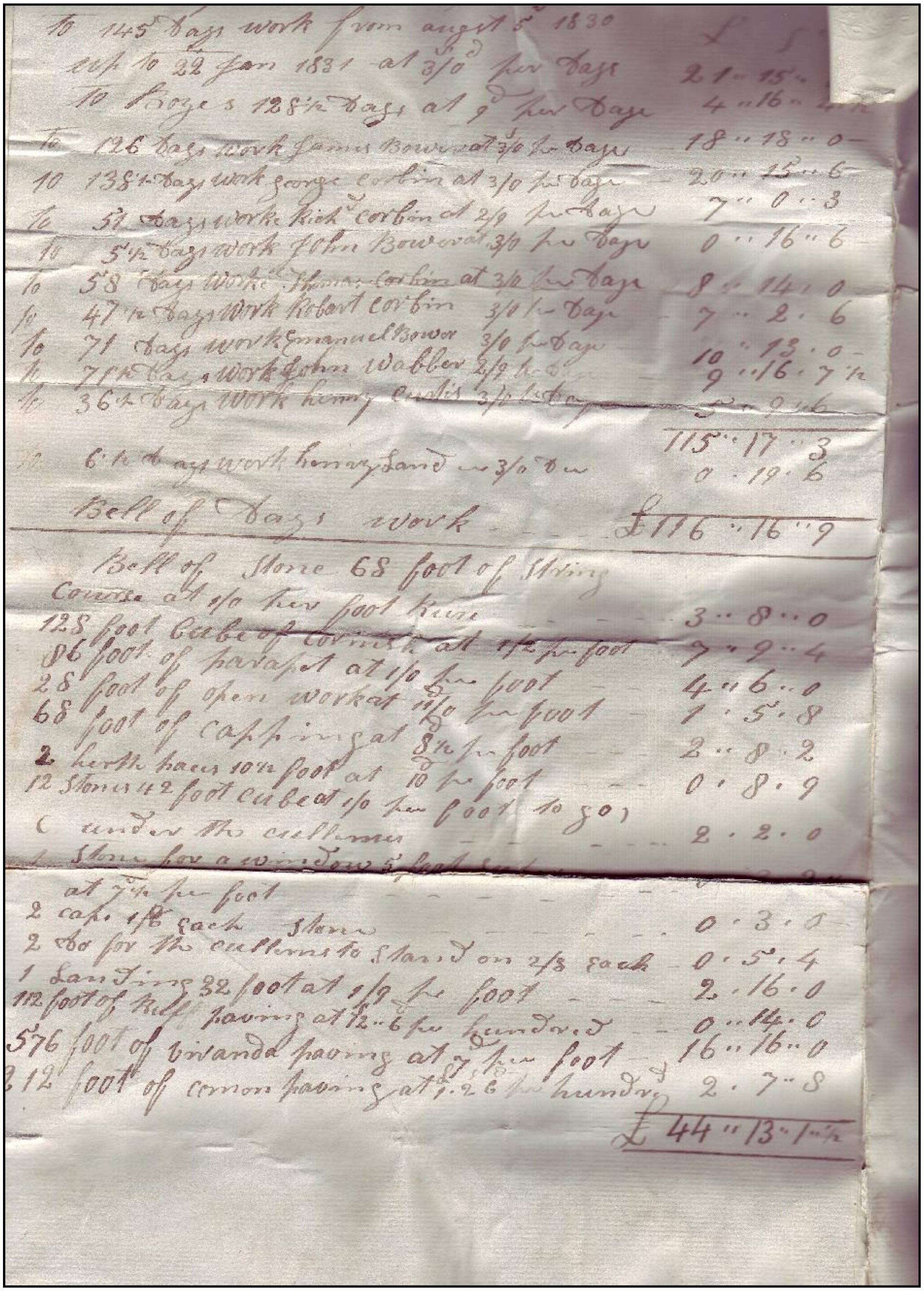
To Thomas Spencer

1831 June 13	1 Man at the Tower since the measurement	2" 6
	- also June 15, 16, and July 8, 9 for 2 men.	
	- 'paid Bill for Hair'	4" 8
	Amount of measur'd work at the Tower	50 9" 5
	Day Work at the Tower and other places	44 7" 10

1831
June 10th To T Spencer

To 259 Perch [?] of stone walling done at the Tower
To 104 feet run of plastering to Chimney Flues
13 Arches turned to windows
To 169 feet [-?-] Pavement laid
To 79 yards 3 coat Plastering
To 153 yds ½ on walls
To 73 yds 2 coat on Walls

* The Corbins (or Corbens) were a Worth Matravers family. John Corben was a quarryman of Worth in the mid nineteenth century and wrote a tune for 'While Shepherds Watched Their Flocks by Night' which is still sung by local choirs.
** Lander is another local family, whose members still fish from Chapman's Pool.



To 145 days work from augst 5th 1830 — £ s
up to 22 Jan 1831 at 3/0d per days — 21 .. 15 ..
To Boyes 128½ days at 9d per day — 4 .. 16 .. 4½
To 126 days work James Bower at 3/0 per days — 18 .. 18 .. 0
To 138½ days work george corbin at 3/0 per days — 20 .. 15 .. 6
To 51 days work Richd corbin at 2/9 per days — 7 .. 0 .. 3
To 5½ days work John Bower at 3/0 per days — 0 .. 16 .. 6
To 58 days work Thomas corbin at 3/0 per days — 8 .. 14 .. 0
To 47½ days work Robert corbin 3/0 per days — 7 .. 2 .. 6
To 71 days work Emanuel Bower 3/0 per days — 10 .. 13 .. 0
To 71½ days work John Wabber 2/9 per days — 9 .. 16 .. 7½
To 36½ days work henry [illegible] 3/0 per days — [illegible]
115 .. 17 .. 3
To 6½ days work henry [illegible] 3/0 per day — 0 .. 19 .. 6
Bill of days work — £116 .. 16 .. 9

Bill of Stone 68 foot of String
Course at 1/0 per foot run — 3 .. 8 .. 0
128 foot Cube of cornish at 1/2 per foot — 7 .. 9 .. 4
86 foot of parapet at 1/0 per foot — 4 .. 6 .. 0
28 foot of open work at 1/0 per foot — 1 .. 5 .. 8
68 foot of capping at 8½d per foot — 2 .. 8 .. 2
2 herth [illegible] 10½ foot at 10d per foot — 0 .. 8 .. 9
12 Stones 42 foot cube at 1/0 per foot to go
under the cullumns — 2 .. 2 .. 0
1 Stone for a window 5 foot [illegible]
at 7½ per foot — [illegible]
2 caps 1/6 each Stone — 0 .. 3 .. 0
2 do for the cullumns to Stand on 2/8 each — 0 .. 5 .. 4
1 Landing 32 foot at 1/9 per foot — 2 .. 16 .. 0
112 foot of [illegible] paving at 12 .. 6 per hundred — 0 .. 14 .. 0
576 foot of viranda paving at 7d per foot — 16 .. 16 .. 0
212 foot of common paving at 1 .. 2 6 per hundred — 2 .. 7 .. 8
£44 .. 13 .. 1½

The Bill of Stone, from the building accounts for Clavell Tower (Smedmore House).

Robert Vining accounts

1830

July 10th	To 2 Plans drawn for Observatory	3 " 3 " 0

- heading a long account through to March 15th 1831, detailing much freight, unloading at quay, carriage, tolls for materials, which seem too many to be all for the tower, so some must have been destined for the work at Smedmore House. Mentions chimney pieces, run of astragal rose and cube of astragal rose.

Jan 18th 1831 Receipt in pencil from Vining for £50 received from Revd Mr Whitt, Clavell's curate.

1831

July 2nd	To Colouring 3 Rooms of Tower	
	By agreement for	1 " 10 " 0
9th	To Painting Down the outside of	
	Tower, with Labor, Materials	
	and Carredge for	14 " 12 " 0
	To 1 Man 3 days, Making Good	
	the Cement on the Balcony	10 " 6
	Labor'r 3 days do	7 " 6
	¾ Cask of Cement	18 " 0
Aug 27th	2 Joiners 4 days ½ for Cutting	
	together & Fixing Staircase @ 3/6	1 " 11 " 6
	[- then all screws, deal etc]	
	1 Newel & Miter Cap	
		4 " 6
Sept 3rd	2 Joiners 6 days	2 " 2
	Do 1 Man 6 days	1 " 1
	Paid for Lodging[2]	5 " 0
	12 tubs [?] Plaster Paris	3 " 0
	2 tubs [?] Glue & 2 tubs Black for Colouring	4" 6

1831 Nov 10th Rec'd of the Revd J Clavell the sum of Thirty Pounds

Seventeen Shillings and Eleven Pence for Work Done at the Tower

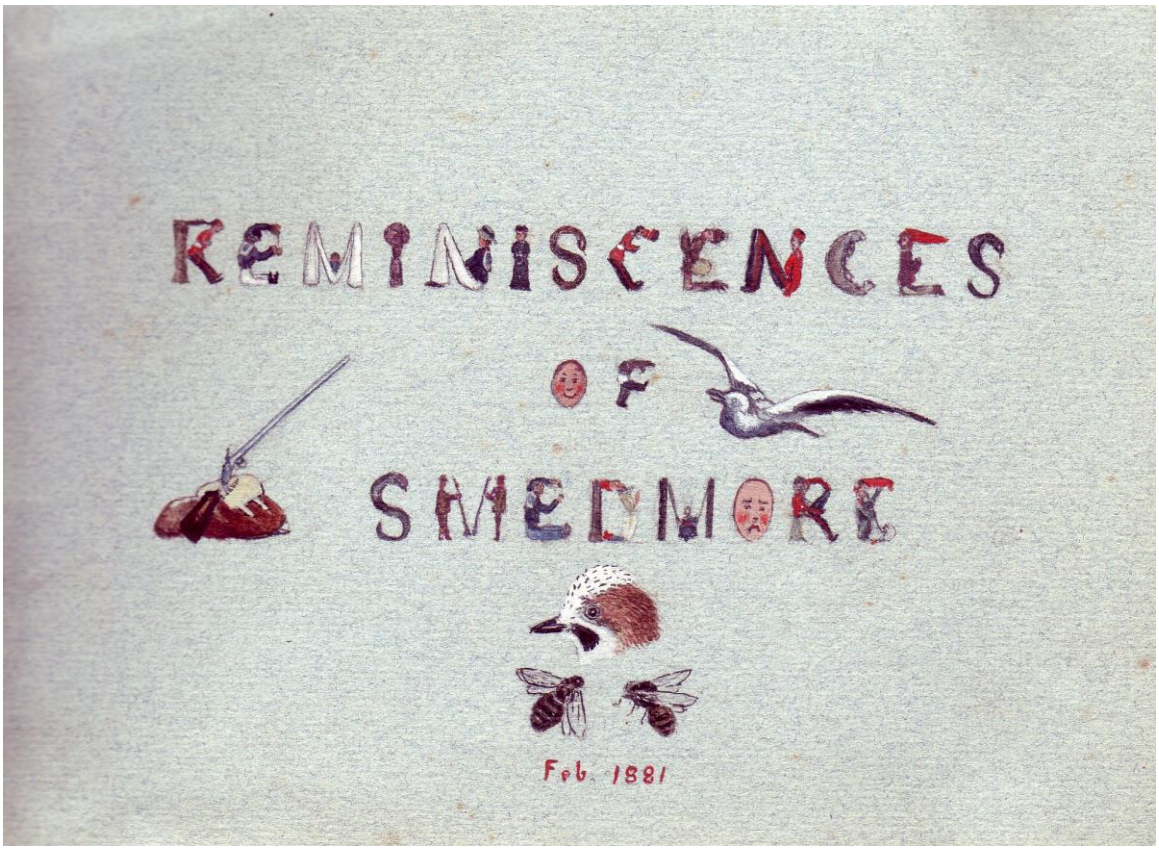
R Vining

[2] I.e not local men? Carrek's team would have sympathised….

We know nothing about how The Reverend John Richards Clavell used his tower, which he would enjoy for only two years before his death, aged 73. Unfortunately, The Reverend John Richards Clavell died intestate - or at least, this is what family history records and the law courts subsequently confirmed. His nearest kin was his niece Louisa Mansel (née Pleydell) who began to take up her inheritance, but then, three months later, his housekeeper produced a will apparently signed by The Reverend John Richards Clavell that left the entire estate to a Mr Barnes who was employed as manager of Swalland Farm. Perhaps significantly, Mr Barnes and the housekeeper's daughter were on friendly terms.

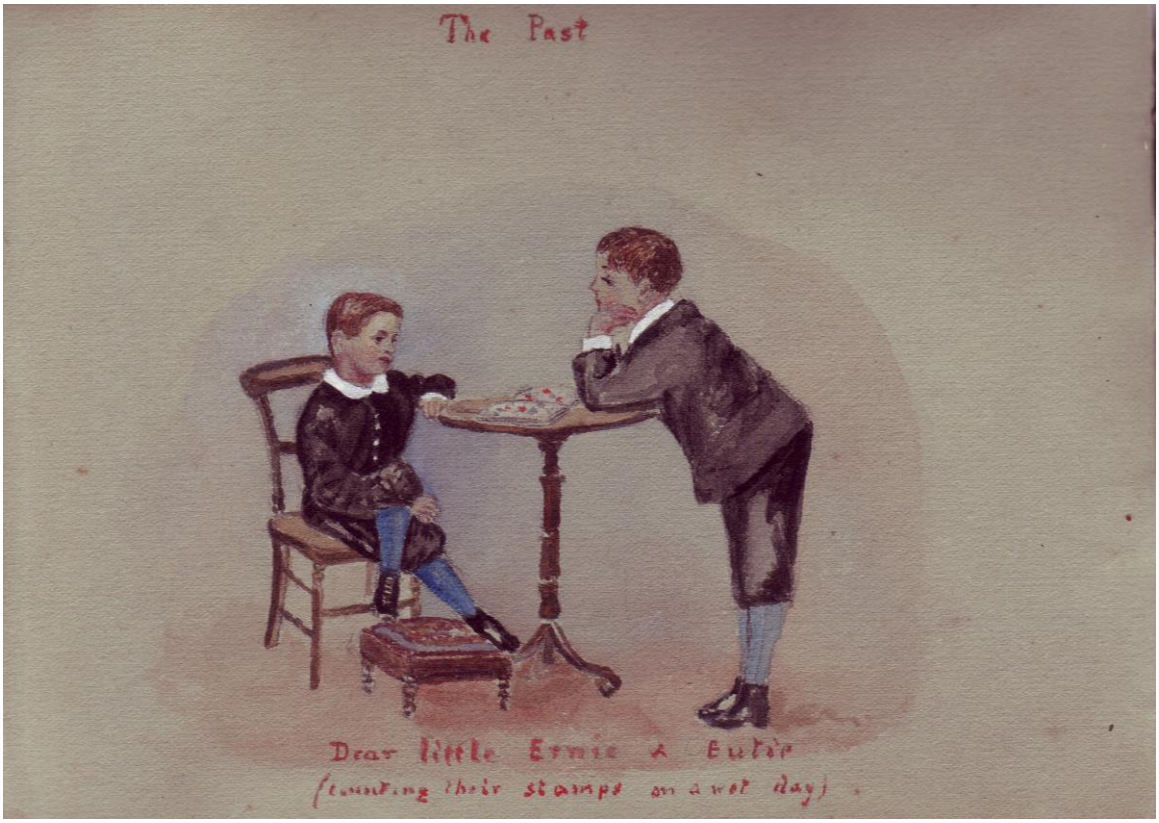
Not surprisingly, Louisa and her husband Colonel John Mansel decided to contest the will in a case that became something of a *cause célèbre* at the time and whose details were subsequently published. Colonel Mansel's diary for 1834 records the anxieties of these days, when 'intense anxiety [was] evinced by all orders of Society as to the result of the trial, whether poor Smedmore shall remain in the same family as it has for four centuries been or pass into the hands of a set of forgers' (July 22nd). Family lore has it that The Reverend John Richards Clavell had become something of a recluse by his death and was possibly senile. Certainly, the Poor Books show that he was barely capable of signing his own name in his last years, and indeed one of his last autograph signatures has been cut out of the Poor Book, perhaps for use as evidence in the trial and validation (or not) of the will. It is not entirely implausible that The Reverend John Richards Clavell did intend to leave his property to Barnes and his associates, although the delay in producing the will counted against them. The jury at Dorchester was told, somewhat unconvincingly, that this delay was on The Reverend John Richards Clavell's own instructions. On 25th July 1834, the jury deliberated until 4.30am before dismissing the will and finding in favour of Louisa Mansel, confirming ownership of the Smedmore Estate to the family who had owned it since the 1420s.

For the rest of the nineteenth century, Smedmore House settled into a comfortable routine as a family home. A book of watercolours there records a happy round of family excursions, rainy days and a drawing room that was sometimes untidy.

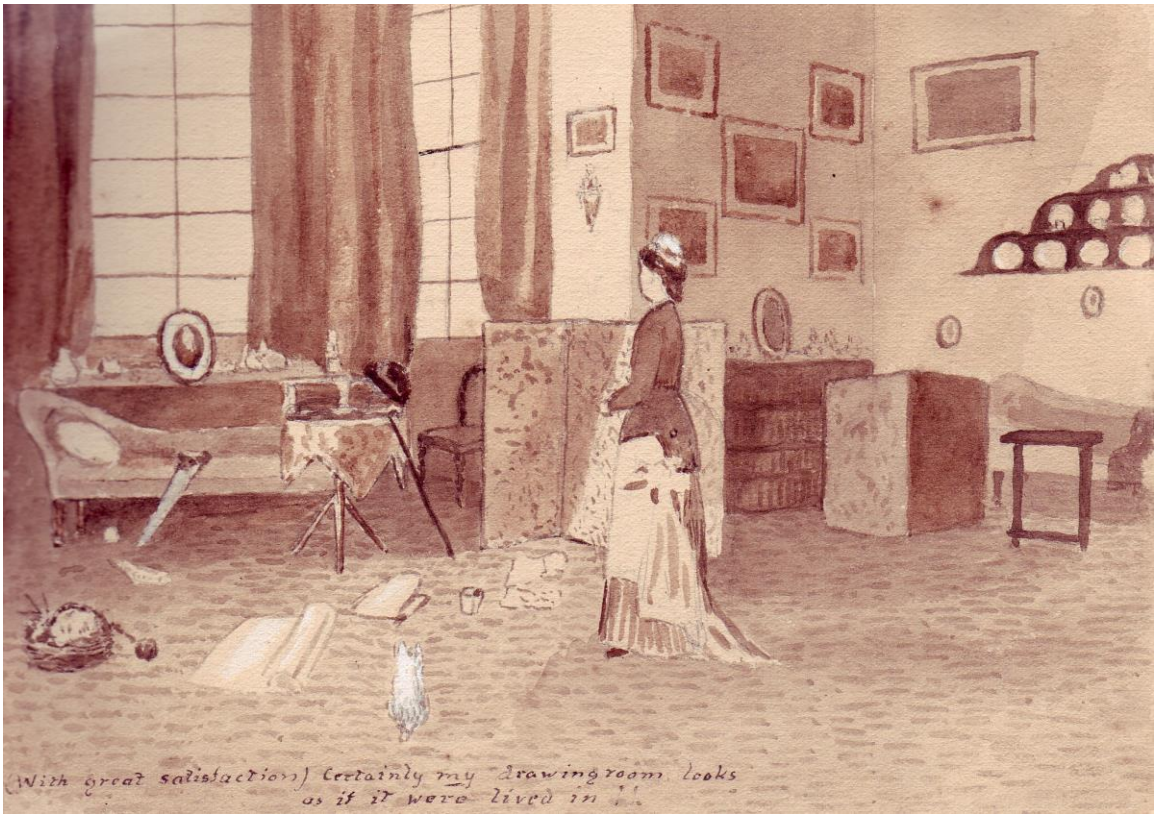


The title page of a watercolour album at Smedmore House

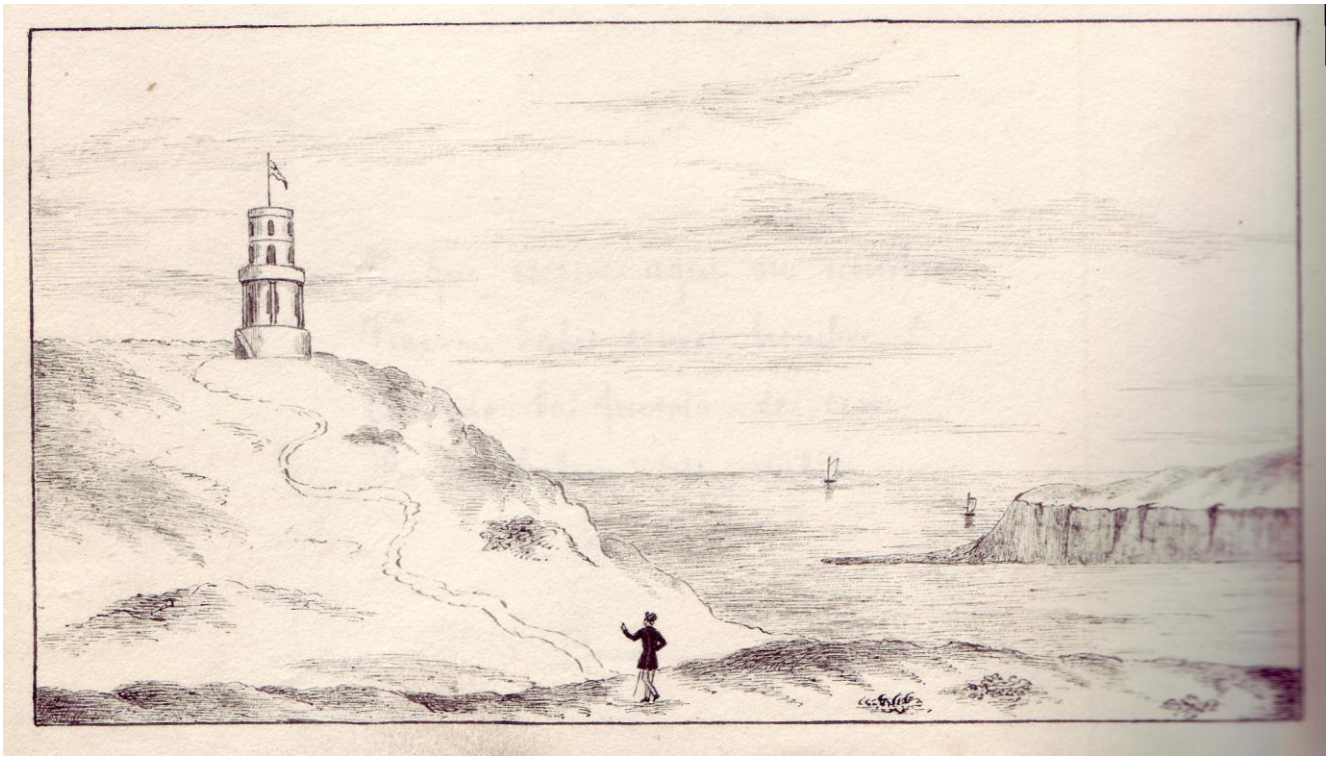

Ernest knows a short cut home!
Look out it's a little, well.. damp"!!


The Past
Dear little Ernie & Butler
(counting their stamps on a wet day)


PERILS OF PURBECK
Ye 'zatty' Pig!


(With great satisfaction) Certainly my drawing room looks as if it were lived in!!

The tower must certainly have featured in these activities, and in another notebook one visitor, a 'B W C', was moved to write for 'the Lady of Smedmore House' several doggerel variations on the theme of his breaking and entering into the tower, where he had defaced the walls by writing his name. He must have been a house guest, so it is not clear why he had to climb in through the window rather than asking for a key, nor why he felt emboldened to write on the walls. It is interesting, too, that at this mid-century date (as the escapade must pre-date the tower's next use, as coastguards' lookout) the tower is known as Kimmeridge Tower.



'B W C' contemplates the tower.

Extract from MUCH ADO ABOUT LITTLE

By B W C to the 'Ladye of Smedmore House'.

He who beneath his name doth write
Learn how he entered this abode
Finding the door resist his might
In at the window boldly strode.
He who writeth now his name
Canst thou guess how here he came?
Bolted and barr'd he found the door
So by the window reached the floor.

He who upon this wall now writes his name
Learn hence the way by which he came.
The door indeed he found was closed with care,
But not the window so he jumped in there.
Say how the fellow hither came
Who hath scribbled here his name.
Finding the door was fastened
He came through the window heels over head.

How came the bold intruder here
Who writes his name, devoid of fear,
The portal closed – he broke the sash
And into this Tow'r he jumped Slap-dash.
If thou cant tell – say <u>how</u> he came
The idler who writes here his name.
Finding the locks his entrance hinder
Vy of course he bolted through the Vinder.

A stranger passing through the land
By chance approached the Kimmeridge Strand.
High on a cliff a Fort there stood
Secure from waves or briny flood,
It seemed so lovely, high and fair,
As if suspended in the air;
He marked the spot – resolved to reach
This fortress – looking o'er the beach;

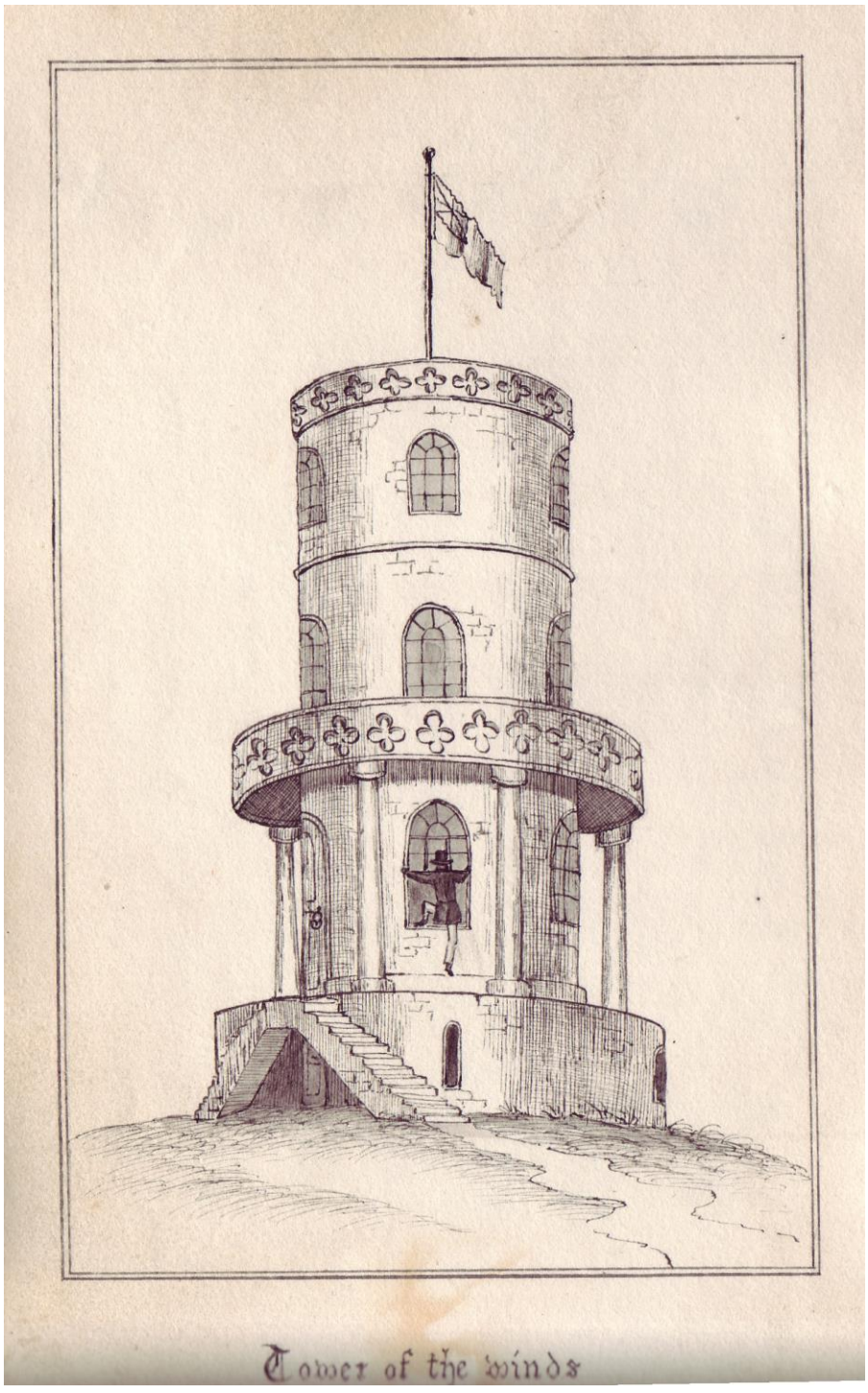
So, pressing onward, urged his way,
And on the summit – made his stay.
Yet here alas! He found with pain,
His labour useless, lost & vain,
For door was under key and lock
And seemed his giant strength to mock.
Yet daunted not – to force this Tower
He persevered with all his power.

- He walked the building round and round,
First upward looked, then on the ground,
Looked up again – then though apace,
"The window! – window! That's the place!"
'Twere vain to say what arts he tried,
What magic feats he now applied,
He jumped, he bolted & he fell,
And other means he used as well,

He hopped, - he tumbled and he strode,
To gain this airy light abode,
He passed the window frame, - & leapt,
And then he slid, - and firm & fast,
Within the Tow'e he stood at last –
And this accomplished with a jerk,
He set his penmanship to work.

Wrote on the walls and wrote so well
It raised around a hidden spell,
And spread abroad both far and near
Poetic wildfire, bright & clear.
- E'en Scotia's land caught up the theme,
Her spirit shed o'er poet's dream;
And back in echoing strain she flung
The chord which southern Bard had rung.

Now to the Wight – we'll bid adieu,
With all his arts and magic too;
Hoping he has enjoyed the view,
Of land and sea , as others do;
Also when next he tries his might,
He may not find so sore a fight
As that in which with ruthless power,
He proved his strength at Kimmeridge Tower.
He proved his strength – at Kimmeridge Tower.

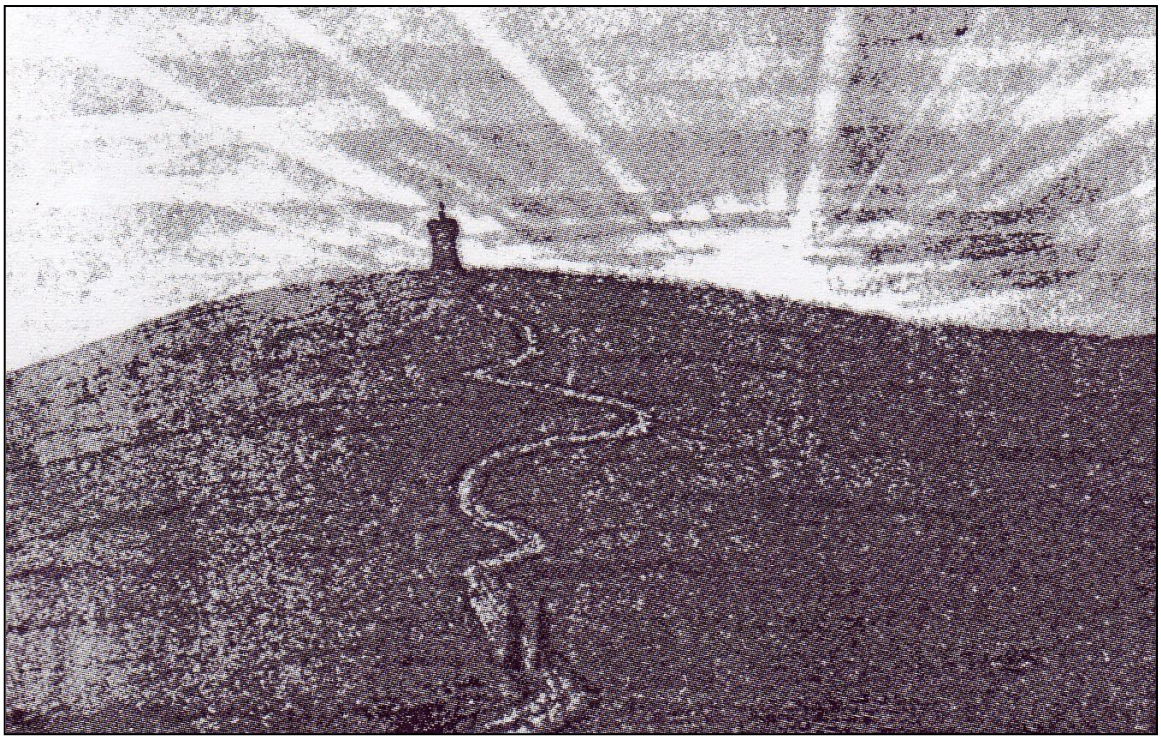


‘B W C’ breaking into the tower, with a passing Classical allusion.

Clavell Tower as Literary Inspiration

Thomas Hardy & Clavell Tower

Kimmeridge coastguard George Nicholl and, more particularly, his daughter Eliza Bright Nicholl were sources for Hardy's interest in the South Dorset coast and its smuggling past. Hardy's love affair with Eliza also inspired the *She To Him* sequence of poems and other sonnets, and Hardy used one of his own drawings of Clavell Tower to illustrate his *Wessex Poems,* showing a male and a female figure walking or standing hand in hand on a path leading towards a building recognisable as Clavell Tower. On this basis, it seems that Hardy may have courted Eliza at the tower - they were more or less formally engaged between 1863 and 1867 when both in their mid-twenties.



The frontispiece to Hardy's *Wessex Poems.*

In 1862, Hardy started training as an architect under Arthur Blomfield and so was living in London, where Eliza Nicholl became the most important figure in his emotional life for a time – Eliza's father George, a Cornishman, had served as a coastguard at Kimmeridge Bay until the late 1850s, living in one

of the coastguard cottages there until he retired with his wife to Findon in Sussex. The couple may have met while Eliza still lived at Kimmeridge, but by 1865 she working in Westbourne Park Villas as lady's maid for Emma, wife of Charles Richard Hoare – and also the daughter of Lieutenant-Colonel John Mansel and Louisa Pleydell, Rev. John Clavell's eldest niece, who had inherited the Smedmore estate once the forged will was discounted.

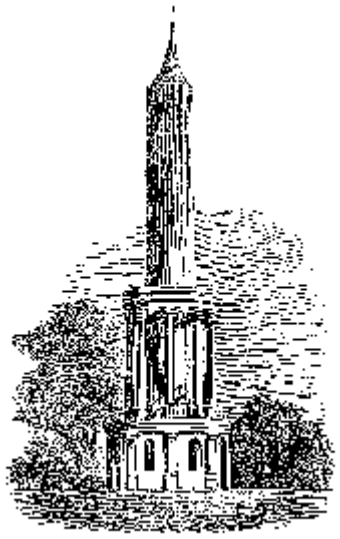
Did Hardy take Eliza to the tower or, as perhaps seems more likely, did she introduce him to the place of her childhood? The *She To Him* sonnets are dated 1866 by Hardy and reflect the decline of their relationship, which seems always to have involved a stronger and deeper commitment on her side than his. Eliza was deeply religious and interested in books and wrote at length to Hardy. The female voice in *She To Him* is possessive and wistful in tone, seeking to evoke a rather maudlin retrospection of their relationship as imagined in later life. It closes with a bitter description of transferred affection – and indeed their liaison ended when Hardy flirted with Eliza's younger, prettier, livelier sister, Mary Jane, whom he met during his visits to Findon. His sad interview with Eliza as their relationship ended is recorded in the poem *Neutral Tones.*

Hardy's relationship with Mary Jane did not last but Eliza was left comfortless. She never married, calling on Hardy almost fifty years later in 1913 after the death of his first wife, perhaps in the hope that her devotion might be rewarded and young love be rekindled. Instead, Hardy announced that he was already engaged to marry Florence Dugdale instead. Small comfort that Eliza was to inspire one last poem, *The Musing Maiden*, in his final volume of poems. Hardy's biographers differ in their assessment of how deep the relationship was, or whether it was rather one of those legends that accrue to famous men. The circumstantial detail and content of the poems would seem to support an attachment of some kind, although Hardy's own private jottings suggest no very great attachment to any woman in these years, suggesting rather that he was disillusioned with the entire sex. His novel set in London and the Isle of Purbeck, *The Beloved* though written much later (1897) also expresses this sense of dislocated malaise, with its disillusioned and commitment-shy central character.

William Barnes

Another writer to be inspired by Clavell Tower was nineteenth-century poet William Barnes. Barnes was a Dorchester schoolmaster who delighted in writing poems in meticulous, phonetically transcribed Dorset dialect. Barnes used the tower as inspiration for his poem *The Leady's Tower*, in which he imagines (entirely fancifully) circumstances which might have caused it to be built. Barnes' illustration of his Leady's Tower is clearly based on Clavell Tower, albeit with a rather futuristic spire. The poem appeared in his second collection of poems, *Hwomely Rhymes* which first appeared in 1859. Louisa Pleydell Mansel, who inherited Smedmore from The The Reverend John Richards Clavell, was one of Barnes early supporters, subscribing to his first volume in 1844. Barnes composed the poem in poignant circumstances soon after his own wife's death in 1852.[3]

William Barnes' own drawing for *The Leady's Tower* is clearly based on Clavell Tower.



THE LEADY'S TOWER

[3] Thanks to Trevor Hearl, President of the William Barnes Society, for providing this information on Barnes and *The Leady's Tower.*

THE LEADY'S TOWER by William Barnes (1801-86)

An' then we went along the gleädes
O' zunny turf, in quiv'rèn sheädes,
A-windèn off, vrom hand to hand,
Along a path o' yollow zand,
An' clomb a stickle slope, an' vound
An open patch o' lofty ground,
Up where a steätely tow'r did spring,
So high as highest larks do zing.

"Oh! Meäster Collins," then I zaid,
A-lookèn up wi' back-flung head;
Vor who but he, so mild o' feäce,
Should teäke me there to zee the pleäce.
"What is it then theäse tower do mean,
A-built so feäir, an' kept so cleän?"
"Ah! me," he zaid, wi' thoughtvul feäce,
"'Twer grief that zet theäse tower in pleäce.

The squier's e'thly life's a-blest
Wi' gifts that mwost do teäke vor best;
The lofty-pinion'd rwufs do rise
To screen his head vrom stormy skies;
His land's a-spreadèn roun' his hall,
An' hands do leäbor at his call;
The while the ho'se do fling, wi' pride,
His lofty head where he do guide;

But still his e'thly jaÿ's a-vled,
His woone true friend, his wife, is dead.
Zoo now her happy soul's a-gone,
An' he in grief's a-ling'rèn on,
Do do his heart zome good to show,
His love to flesh an' blood below.
An' zoo he rear'd, wi' smitten soul,
Theäse Leädy's Tower upon the knowl.

An' there you'll zee the tow'r do spring
Twice ten veet up, as roun's a ring,
Wi' pillars under mwolded eäves,
Above their heads a-carv'd wi' leaves;
An' have to peäce, a-walkèn round
His voot, a hunderd veet o' ground.
An' there, above his upper wall,
A roundèd tow'r do spring so tall.

'S a springèn arrow shot upright,
A hunderd giddy veet in height.
An' if you'd like to straïn your knees
A-climèn up above the trees,
To zee, wi' slowly-wheelèn feäce,
The vur-sky'd land about the pleäce,
You'll have a flight o' steps to wear
Vor forty veet, up steäir by steäir,

That roun' the risèn tow'r do wind,
Like withwind roun' the saplèn's rind,
An' reach a landèn, wi' a seat,
To rest at last your weary veet,
'Ithin a breast be-screenèn wall,
To keep ye vrom a longsome vall.
An' roun' the windèn steäirs do spring,
Aïght stwonèn pillars in a ring,

A-reachèn up their heavy strangth,
Drough forty veet o' slender langth,
To end wi' carvèd heads below
The broad-vloor'd landèn's aïry bow.
Aïght zides, as you do zee, do bound
The lower buildèn on the ground,
An' there in woone, a two-leav'd door
Do zwing above the marble vloor:

An' aye, as luck do zoo betide
Our comèn, wi' can goo inside.
The door is open now. An' zoo
The keeper kindly let us drough.
There as we softly trod the vloor
O' marble stwone, 'ithin the door,
The echoes ov our vootsteps vled
Out roun' the wall, and over head;

And there a-païnted, zide by zide,
In memory o' the squier's bride,
In zeven païntèns, true to life,
Wer zeven zights o' wedded life.”
Then Meäster Collins twold me all
The teäles a-païntèd roun' the wall;
An' vu'st the bride did stan' to plight
Her weddèn vow, below the light
A-shootèn down, so bright's a fleäme,
In drough a churches window freäme.
An' near the bride, on either hand,
You'd zee her comely bridemaïds stand,
Wi' eyelashes a-bent in streäks
O' brown above their bloomèn cheäks;
An' sheenèn feäir, in mellow light,
Wi' flowèn heäir, an' frocks o' white.

“An' here,” good Meäster Collins cried,
“You'll zee a creädle at her zide,
An' there's her child, a-lyèn deep
'Ithin it, an' a-gone to sleep,
Wi' little eyelashes a-met
In fellow streäks, as black as jet;
The while her needle, over head,
Do nimbly leäd the snow-white thread,

To zew a robe her love do meäke
Wi' happy leäbor vor his seäke.
“An' here a-geän's another pleäce,
Where she do zit wi' smilèn feäce,
An' while her bwoy do leän, wi' pride,
Ageän her lap, below her side,
Her vinger tip do leäd his look
To zome good words o' God's own book.

“An' next you'll zee her in her pleäce,
Avore her happy husband's feäce,
As he do zit, at evenèn-tide,
A-restèn by the vier-zide.
An' there the childern's heads do rise,
Wi' laughèn lips, an' beamèn eyes,
Above the bwoard, where she do lay
Her sheenèn tacklèn, wi' the tea.

“An' here another zide do show
Her vingers in her scizzars' bow,
Avore two daughters, that do stand,
Wi' leärnsome minds, to watch her hand
A-sheäpèn out, wi' skill an' ceäre,
A frock vor them to zew an' wear.
“Then next you'll see her bend her head
Above her aïlèn husband's bed,

A-fannèn, wi' an inward praÿ'r,
His burnèn brow wi' beäten aïr;
The while the clock, by candle light,
Do show that 'tis the dead o' night.
“An' here ageän upon the wall,
Where we do zee her last ov all,
Her husband's head's a-hangèn low,
'Ithin his hands in deepest woe.

An' she, an angel ov his God,
Do cheer his soul below the rod,
A-liftèn up her han' to call
His eyes to writèn on the wall,
As white as is her spotless robe,
‘Hast thou rememberèd my servant Job?’
“An' zoo the squire, in grief o' soul,
Built up the Tower upon the knowl..”

P D James

In the twentieth century, crime writer P D James imagined a murder plot involving the wheelchair-bound victim being tipped off Hen Cliff beside the tower. This inspired her novel *The Black Tower* (1975) which finds her hero, Commander Adam Dalgleish, convalescing in Dorset but unable to resist investigating this latest example of foul play. Baroness James has been a tireless campaigner and supporter of Clavell Tower. In 1985, a television adaptation of the novel was filmed at the tower, which was suitably 'blackened' for its role.

Clavell Tower in 1985, 'in costume' for its role in the television drama, *The Black Tower,* based on P D James's novel of the same name.

Clavell Tower: contraband and coastguards

Today's Coastguard Service has its origin in the battle against the smuggling of contraband. In 1760 800 items were liable for customs duty; by 1810, 1,300 had been added, resulting in the smuggler's golden age. The Napoleonic Wars only increased the black market for French luxuries like lace, silks and brandy, but goods came from other countries too, such as thousands of gallons of gin from Holland, and tea, linen, glassware, paper, rum. Brandy was such a favourite that it even gave its name to Brandy Bay next to Kimmeridge. Smuggling had long been a problem at Kimmeridge, just as it was the length of England's south coast and 'King George's men' would have patrolled its cliffs as well as coastguards.

The row of coastguards' cottages in Kimmeridge was built in1829 by the Customs and Excise Service, to assist the ongoing battle against smuggling as much as for the good of sailors.

According to an old smuggler employed by Thomas Hardy's father as a servant, smugglers worked hard for their ill-gotten gains. Most worked in the fields all day, and then had to stagger for miles across fields with two forty-five pound kegs thumping on chest and back. The old man told Hardy that breathing in this condition was difficult, and that many smugglers were deformed for life. But they got 10s a night, more than they could earn in a week, and took home a measure of tea and a bottle of brandy, and were often given a hot meal too, so the risks were worth it.

The coastguards built a station at Worbarrow Headland to dominate the heavily used smuggling point. They also fretted about the plentiful supply of seamarks on this stretch of coastline, from which smugglers took their bearings. Clavell Tower may have been an unwitting aide in this, for as late as 1840, long after the establishment of the coastguard, a local smuggling gang were manhandling kegs up Gad Cliff above Brandy Bay, using long hauling ropes, after which the kegs were hidden in the bracken while the coastguard patrol passed by on its way back to the station at Worbarrow.

There is a tale that once, a patrol came along and found the concealed kegs. An old and experienced smuggler told his mates he knew that the chief officer gave his men their orders at a spot near a bridge over a stream that cut into the cliffs near the flagstaff outside his house. So he followed the guards, crawled under the bridge, and heard the orders on the direction of the coastguards return. He was able to warn the smugglers – who each grabbed a couple of kegs and made their escape.

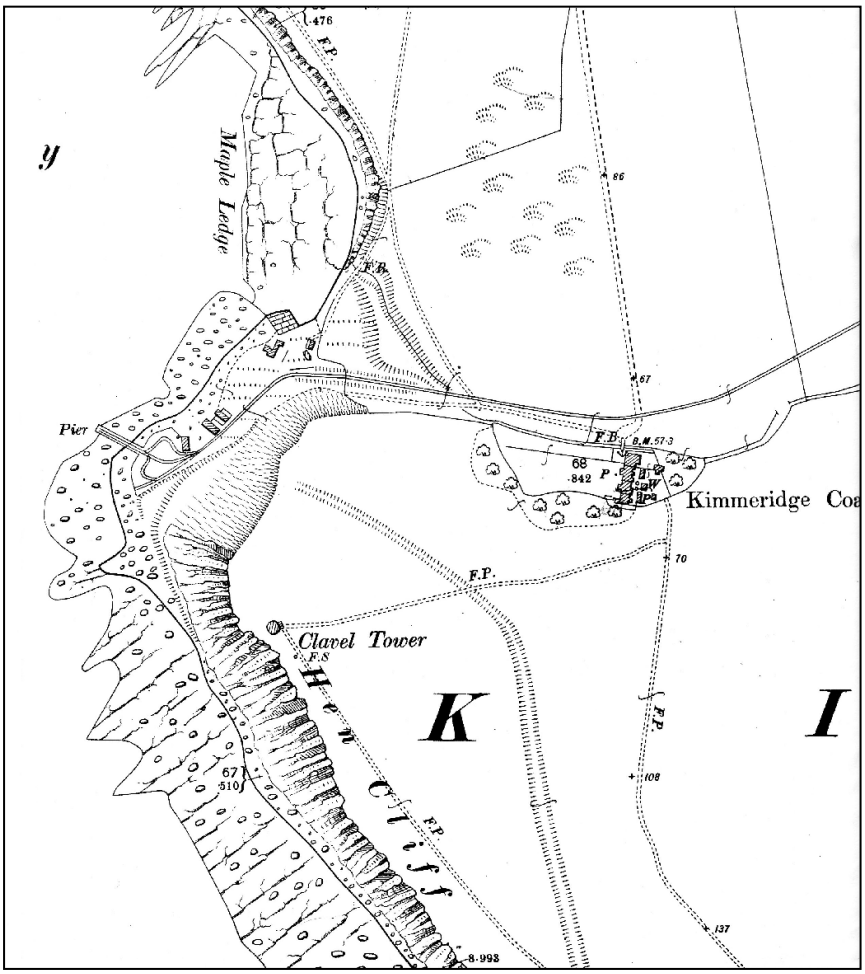
However, smuggling did dwindle as the century wore on. From about 1880, use of Clavell Tower from Smedmore House had dwindled so much that the tower became a lookout station for the coastguards, now concerned more with the welfare of seafarers than with smugglers. From 1867, local trade directories record the names of their Chief Officer:

1867 Henry Stocks, RN
1869 John Farrell
1889 John Macgillicuddy
1898 Thomas Boulton
1903 Geoffrey Battershill
1907 James Frederick Whittle
1911 William Bedwood
1915 Percy Pearson
1920 Geoffrey Herden
1927 Samuel Applin
1935 E J Bright
1939 H Wiltsher[4]

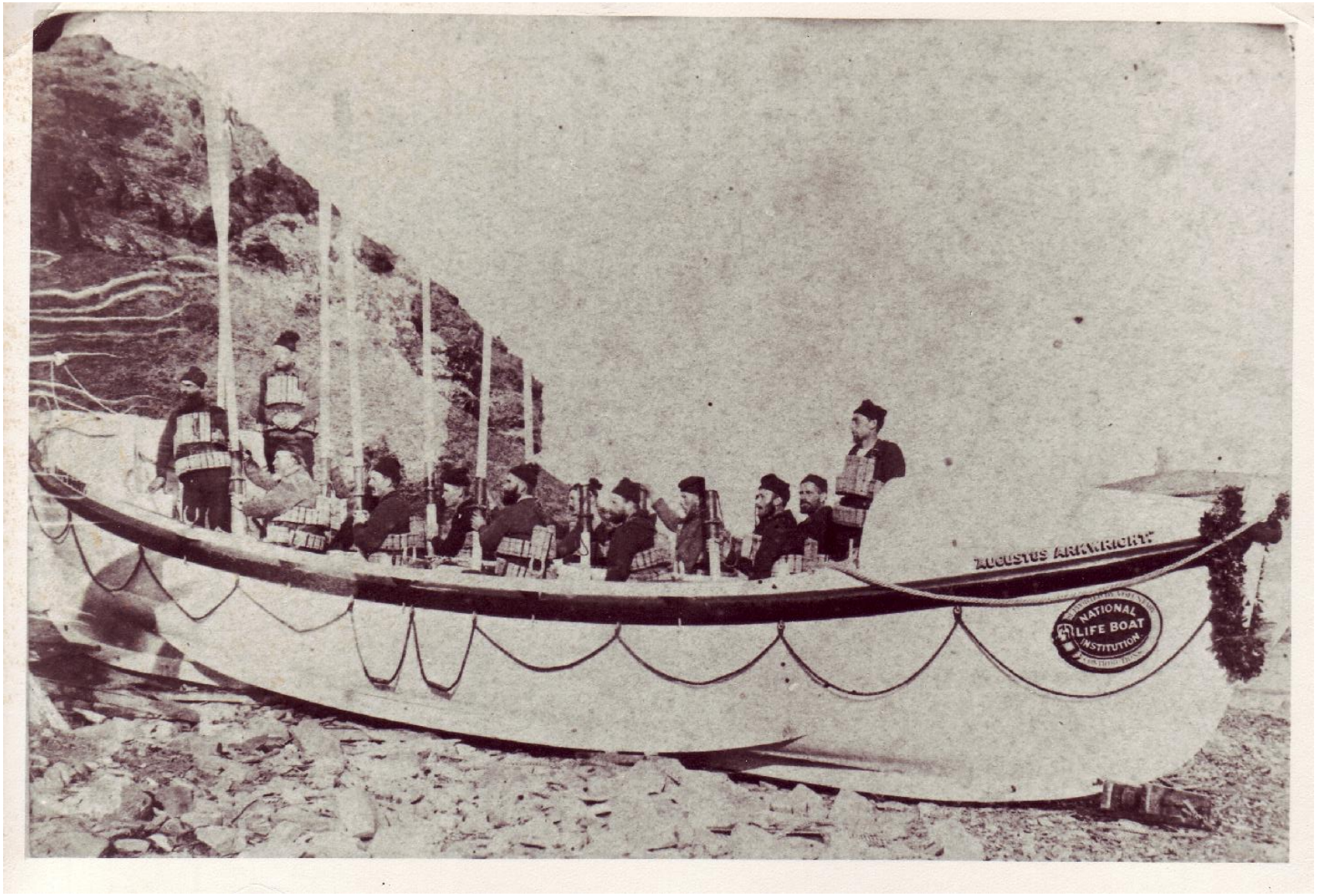
From at least 1889 until 1915, the Chief Officer was assisted by five men, indicating the importance of Kimmeridge as a lookout post. As Ida Woodward wrote about the tower in 1907 'The coastguards now use it as a watch-tower and greatly appreciate the comfort afforded by its strong stone walls. From it the coast can be seen with all its promontories and inlets, from Lulworth on the west to St Adhelm's Head on the east.'[5] After the war, the team dwindled to four, then one, and by the 1930s only one station officer is mentioned.

[4] These and other statistics from the trade directories were extracted by three children from Wool First School at Dorset History Centre, under the supervision of Landmark's Historian and the DRC's Outreach Officer. This research was part of the extension activities during the Clavell Tower Education Programme that formed part of the Heritage Lottery Funded activites.
[5] Ida Woodward, *In & Around the Isle of Purbeck* (1907), p. 76.

The presence of the station also brought 'telephonic communication' (what we would call telegraphic) from Kimmeridge to St Albans Head – the 1895 Directory states 'Telegrams can be sent to Kimmeridge Coast Guard Station for Kimmeridge and no extra postage to pay.' In addition to the coastguards, from 1868-96 there was also a lifeboat station at Kimmeridge, with a wooden lifeboat house from 1879. One intriguing link to another Landmark is that a new lifeboat was donated in 1887, the *Augustus Arkwright,* by F. C. Arkwright, JP, of Cromford in Derbyshire and a few friends. F. C. Arkwright of Cromford must have been a descendant of Richard Arkwright of mechanized spinning fame, who built North Street, Cromford (No. 10 is a Landmark) to house the workers in his new mills. It has so far proved impossible to determine the Arkwrights' connection with Kimmeridge, but perhaps they too simply came on holiday.

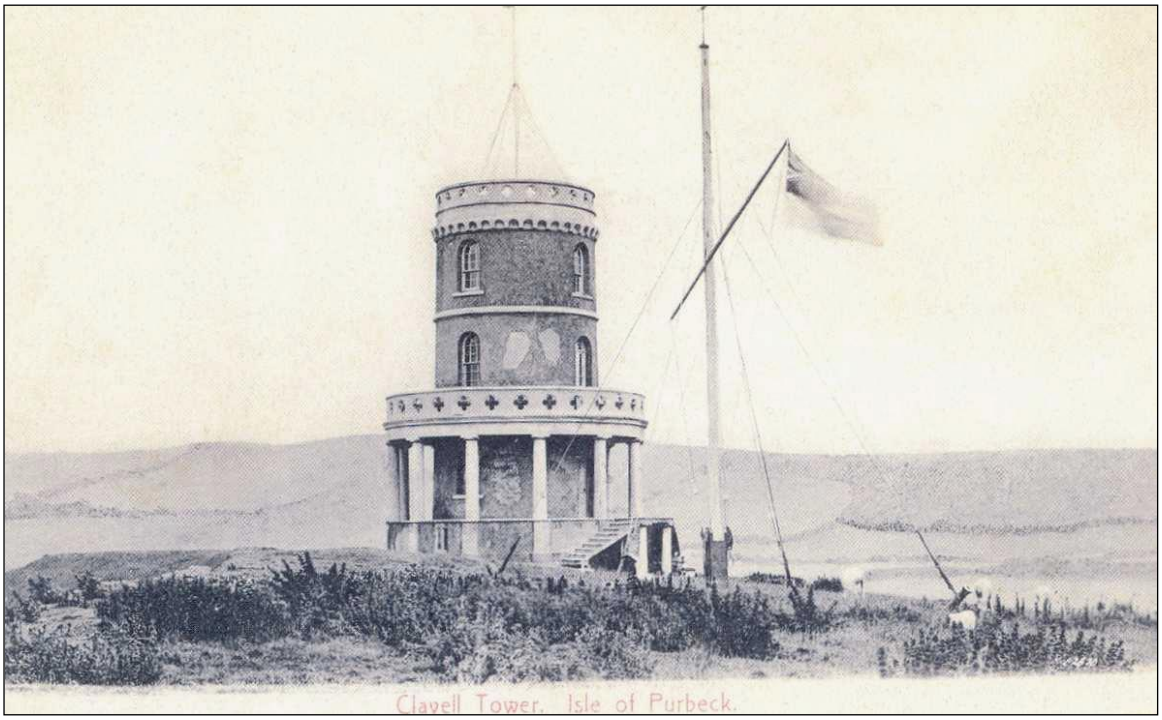


The 1902 OS map shows a well-trodden path from the coastguards' cottages to the tower. Note too the little pier, with the tramlines leading to it from the by now disused blackstone mines.



The crew of the *Augustus Arkwright* pose proudly in their new lifeboat. The garland of flowers suggests it may have been the day of her launch. The lifeboat station closed in 1896 because a crew could no longer be found.
ch. (Smedmore House)

This photo from *c*1900 shows the tower still in use as a coastguard station. Their flagpole is anchored to the muzzles of four Napoleonic cannon sunk into the ground. After one of these was stolen, another was sold and the remaining two can still be seen at the front of Smedmore House. At this date, the tower is still in generally good condition apart from some missing render and this clear photo was a useful reference during restoration.



An earlier postcard, showing Clavell Tower with a flagpole also on the roof .

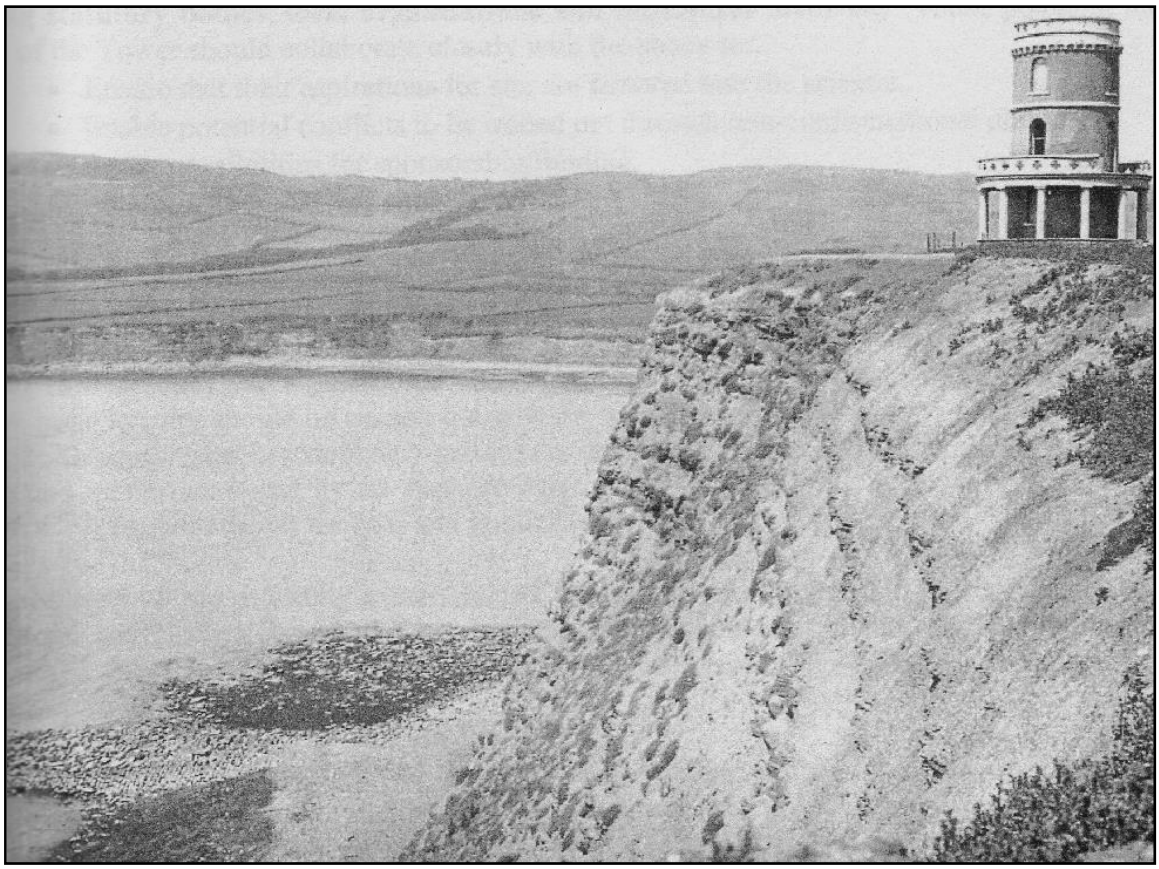
Although there was a coastguard presence at Kimmeridge until the Second World War, after the Great War Clavell Tower was left empty and increasingly derelict, having been 'knocked about' by soldiers staying nearby. There is also said to have been a cliff fall just before 1914 and we were told there was a fire, but no evidence of this, either documentary or archaeological has come to light. During the Second World War, the cliff's stability was further endangered by explosions from an anti-tank range at Swalland Farm to the south east.

From 1896 until 1924, Smedmore House was let to Major van der Weyer and his family. In 1914, the Major developed a hybrid buddleia at the house, Buddleia x Weyeriana. In 1924, Major R. C. Mansel took up residence again to general delight from the residents of Kimmeridge. An undated cutting records:

'In the afternoon Major and Mrs Mansel and family were met at the cross-roads by Kingston brass band, who headed a procession of villagers and

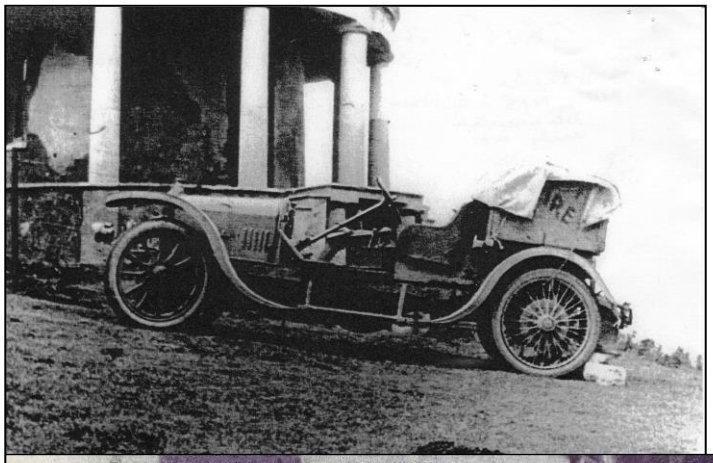
friends. The Major's car was drawn with ropes [without his children, who were made to walk]*. At Smedmore organised games were played until an adjournment was made to the lawn, where tea was served to about 300 people. A pleasing ceremony followed. As an expression of goodwill, Major and Mrs Mansel were invited to accept a silver tray from residents and friends, with the hope that they might never be able to wear it out. …. More games followed, with dancing to the strains of 'Charlie's' jazz band and a fine display of fireworks. The Park had been rendered a veritable fairyland with hundreds of coloured lights.'*

The house was also opened for the locals to inspect recent alterations, which included 'the installing of the electric light.'



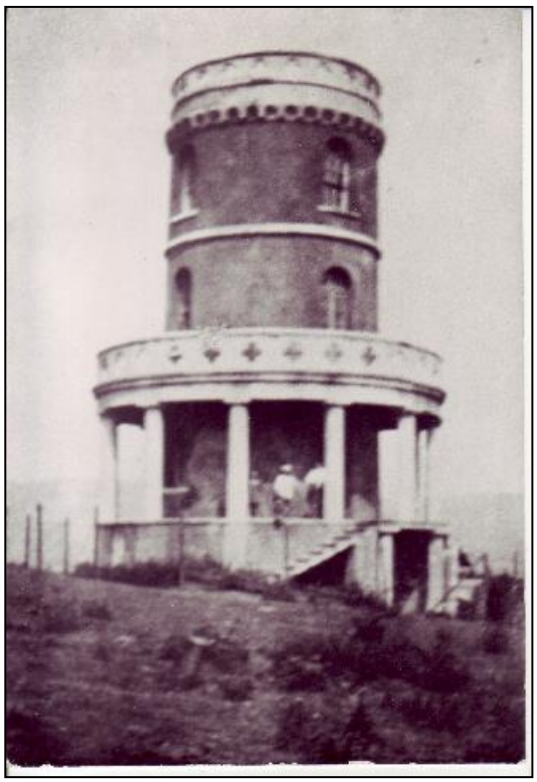
Clavell Tower in the 1920s. Comparison with the picture opposite the Restoration section shows how rapidly the cliff has eroded since.

During these years, it seems the tower was generally available to the pubic as a picnic spot. We were contacted by Ione Heath (née Ware) who told us of a Ware family tradition of family gatherings at the tower. Mrs Heath provided some snapshots from the 1900s, when the tower was being let for holidays by Major Mansel. Mrs Heath celebrated her 85th birthday at the tower in 2005 with a picnic with her extended family.

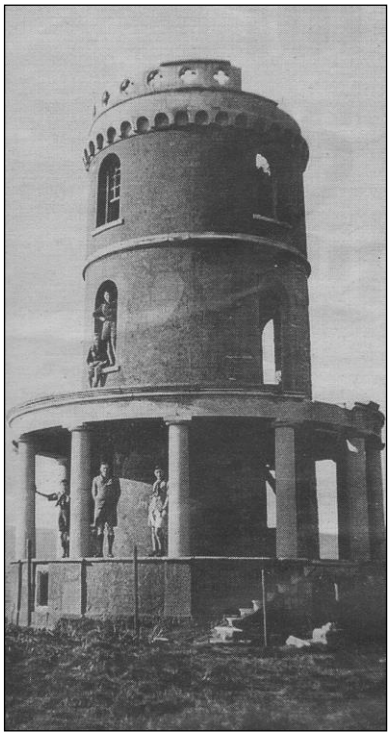


Sidney Ware, Chief Engineer at Straker Squire, arrived in style at the tower *c.*1913 in a Straker Squire motor. Sidney and his brother Reg rented the tower as a holiday cottage. Note the precautionary stones behind the back wheels.

The family of Walter Thomas Ware 'of RHS fame' hold a tea party under the colonnade at the tower, *c* 1900.



Another early snapshot, from the Bracchi family, taken in the 1900s.



Weymouth Sea Scouts visit the tower in the late 1920s. The tower's decline since the Wares' holidays there is clear.

During the 1930s, Shell ran an advertising campaign to encourage motorists to explore Britain by car. The campaign generated a series of now iconic posters, one of which was of Clavell Tower by Paul Nash.

When war broke out again, Smedmore House was requisitioned by the army. The troops manning the nearby anti-tank range slept in Nissan huts in nearby fields, and it seems likely that the tower was once again subjected to their sometimes thoughtless attentions.

From 1950, the house was let to historian and biographer of Samuel Pepys, Sir Arthur Bryant, until 1958 when Major J. C. Mansel, son of Major R.C. Mansel, moved back. The family has been in residence ever since.

Clavell Tower just before work began.

Restoration of Clavell Tower

Clavell Tower's derelict and increasingly precarious state had been a cause of concern to its owner, then Major J.C. Mansel, for decades. Major Mansel had investigated restoration and repair in the 1970s but even then it proved beyond the resources of a private owner. In 1986, Major Mansel offered the tower to Dorset County Council, who declined the gift. In 1996 the Clavell Tower Trust was set up by Dr Philip Mansel and his land agent Piers Chichester, encouraged by the author Baroness (P.D.) James, with the aim of saving the tower. Considerable effort was put into investigating funding, possible upgrading of listed status (unsuccessful) and technical restoration solutions. Added urgency was lent by the fact that, should pieces of the tower fall, members of the public on the beach below could be at risk at low tide. Landmark was first approached about the tower in 1998, when we turned it down on the grounds that its position on the edge of the cliff was already too precarious to justify a traditional restoration approach. Erosion of this stretch of cliff face is estimated at 13 metres every hundred years or 13 cm every decade – except that cliffs of course do not behave like this, the most likely scenario being the loss of several metres in one slippage.

As a result of the Clavell Tower Trust's activity, English Heritage agreed to the principle that the tower could be re-sited, as this was now the only way to save it. By 2002, however, the Trust had had to accept that the cost and complexity of saving the tower was beyond them and a second approach was made to Landmark under the auspices of the Country Houses Association. By now the management of the Smedmore Estate had passed to Major Mansel's son, historian and writer Dr. Philip Mansel. Landmark's Trustees gave a cautious acceptance of the building, but the tower was by now so close to the edge that it would not be long before Health & Safety considerations made it unsafe for any intervention at all. An initial Conservation Statement was prepared by Andy Brookes of Rodney Melville and Partners, with historical research by Anthony Peers.

Our first thought was to dismantle and re-erect the tower and this was costed at an early stage, but seemed at first too intrusive a solution. So a

protracted period of consultation began to assess other ways of saving the tower.

Stabilising the cliff face and anchoring the tower in its existing position through a 'diving board' platform with compression and tension piles behind had to be ruled out, partly on grounds of cost but also because of the friable nature of the Kimmeridge shales which make up the cliff. Further constraints to such major engineering works were existing designations of the entire clifftop as an Area of Outstanding Natural Beauty, the siting of the tower within a Site of Special Scientific Interest and the foreshore as a Scheduled Ancient Monument due its ancient workings (described elsewhere). All these factors also worked against another solution considered, which was to move the tower intact. This would have involved mounting the tower onto a concrete ramp, down which the whole building could be hydraulically cranked back from the cliff edge – a process for which there are some precedents. In 1999 Belle Toute Lighthouse on Beachy Head, massively built of granite in 1834, just three years after Clavell Tower, was pushed 17 metres back from another crumbling cliff face, using hydraulic jacks. Again, the disruption to a sensitive site involved in the use of heavy machinery coupled with the fragility of our tower's fabric ruled this out.

Eventually, we returned to our original plan to record, dismantle and re-erect the tower as the only feasible solution. Its new site was also the subject of much discussion. Much of the point of the tower has always been its position in the landscape, being seen for miles as the only feature in this wide open sweep of coastline. The cliff slopes back noticeably from the edge, however, and moving the tower too far inland, or too far east along the cliff, would have made it much less visible. The eventual site chosen, some twenty five metres back from the edge, was chosen as offering the best sightlines as well as a geologically confirmed sound footing.

It also proved quite a challenge to shoe-horn in all the necessary accommodation into this tiny building to equip it as a Landmark for two. Once a scheme had been settled on, Listed Building Consent and planning applications (including for a change to residential use) were submitted and

approved during 2004. Building Control regulations affected the room configuration, requiring for example that the bedroom be on the first, not top floor – which therefore reserved the best views for the sitting room.

It was also clear from an early stage that access to the tower could only be permitted up the steps along the cliff path. The views are so good when you reach the tower, that, as with some of our other buildings, we felt there would be enough Landmarkers prepared to accept this to make Landmark use viable. However, the path up to the tower had suffered considerable erosion and towards the end of the project would be relaid by Dorset County Council, whose responsibility it is.

Fundraising had meanwhile been proceeding in parallel. An evening was hosted by auction house Christies, at which authors P. D. James and Ruth Rendall entertained those present with a conversation about their writing and at which an auction was held which included the original manuscript of P. D. James's novel *The Black Tower,* inspired by Clavell Tower. In July 2005, a fundraising lunch was kindly hosted by Mr & Mrs Charles McVeigh at nearby Encombe House, on a sunny day on their lawns. One of the guests was sculptress Mary Spencer Watson, who would sadly die the following year, leaving us Dunshay Manor near Worth Matravers. A direct mail appeal had been held in 2003 and donations were made by many private individuals and trust funds. However, costs were rising all the time and it became clear that Clavell Tower could not be saved without a sizeable grant from the Heritage Lottery Fund. In March 2005, the HLF pledged a grant of £436,000, to include education and training programmes, and in September the grant was confirmed. It would be another ten months before the outstanding balance needed was raised, the tender process completed leading to Carrek of Wells's appointment, and the lease be finally agreed with the Smedmore Estate.

Meanwhile, there were certain things that had to be done while the tower was still in its original state. As described elsewhere, a four-week education programme was carried out with some 150 8-9 year olds from four local primary schools, in April 2006.

Around the same time, the first of three stages of rectified photography was undertaken by Plowman Craven, to record the tower's original state as accurately as possible. Digital, high resolution rectified photography allows the images to be corrected for perspective and, as these are taken sequentially across the face of the building, allows the three-dimensional surface to be 'unwrapped' into a single, two dimensional image of the whole building. This would be an important reference tool once the physical dismantling began, and was undertaken three times: to record the untouched structure; then the outer drum once the render had been removed, and finally the inner drum. These images would adorn the walls of the Portacabin site office throughout the project.

An example of rectified photography and the 3D laser camera used to capture it, using the rectangular 'telltales' for alignment.

Another lucky contact was with Dorset resident, Peter Brachi, who had carried out a measured and photographic survey of the tower as an architectural student in the late 1960s. Peter still had all his records and notes and these too were helpful in analysing the structure.

Discussions were also going on with Purbeck District Council to agree a temporary diversion of the footpath around the building site, and with the water and electricity boards to find an underground route for services. Once Carrek's team moved on site in July 2006, better access than the cliff steps was also needed and so a track was put in across the field behind the former coastguards' cottages. The site office and later the bankers' (masons') shed were established near the gate. The site of the tower was fenced off, although walkers along the Coastal Path still had a good view of work as it progressed and temporary information posters told them something, for the first time, about the tower's history and the work that was planned.

CLAVELL TOWER BEFORE WORK BEGAN

Looking up the shaft of the tower at the underside of the first floor.

The fragility of the tower is clear. As the stairs had disappeared and the floors were badly rotted and access to the upper floors was not possible until the tower was scaffolded.

All that remained of the steps.

Once the building was scaffolded a full archaeological analysis could be carried out for the first time by regular Landmark consultant, Richard Morriss, assisted by Andrew Thomas who was retained as architectural adviser (it was felt that the special nature of this project, being primarily one of dismantlement and reconstruction, made a full architectural appointment unnecessary). Quantity surveyor Adrian Stenning also contributed some acute observations, although caused one false alarm when he thought he spotted bats in a flue (which would have required work to be halted). Happily the subsequent bat survey revealed them to be hibernating butterflies!

August 2006: the new site access track, leading down to the site office. It would become much muddier before the job was done.

The process of analysis continued through the dismantlement process, which now began in earnest. Analysis revealed signs that the building may have been completed in something of a hurry. Richard also discovered that

the surrounds for the two fireplaces were simply plaster lined out to look like stone, and that the rooms had never been panelled – the skirting line and staircase string had both been applied directly onto plaster both of which have been re-created.

Many details of the original structure supported the sense that this was a rather naively constructed building. There was much variation in the remaining quatrefoils, the columns were made of differing stones and the joists were of varying widths. All this pointed to the adaption of materials that happened to be at hand. During the restoration, we encouraged Carreks to build in the spirit of the original. By reaffirming this approach, we hope that the quirkiness and charm of Vining's tower will continue into the future, despite the intrusiveness of the restoration process. So for example, the new quartrefoils are not identical, nor are they all carved from a single piece of stone, and such deliberate informality of approach is continued through other elements of the re-building in new work.

English Heritage had insisted as a condition of Listed Building Consent that every single piece of the building was to be numbered, to allow it to be accurately pieced back together. In fact, the Carrek's team was unfazed by this seemingly proscriptive requirement. A system was devised under which both inner and outer drums of the building were divided into coded panels, painted on in white paint. After some experimentation with different methods, a suitable engraving tool was then settled upon to carve this code and a number on each stone and brick.

The old tower fully scaffolded, the outer drum by now taken down (summer 2006).

This code was then written onto the rectified photographs of the tower, and all the pieces were carefully stored on site in vast numbers of wooden crates which soon covered the surrounding area. Some 16,000 pieces were numbered in this way.

Numbering and recording individual bricks during dismantlement, before storing them in wooden crates (October 2006).

Countless sheets of record photography were used to reconstruct the tower.

As the new tower went up, the white lines were used to align each quadrant

Weather was an issue from the start, and on very wet and/or windy days work often had to stop for Health & Safety reasons. Perhaps inevitably, the dismantling process took longer than had been anticipated. Sadly, the brass plaque referred to in the account of Clavell Tower's completion in the *Dorset County Chronicle* was not found. One local myth was discredited, that Clavell Tower was gutted by fire in the 1920s or so. No signs of scorching were found, nor any other evidence of a fire, and no documentary evidence or reliable oral history collaborates the rumour of fire. However, careful study and sifting of the building during its dismantlement did reveal much else of interest.

The sun did not always shine. On days like these, hard hats were simply blown off and over the cliff, and work on the old tower became impossible.

THE EVIDENCE

Windows and joinery

A short section of horizontal glazing bar was found, confirming beyond question that the windows had been flat and not curved – a matter much debated from the early photos, which show the windows intact but leave their plane unclear. The detail of the render on the inner faces of the window reveals were also found to have been deliberately built up to allow for flat sashes.

The fragment of glazing bar was taken to Charles Brooking for advice. During his lifetime, Charles has amassed an unrivalled collection of historical architectural details, now housed in several locations including on the National Maritime Museum site in Greenwich. Charles confirmed that the glazing bar was consistent with a construction date of 1830, and had plenty of dated examples of windows, shutters, stair newels and balusters, hob grates etc of that period to give us a sound basis for decisions when it came to fitting out the interiors. Very few other fragments were found – just a door knob and a few other bits of glazing bar – but another important source for such details was Robert Vining's other known building, the octagonal Spa House at Nottington which had plenty of surviving contemporary joinery and to which the owner kindly gave access.

All 'new' joinery details are therefore based on either what still survives from Clavell Tower itself, or from original Vining details or from known details of the 1830s from the Brooking Collection. The surviving evidence suggested that the windows had been lined and quite possibly had had shutters, and so these have been installed at ground and first floor levels. These boxed sash windows and their shutters/linings are therefore 'correct' for this building and date, even though nothing remained of the originals.

From old photographs (including ones taken by Peter Brachi in the 1960s) it was discovered that the basement outer drum spaces had small stone mullioned windows (in deliberate contrast to the wooden sash windows in the 'polite' rooms above). These have been reinstated. The glass in all the

windows is carefully chosen ‘conservation’ glass, which replicates the slight irregularity of early glass. The second floor, today’s sitting room, always had a lower ceiling and seems to have been less ‘polite’ than the other two floors and so here we have fitted simple fixed linings and added curtains. The cornice is also an addition, to reflect the room’s new use.

One of Peter Brachi’s photos from his student project in 1969.

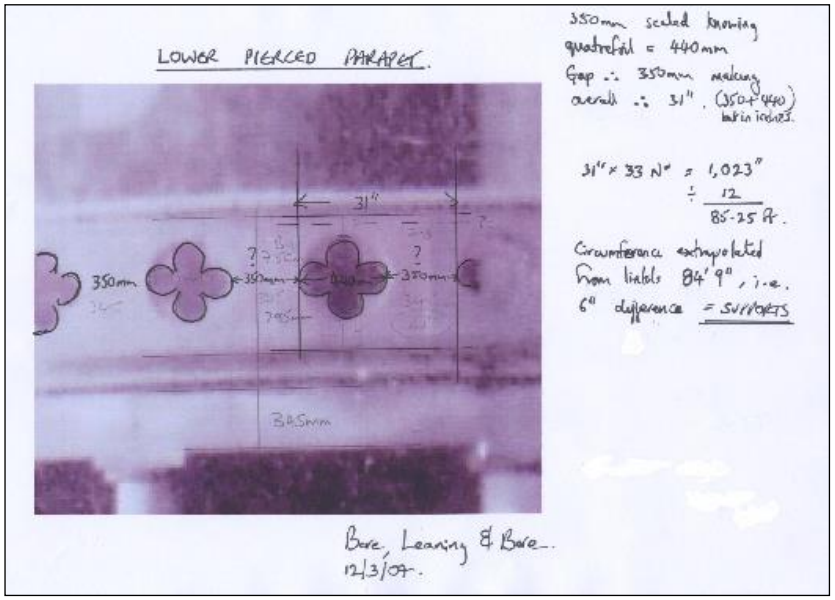
Carved ashlar details

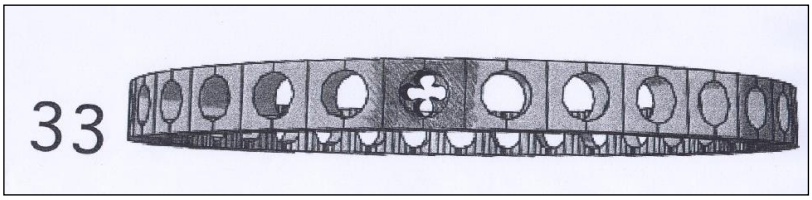
All the elements of the carved stonework still existed - either complete, with no stones missing (the peristyle columns and stringcourse, for example); or as whole elements (the upper parapet); or as parts (the cantilevered stone steps) thus enabling exact copies to be made. The only element for which no complete example survived was the lower quatrefoil parapet. Just two quarters of piercings of this lower level parapet coping were found, early in the process of dismantling the outer drum. It differed from the upper parapet, having a simpler string course moulding beneath a quatrefoil motif, whose internal dimensions were calculated at 440mm from the fragments found. Computer modelling identified that thirty three quatrefoils would be needed. The height of the parapet could then be extrapolated from the early photos.

Only a small section of the two small columns that supported the raised ground floor landing survives, as a bird bath in the garden of one of the Coastguard Cottages. This fragment has been measured, and together with the old photographs and the outline of the bases that remained in the paving, this enabled these columns to be accurately recreated.

Another exciting discovery was a small piece of the trefoil coping to the lower parapet. As this coping seemed to have been lost, we originally assumed that it would have had the same simple profile as the roof parapet. However, having found this fragment there was no question that it should be replicated – one of the many examples of the extra costs that can present themselves in the course of a restoration, however carefully a building is researched.

EXTRAPOLATING THE LOWER PARAPET PIERCINGS





Floors

The floor joists at first and second floor level largely survived, though not the ground floor ones. The former have stopped chamfers, and were clearly intended to be seen from below – in other words, there were no plaster ceilings at ground and first floor level. These joists, which are of teak, appeared to have been re-used and repaired originally and we have mostly re-used them as found, though some needed conservative repair, and one or two full replacement. A few teak floorboards survived, but not enough to reinstate even one floor. While a few plantations still grow certified teak, this tends not to be of reliable quality, and most other available supplies are illegally logged, so it was decided instead to use reclaimed pitch pine for all three floors.

To our surprise, the stone basement floor survived in its entirety except for one missing slab, and has been reinstated as originally. Its survival allowed a 'wet room' for the shower in half the space (there was no room to fit a bath). The solid floor also allowed us to install underfloor heating.

Stairs

The original staircase did not survive although a scar existed on the inner elevations showing where it went. Oddly, it turns out that the original stairs must have been almost unusable as their pitch meant that the headroom under the trimmed openings was very low. This would have been unpleasant for regular use by visitors to the tower, and so by slightly adjusting the spacing of the floor joists the stair openings were increased and the pitch reduced to an acceptable level (the observant might notice where the redundant mortises for the trimmers have been filled). The stairs are of painted Douglas fir, with reclaimed pitch pine treads. Evidence survived for the spacing of the balusters (and that they were circular, not square) and for the moulding that trims the openings, and for the skirting boards.
Other details (newel posts, handrail, etc) are a combination of examples from the Spa House and the Brooking Collection.

It was not entirely clear whether there was originally a stair from the polite ground floor down to the working basement area (used for food preparation

with direct access from outside for the servants). Some evidence was found that the floor was altered, probably by the Coastguards, to create a stair to the basement. Certainly, an inside link to all floors was desirable in this exposed position for the Landmark. The change in hierarchy as you move from ground to basement level is registered in the simpler stair with a plain painted handrail and solid tongue & groove boarding to enclose it – again replicating the original still in situ at the Spa House.

Robeda Joinery of Bideford produced all the joinery except the kitchen, which was made by Landmark's Mark Smitten, already familiar with curved kitchen units after the refurbishment of Clytha Castle, carried out the same year as Clavell Tower opened.

Doors

No doors survived but the glazed French windows allowing access onto the first floor balcony can be seen in the old photographs, and have been replicated. The front door is based on suitable designs from the Brooking Collection from around 1830. The only other external doors are to the basement outer drum store rooms, and these are simple ledged and braced doors befitting the status of these rooms.

Fireplaces

The fireplace openings and their flues accurately reflect the original form, with simple rendered surrounds lined-out and, as almost certainly originally, painted to imitate stone. In 1831, there were working fireplaces on the basement, ground and first floors, quite generous provision for a folly. Building Control Regulations having dictated that the bedroom could not be on the second floor, the best views were reserved for a sitting room that was therefore on the second floor but potentially without a fireplace. It was decided to construct an exact replica of the first floor fireplace on the second floor, blocking this first floor fireplace. Both today's fireplaces have hob grates typical of the period, converted to more practical gas fires. The basement fireplace has been left as a simple opening in the wall, as it almost certainly would have been originally.

Roof

Nothing of the original structure survived, but aerial photographs dating back to the 1950s show the orientation of the ceiling joists as well as the much larger central beam, presumably needed to carry the weight of the former flagpole and its housing. Together with the evidence of the surviving stonework at high level, which was all intact and showed where the lead flashings and rainwater sump were, these aerial photos allowed an accurate reconstruction of the roof structure (with a substitution of a steel beam in place of timber to tie the structure together at this level). We had to reluctantly concede that it was not practicable to reinstall a flagpole, as access to the roof level is not safety compliant with today's stricter rules.

THE RECONSTRUCTION

As Clavell Tower was gradually dismantled, with pauses for further rectified photography, a new hole was dug and concrete poured in to create a reinforced concrete pad under the entire building. These new foundations made the tower's original foundation stones redundant and so these have been left in situ to mark its original position – at least until the cliff crumbles. Of course reconstruction could not begin until the last stone of the outer drum had been taken down, but Carrek were then able to start rebuilding the outer drum piece by piece while the inner one was still being dismantled. The reconstruction process was painstaking but went smoothly overall, the white grid lines painted on the original brickwork lining up again , to everyone's relief, and the brick linings to windows and doors also went back as before. Where replacement brickwork was unavoidable, a brick quite different in colour was deliberately used to distinguish from the original (now of course hidden by the render, but there 'for the record').

By August 2007, reconstruction was well underway.

Fitting a new slab. In the background are some of the many crates used to store the numerous pieces of the tower's fabric.

As comparison of early and recent photos make clear, a lot of replacement ashlar stone was going to be required during reconstruction and to help select this, a specialist report was commissioned from Dr Ian West of Southampton University, which may be found in the Reader Volume that goes with this album. Dr West's analysis showed that a wide variety of stones had been used in the original construction, from a number of different sources, mostly very local. It seems the rubble stone used in the walls had probably come from the beach below, since many of the stones showed signs of having been rounded by the action of the waves. We had intended to use Purbeck stone for replacement, but there were problems with getting the required bed depths and the lengths needed for lintels. In the end all the new stone came from a single quarry, Coombefield on Portland. Portland and the Isle of Purbeck lie on the same limestone belt, and we also felt that by using a single source, it would be clear to future experts which was replacement fabric and which was original.

Once the blocks of stone had arrived on site, Carrek's masons could join the team on-site, working throughout summer 2007 in their bankers' shed to carve the many replacement pieces needed, even though we went to great lengths to retain original stonework wherever possible. All the columns at ground level are original, as are all the lintels except one.

One of Carrek's masons explains the use of templates to a group of visiting students in the bankers' shed.

Carving a new slab.

None of the cantilevered steps survived whole, although plenty of ends remained bedded within the wall, and some surviving outer ends showed how the moulding returned. Setting out these new steps was technically quite challenging and three attempts were made at setting out the steps before everybody was satisfied with the result The final staircase was a credit to all concerned.
Many of the paving slabs at upper and lower levels were also missing or too damaged to reuse, but wherever possible we have salvaged the moulded ends (that project beyond the parapet) and pinned these onto new stone behind. Some of the slabs needed additional sideways support to their neighbours, either by pining and/or supporting on angle irons, a solution that allowed much greater retention of the original material. Tooling of the new slabs runs at right angles to that on the original, making it possible to tell which are old and which are new.

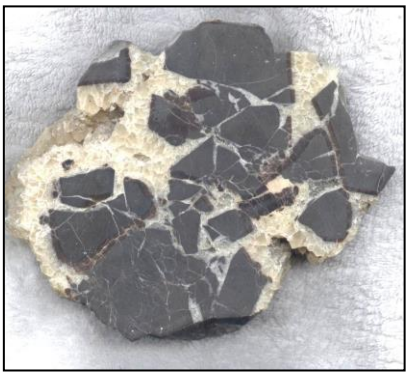
Render

The tower was originally rendered in Roman Cement, the name given to a very hard natural hydraulic lime produced from burning clay-containing limestone in a coal (or coke) fired kiln. As these cements rely on a chemical reaction to set (rather than carbonation in contact with air as in more typical, non-hydraulic lime mortars) they were also often called water cement because they could set underwater and in maritime environments.

The Romans had known about the properties of hydraulic mixes and had used them in their construction. Despite being described by classical author Vitruvius in his *Ten Books of Architecture* (translated from Latin in the late fifteenth century), hydraulic cement had to be rediscovered in the 1790s by John Smeaton first and then by James Parker. They discovered that the best constituents for water cements were ground volcanic rocks, either *pozzolana* from Italy or terras or trass from Germany. It was James Parker who named his patented, reddish brown formula Roman Cement, simply because it resembled the cements of the ancient Romans in colour and hardness. Such mixtures were the most commonly used hydraulic mixes until the late

1860s, when Portland cement was discovered and gradually came down in price.

Analysis of the fabric of Clavell Tower identified that the render used to coat its outer drum was Roman Cement made from septarian nodules that occur naturally in Dorset and contain a high proportion of the silicates necessary to trigger the hydraulic reaction.



A septarian nodule. Roman cement is known to have been manufactured in Weymouth from such nodules in the 1820s & 30s, and indeed would have been used for the Esplanade.

However, today true Roman Cement is no longer available and so close matches are based on a hydraulic lime hydrate, mixed on site with carefully selected pre-mixed aggregate to provide the characteristic reddish brown colour. At Clavell Tower, trial panels of different mixes of aggregate were left to weather through the first winter to assess their performance and best match with the original.

Lime render trials using different aggregates were prepared in August 2006, to allow them to weather through the winter before a decision was made.

A fragment of the original Roman cement from Clavell Tower (top) and the mix chosen to replicate it.

The render has been left with its pleasant self-colouration, which means that there is no need to apply a sacrificial coat of limewash, as is the case with softer, non-hydraulic lime mortars, an approach that would be a losing battle on Hen Cliff, with the squalls forever blowing in from the English Channel.

As the tower's walls rose in its new location**,** one small but important task was to inform the National Oceanographic Office that this seamark that had stood as a navigation aid for more than 170 years had now moved, even if only slightly. Finally, on 25th February 2008 a topping out ceremony was held to place the final stone in the parapet.

Landmark's Director Peter Pearce positions the final stone, with Adrian Tinniswood, Chair of the Heritage Lottery Fund's Committee for the South West, looking on.

July 2008: new life for Clavell Tower, as wild flowers claim its former foundations.

The Carrek team who saw the restoration project through. From left to right: Richard Blair (Labourer), Wieslaw Szot (Stonemason), Kerry Scrimgeour (Stonemason), Peter Ward (Builder), Ben Coles (Labourer & Telehandler Driver), Steve Strode-Walton (Site Foreman), Niall Millar (Joiner), Doug Brown (Site Manager), Tony Mazzeo (Builder), Andy Baker (Lead Worker)

Carrek's team was on site for just over two years, staying locally during the week and enduring all the elements could throw at them. While there were few major hitches during the project, delays due to bad weather and the exacting methodology turned it into something of a marathon effort. Doug Brown, Steve Strode-Walton and their team saw it all through with good humour and persistence, a once-in-a-lifetime job and one that, in conservation terms, none of us hope to repeat! Now in 2008 the turf can grow back and the The Reverend John Richards Clavell's tower can weather back into this wide open landscape, its role as sentinel secured for another few centuries.

History of Kimmeridge

Although it is hard to believe it given its beauty today, Kimmeridge Bay's particular geology has led to specialized industrial activities there since very early times. The geology has also earned the coastline UNESCO designation as a World Heritage Site under the name Jurassic Coast. A brief description of the geology, written by volunteer Ava Pendred can be found in the Reader volume.

Coal Money

A 75cm thick stratum of blackstone today lies about four feet below the surface. This was exploited in two distinct phases of activity to produce much-prized amulets and, as a by product, the so-called 'Coal Money', flat circles of shale from 1-5cm in diameter with many different incised marks, some two or three groups of circles, some with square or triangular holes where they would have been mounted onto lathes. The earlier phase was during the early Iron Age, when the blackstone bed would have become a workshop floor as workers squatted with flint tools, fashioning roughly shaped circles 8-10 cms in diameter and clearly intended for personal ornament. In the words of Dr Henrietta Davies, who excavated the beds in 1937, 'The appearance of the floor vividly suggests that here sat a worker, cutting the shale with sharp flint flakes, throwing down the pieces which he broke and the flint flakes as they blunted and striking off fresh flakes as he needed them.'

Production seems to have ceased by the time the Romans appeared, who also prized the lightweight, jet-like rock and started a similar industry, this time facilitated by the use of lathes. Discarded or damaged amulets have been found in great numbers: Dorchester Museum has many. For a long time, the discs were thought to be trading tokens of some kind but are now generally accepted to be the discarded cores where the stone had been held on a simple lathe. When polished and bees-waxed, the finished articles would have been shiny and lightweight and similar in appearance to jet,

popular throughout Europe in the Iron Age and thought by Pliny to hold magical properties.

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Iron Age terraces and working fields with large circular huts 8-15 metres in diameter have also been identified nearby, and graves with the amulets on upper arm bones and wrists have been found at Maiden Castle, Fordington, Silchester, Glastonbury and as far afield as Corbridge on Hadrian's Wall.

Kimmeridge 'coal money', showing how it might have been finished with flints and some discarded discs from the centre of turned amulets. The holes show how they would have been held on the lathes.

In Richard Gough's copy of Coker's *Survey of Dorsetshire* in the Bodleian Library in Oxford, an 18th-century copy of a letter from Rev Hutchins of Wareham to Sir Peter Thompson is bound into back. Hutchins writes: 'Concerning the antiquities found at Smedmore, they are dug out of the ground about a foot deep, one or more at a time, sometimes they are found in earthen pots, placed between two pots set edgeways. I saw one of those I gave you dug up, and the Labourer told me he had in his lifetime dug up above a dung cart full at different times…The Smedmore amulets are neatly turned and do not resemble the rudeness of the ancient Britains. Perhaps

their acquaintance with the Romans taught them to give their work a more polite turn.'

Salt making

It was Sir William Clavell (1568-1644), Lord Mountjoy's associate in the Irish Wars, who was the most ambitious projeteer at Kimmeridge and made it once again a hive of industrial activity. Sir William's father John Clavell was already a manufacturer of salt, an activity that dates as far back as the Early Iron Age at Kimmeridge. Sir William continued his father's scheme: in 1632 Coker tells us that 'For transportation of these commodities [see below] as also of white salt (there is made in great Abundance, by boyling it out of the sea water) hee [Sir William] hath made at his owne charge, with great Rocks and Stones piled togther, built a little Key in Imitation of that at Lime, for small Barkes to ride...' The site for saltwater boiling appears to have been near the end of the present remains of a stone pier, where traces of buildings were found, and where pieces of rough clay pans about the size of a large pie dish and obviously subjected heat had been tipped into the shale.

Alum extraction

Sir William, however, had his eye on more lucrative business than saltmaking. When Henry VIII severed links with Rome, he also lost access to Britain's main sources of alum in the Vatican and Spain. Alum is a double salt, usually aluminium sulphate with potassium sulphate and has been used throughout history as a dye fixer or mordant, as well as in leather curing and paper making. It was essential to the woollen industry on which England's prosperity depended heavily in the late Middle Ages and Tudor era.
Early references show that alum was being made in various parts of the country where the shale is similar to that at Kimmeridge, including, in 1587, at Alum Bay in the Isle of Wight and Alum Chine near Bournemouth.

Alum was produced by quarrying vast quantities of shale, up to 3,000 tons of which was then carried in wheelbarrows and stacked on a bed of

brushwood. The quarries for this shale can still be identified in cliffs nearby. This was allowed to burn slowly for at least three months. The ash was then cooled and barrowed away to cisterns where it was washed and soaked in water for a long time to dissolve out the alum salts. The acidity was then neutralised by adding an alkaline salt derived either from seaweed ash or urine or both. The liquid was then poured off into lead cauldrons and evaporated to obtain crystals. It took between 80 and 130 tons of shale to yield one ton of alum. Kimmeridge had shale, freshwater and coal, for later experiments to speed up evaporation – in principal, an ideal place to produce alum.

Such manufacture was regulated by the grant of a patent of Monopoly by the sovereign through the 16th and early 17th centuries, typically granted as a mark of royal favour and remuneration rather than in recognition of particular expertise. Elizabeth first granted such a monopoly to James, 6th Lord Mountjoy in 1567. He joined with John Clavell in experimenting in the production of alum from Kimmeridge shales, apparently without much success. In 1609, James I, ever on the lookout for new sources of income, decided to make the alum industry a royal monopoly and appointed two agents to deal for him and lease the workings to, among others, John's grandson, Sir William Clavell.

The King invested £3,650 and Sir William £2,000 and in 1612-13, Sir William built two alum houses, whose stone foundations have been tentatively identified on the foreshore beneath the waste deposits of later industries. He also built his pier of stone across the harbour, 100 feet long and 60 feet broad. Two furnaces also survive *in situ* beneath later waste. Sir William also developed the coal mining. Unfortunately the operation failed to produce the 500 tons a year at £10 a ton as predicted and in 1616 the king resold the monopoly to another group of merchants who closed down the operation at Kimmeridge and took away the equipment for use elsewhere. This seems to have been in lieu of Sir William having to repay the king's investment of £3,650 and by forfeiting his own investment of £2,000, he was allowed to close the account, a royal scam typical of James I and his money farmers.

Two thousand pounds poorer but unbowed, Sir William then decided to turn his hand to glassmaking, by exploiting the oil rich Kimmeridge shales to fire the kilns, since society was becoming aware of the danger of deforestation in the country at large as the demand for timber for all sorts of purposes grew. Once again, royal permission was required and in 1614, and under the leadership of Admiral Sir Robert Mansel, a group of partners not only got permission to make glass with coal, but also succeeded in getting a prohibition of the use of wood as a fuel for glassmaking. Sir William went into partnership with one Abraham Bigo, glassmaker on the Isle of Purbeck, Sir William providing land, capital and fuel for glass for the south west. However, he was soon in conflict with Mansel, Sir William apparently trying to avoid his obligations to the monopolists and Mansel determined to enforce the monopoly. Sir William was also selling his wares in London, also counter to the agreement. In 1623, the glass works at Kimmeridge were suppressed and Clavell committed to Marshallsea debtors' prison for non-payment of debts. He was released, petitioned the courts, imprisoned again until finally in February 1626 he received a pardon for just about every conceivable sin, including witchcraft.

Sir William had by now lost some £20,000 and could hope only to hold his estates together. In fact, he was forced to sell the hitherto main family seat at Barnston, with the result that his 'little newe house' at Smedmore became the main family residence and has remained so ever since.

The Blackstone Project

While these earlier activities relied heavily on the blackstone at Kimmeridge and while it had been scavenged and burnt as domestic fuel by locals for centuries, it was not until the mid-nineteenth century that there was a concerted effort to mine it, although not by the Mansel family themselves. Instead, leases were given. First in 1848 came the Bituminous Shale Co., which produced various derivative products such as fertilizer, paraffin wax, varnish and lubricants from their works in Weymouth. Their successors from

Tram lines, apparent in this early watercolour, were laid to carry the oil shales to the sea for onward transportation to the refineries. The mines seem also to have been a destination for expeditions from Smedmore House.

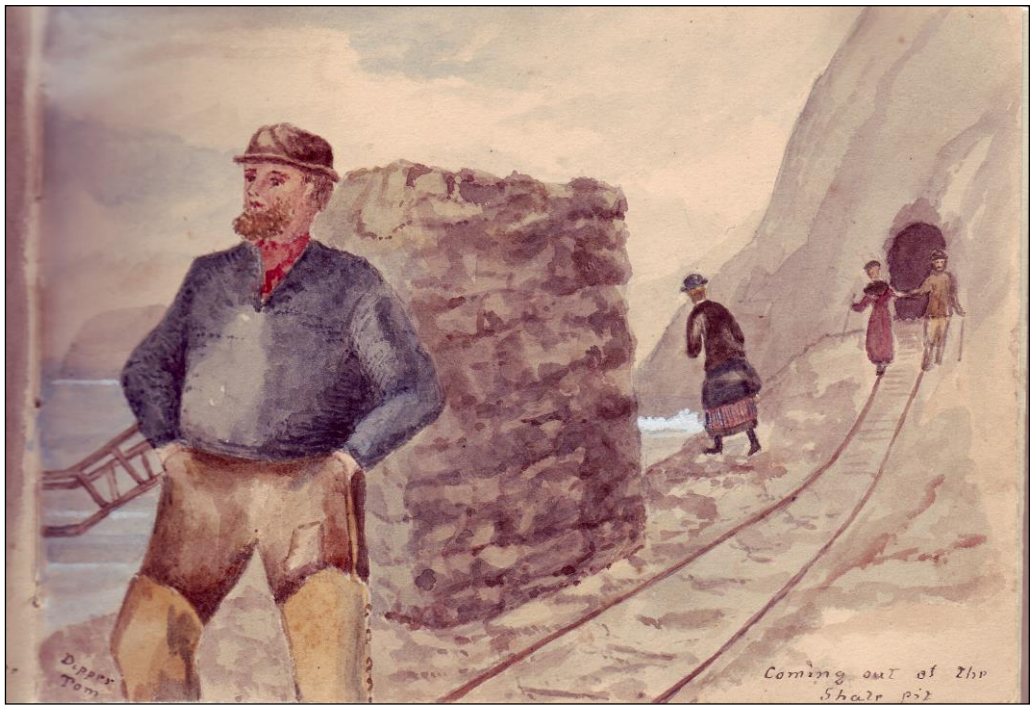
1858, Messrs Wanostrocht and Co of Wareham, were more ambitious, securing a contract to light Paris with oil produced from the Kimmeridge shales. One wonders what the Parisians thought of it: in its raw state the sulphurous shale (which is very occasionally prone to smouldering spontaneous combustion in the cliffs) is fairly malodorous. As Ida Woodward trenchantly described it in 1907, 'although the odour is said not to be unwholesome, it is intensely unpleasant and few could be prevailed upon to burn it even in the cause of domestic economy…[it] emits a sulphurous smell like the bitumen of the Dead Sea.'[6]

Wanostrocht & Co built the small pier whose mostly submerged remnants can be made out on the foreshore below the tower, but the business only lasted a few years. The blackstone mining never reached a sound footing at Kimmeridge. Land carriage to Wareham was prohibitively expensive and the waves sweeping in across the bay made it a poor landing stage (Sir

[6] Woodward, Ida *In & Around the Isle of Purbeck* (1907), p. 78.

William's Cobb had been destroyed in a fierce storm in 1745, and other attempts to built a pier were no more successful). By 1890, all attempts at mining had ground to a halt. Just one more recent attempt to exploit Kimmeridge's geology for oil remains, BP's 'nodding donkey' on the other side of the bay from the tower, which pumps oil from the Cornbrash layer some 1850 feet below the surface.

'Waiting for candles in the shale pit, Ernest proposes giving B.M. a ride – pushes the trolley without effect for 10 minutes, spite of scoffs and jeers, till "Dipper Tom" shows us the real state of things.'



'Coming out of the shale pit.' Perhaps this is Dipper Tom.

LAND

An installation by Antony Gormley in celebration of Landmark's 50th anniversary

In 2015, Kimmeridge Bay beneath Clavell Tower is one of five Landmark sites chosen by artist Antony Gormley for an installation called LAND, a collaboration with Landmark in its 50th anniversary year. From May 2015 to May 2016, five different representations of a human figure in cast iron are placed to represent the four compass points - Saddell Bay, Martello Tower, Clavell Tower and SW Point on Lundy, with Lengthsman's Cottage as the fifth, anchoring the whole installation near the centre of Britain, a quiet site on a manmade waterway in marked but complementary contrast with the wide horizons of cliffs and sea at the other four sites.

The Kimmeridge work is called HEED. It was specially created for the site using 3D body scanning techniques. It is installed on a ruined pier built in 1858 by Wanostrocht & Co as part of their contract to supply the lamps on Parisian streets with gas from the Kimmeridge shales. They went out of business in 1862. The pier is now part of a Scheduled Monument that also includes the below ground remains of seventeenth-century alum works in the bay.

Landmark's role as Exhibitor of the works was funded by three very generous Landmark supporters who wanted to support this high profile initiative to celebrate Landmark's work across Britain through Landmark's first commission of a public art work. The cost of fabrication of the five works was funded by the White Cube Gallery, who will sell them on behalf of the artist at the end of the installation year.

Landmark also received a development grant from Arts Council England for scoping and developing this public art work in celebration of our 50th anniversary.

LAND – Artist's Statement **Antony Gormley**

The prospect of making five works for five very distinct locations around the British Isles, to celebrate the 50th anniversary of The Landmark Trust, was an intriguing one. I am always interested in how a work might affect a given environment and possibly add a dimension, a point of focus in a landscape or room. The challenge posed by the Trust's invitation was not simply to offer some form of decoration for the range of historical layers that their buildings embody.

The Trust saves buildings that would otherwise disappear and allows us to live within their history. Many of these buildings are detached from their original context of use and social matrix, and are sometimes remote. Some of these buildings were built as follies and towers, made to stand apart, using their isolation as a point of punctuation in the landscape, making a landmark or a point from which to look out at the world at large. This isolation promotes thinking about human history and power relations, and wonder at the very variety of habitats that the human species has created for itself.

This being in the world but not exactly of it, through distance in time or isolation in space, is precisely the position that I aspire to occupy in my work. A certain distance is necessary in order for sculpture to encourage or evoke contemplation. It was important to find sites in which the work would not simply become an unnecessary addition, but where it could be a catalyst and take on a richer or deeper engagement with the site.

Each of the five works made for this commission tries to identify a human space in space at large. Where do we live primarily? We live in a body. The body is enclosed by a skin, which is our first limit. Then there is clothing, that intimate architecture of the body that protects us from the inclemency of the weather. But beyond a set of clothes are fixed shelters. We live in a set of rooms. A room coheres into a building and buildings cohere into villages, towns and cities. But, finally, the limit of our bodies is the perceptual limit of the horizon, the edge of a world that moves with us.

In searching for positions to site the five body-form sculptures, I have looked for locations that are not simply conventional places for sculpture (the grotto, the glade, the lawn, the niche or on the axis of an avenues of trees). I have found the most potent places to be where the horizon is clearly visible, and that has often meant the coast. So, I have been drawn to places where the vertical nature of the sculpture can act against the relatively constant horizon of the sea: the promontory on Saddell Beach near Saddell Castle in Argyll; Clavell Tower, the folly on the South Dorset coast; the promontory above Devil's Leap, Lundy; and the Martello Tower near Aldeburgh in Suffolk. The work is a register for our experience of our own relative positions in space and time, which has led me to choose positions on the edge; the liminal state of the shoreline.

Of course, all of this relates to our identity. The buildings of The Landmark Trust are detached from their original social function and, mostly, from the city. I think that they connect with the characteristics and psychology of the British as an island people. The British Isles are set somewhat adrift from the great Eurasian continent, with our various associations with the Norse and Scandinavian countries, the Baltic and indeed our friends across the Atlantic. Despite being very aware of our own insularity and separation from the rest of the world, the trading relationships with distant lands - that relationship with the sea, with self and other, with home and the world - has led to water: our identity as an island nation is moulded by our relationship with the sea.

I have selected four coastal sites that are countered by the siting of a fifth body-form that will look down at the water in the lock next to Lengthsman's Cottage in Warwickshire, in the centre of England. The towers and defensive sites on the coastline are here, inland, parried by a state of intimate, domestic exploitation of water as a containable means of transport. I have tried to associate all five works with both their social contexts and the geology of site, using the language of architecture and geology, while acknowledging the skin as a 'weathered edge'.

The challenge was to make every work distinct, to allow its verticality to be a focus, as a kind of rod or conductor for thoughts and feelings that might arise at a site. They are not representations. They are simply displacements, identifying the place where a particular human body once stood and anyone could stand. In that respect they are open spaces, void of ideological or narrative content but waiting for your attention. The works are made of iron: the material that gives this planet its magnetic field, its density, something that maintains it in its particular course through the heavens. Although these works are temporary placements, I would like them to act as catalysts for a reflexive engagement with site: both body and space. In the context of The Landmark Trust's 50th anniversary, it is an occasion to think and feel the nature of our species, its history and future, and its relationship to the huge biodiversity of living beings that exist on the surface of this extraordinary blue planet.

Antony Gormley
August 2012