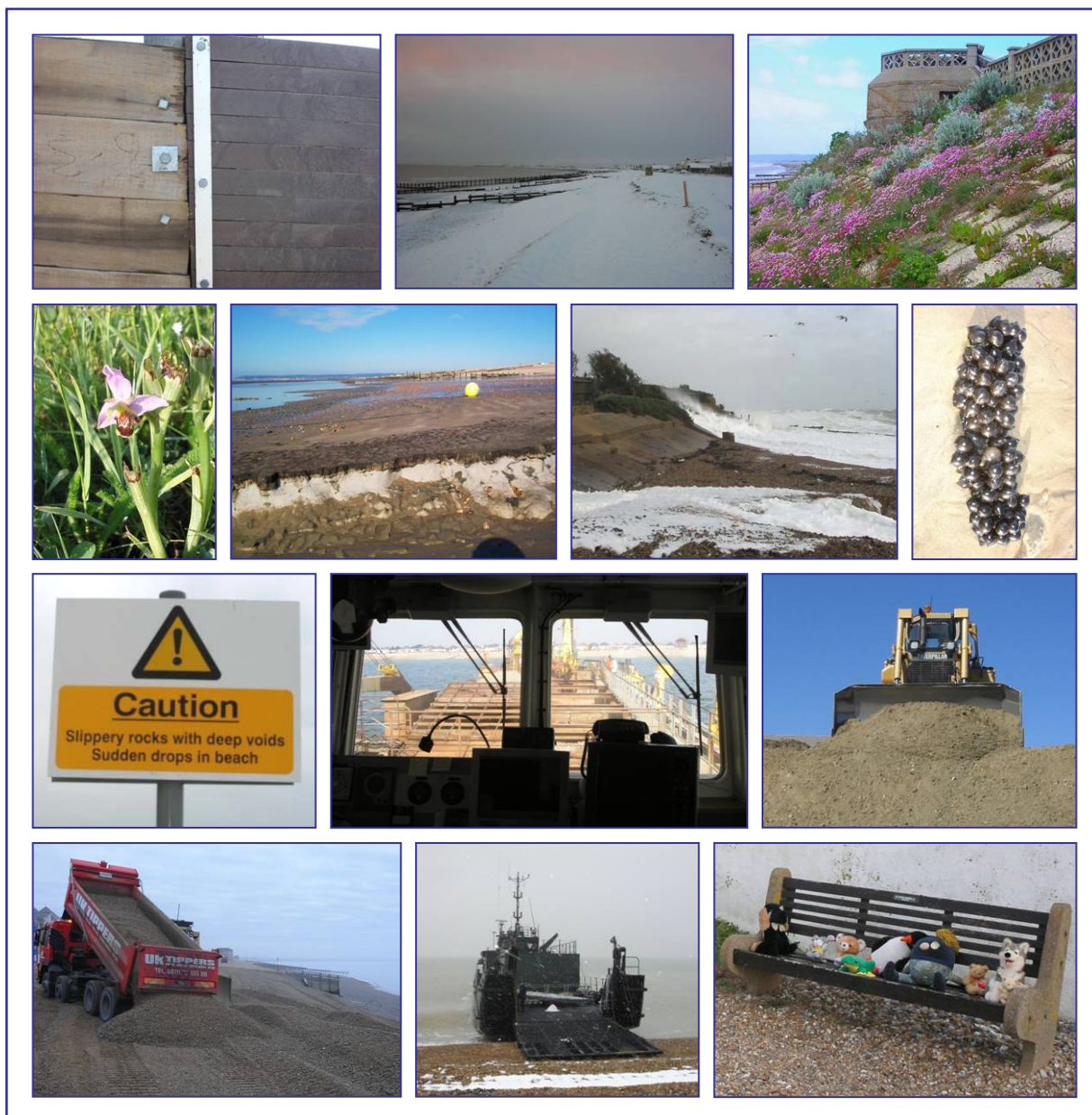




PEVENSEY BAY SEA DEFENCES PPP

MONTHLY REPORT: April 2010





1. Weather

1.1 General Synopsis – Southern England

The first week was unsettled but after this high pressure over or close to the UK brought plenty of dry and fine weather until the last few days. Daily maximum temperatures were above average and reached 20 °C in places on several days. However, daily minimum temperatures were close to normal with some frosts. Overall, April was a dry month, with less than 50% of the monthly average rainfall recorded in many areas and only about 30% of average in parts of northern England and East Anglia. Provisionally, it ranks thirteenth driest in a 100-year series, but was not as dry as April 2007. A sunny month, particularly in the Midlands, East Anglia and the South, where totals were locally 50% above normal. Provisionally, it ranks fifth sunniest in a series from 1929, similar to April 1990 but not as sunny as April 2007. In more detail the Met Office recorded April as follows;

Detail

1st to 7th During this period, outbreaks of rain or showers moved eastwards with a few sleet and snow showers affecting northern hills at first. There was heavy rainfall over northern and western parts early on 5th, with totals over 20 mm recorded in Cumbria, and the west or south-westerly winds were particularly strong on 5th and 6th. This weather system cleared eastwards on the evening of 7th. Daily maximum temperatures were mostly close to 10 °C, but it was warmer on 6th when 17.5 °C was recorded at Monks Wood (Cambridgeshire).

8th to 24th High pressure dominated for much of the period, giving prolonged dry weather and plenty of sunshine. However, temperatures regularly fell to near or below 0 °C overnight with, for example, -2.9 °C at Benson (Oxfordshire) early on 8th. There were a few cloudier days, notably 14th, 19th and 20th. By 24th, overnight temperatures were recovering and the maximum temperature reached 21.3 °C at St. James's Park (Greater London).

25th to 30th From 25th, there was a slow breakdown of the settled spell as frontal systems spread cloud and outbreaks of rain eastwards. Rainfall amounts were generally small, however. Winds became west or south-westerly and were strong at times, but introduced warmer air. The highest temperature so far this year, 22.0 °C, was recorded at Leeming (North Yorkshire) on 28th. By 30th, temperatures were closer to normal, reaching 16 °C in eastern areas.

Winds

Variable
Light to
Moderate

Variable
Light to
Moderate, to
NE
Gale force 8

SW to SE
Light to
Moderate



1.2 Gales

With winds becoming much lighter there was no particularly dominant wind direction, although over 40% still originated in the north and east. The net result was an average speed that coincided almost exactly with the contract mean for April. Waves on the other hand continued to be well below the ten-year average. It is remarkable that with just one month to go, all but July and November have been significantly lower than would be expected.

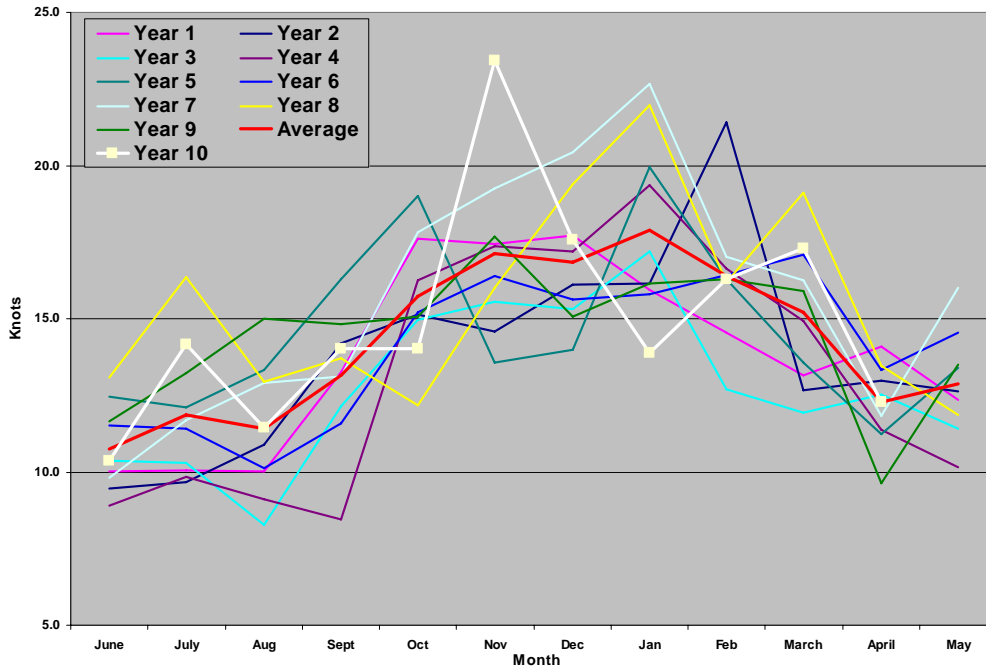


Figure 1: Average Monthly Wind Speeds (from Met Office model)

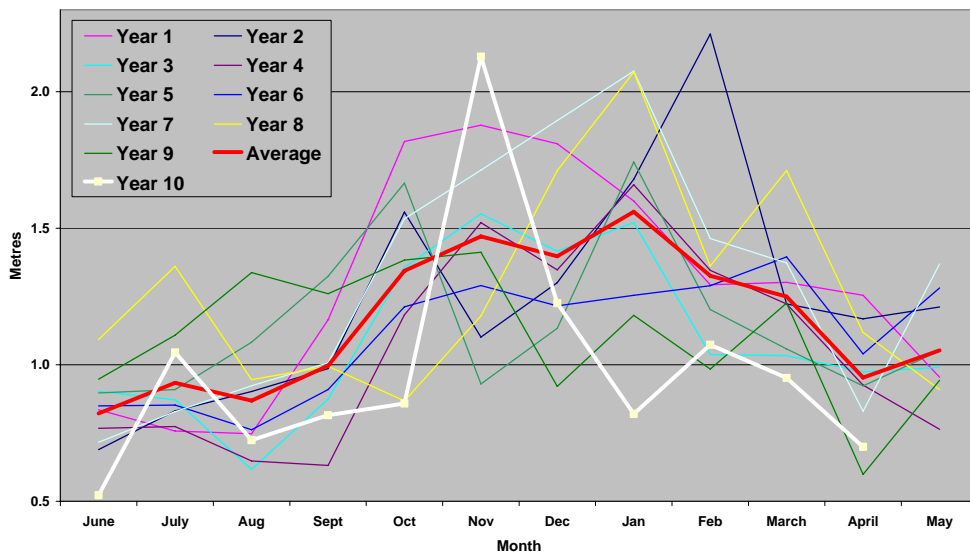


Figure 2: Average Monthly Wave Heights (from Met Office model)



Spells of particularly warm weather brought a feel of summer, and for the first time in many, an almost gale-free month. All pertinent wind and other forecast information for Pevensey and sea area Dover is recorded in Table 1 below;

Type	Day/Date	Times	Wind Force	Wind Direction
Gale Warning	Thursday 1 st	03:40	-	Gale now ceased
Gale Warning	Monday 12 th	03:41	8	NE expected soon
Gale Warning	Tuesday 13 th	03:19	-	Gale now ceased

Table 1 – Weather Information Received: April 2010

1.3 Weather Events

Although the weather was by and large fine, the first couple of days saw the tail end of the weather system that had brought storms to coincide with March's final spring tides. As water levels were still relatively high and waves just above 2m, the first tide 15 minutes into April recorded a JRP 1:1. Despite improving conditions, three tides later a switch of wave direction from southwest to south saw a final 1:1 event for winter 2009-10.

Day	Time	Forecast		Total Water	Tide Gauge		Ave. Diff.	Waves		Wave required for JRP						
		UKHO	Surge		PVSY	SH		Ht	Dir	1	2	5	8	10		
1 st	00:15	4.08	0.10	4.18	4.10	4.27	0	2.3	248	0.3	2.4					
2 nd	13:00	3.58	0.12	3.70	3.81	3.94	+0.18	1.4	185	0.8	1.8					

Table 2 –JRP Values for April 2010

1.4 Effect on the Defences

As this final event was a directional statistical anomaly rather than a significant wave event, there were no additional implications for the defences. Last month's report highlighted that reinstatement works during March had protected all areas, leaving essentially tidying up that need to be completed.

2. Works Undertaken

2.1 Programmed Works – Reprofiling

In the wake of the 30/31st March event it was soon discovered that relatively little material had been lost, much of it being found lower down the beach and available to be reprofiled back to the crest. Since Easter school holidays started on 1st April, it was agreed that only essential works would be completed immediately. With no further significant waves experienced, work for the season was completed on 24th April, when all plant left site.



Post storm recovery and repair at Herbrand Walk flagpole
Top: Exposed Wavescreen near the flagpole at end of March
Bottom: Reprofiled beach on 15th April 2010

2.2 Programmed Works – Recycling

Early April saw a complete change in the weather and an end to storms. Falling tides and with Easter approaching, it was agreed with the Agency project manager to delay any necessary recycling until after the end of the school holidays. As it happened, April's survey had to be done on Good Friday as this was the only suitable tide due to other commitments in the middle of the month, and the following spring tide only producing ones in May not April.



The final day of recycling at Herbrand Walk fishing station

The consequence of this was that amounts of recycling required were calculated well in advance, with the net result that it was decided that only three days would be needed. Thursday & Friday 15th/16th April saw two dumptrucks working at the Camping & Caravan Club site, moving shingle back to Beachlands.



A final day on Monday 19th was used to cover exposed Wavescreen at Herbrand Walk wall with sediment gleaned from against groyne GC16 at the eastern end of HW fishing station. Because only a small quantity was required this was achieved using a single Volvo A25 truck.

This completed works for winter 2009-10. Final volumes are recorded in Table 2;

Date	15	16	19	Total
Beachlands	1,712	1,760		3,472
Herbrand Walk Wall			600	600
Total	1,712	1,760	600	4,072

Material Source							
	PBSC		N. Bay Outfall		Flagpole/HW Huts		Stockpile
	C&CC Campsite		East Stream		Sector 1 Martello		Cooden

Table 2 – Recycling Volumes to 19th April 2010

3. Health, Safety & Environment

No Health & Safety incidents were reported during March.

4. Monitoring

4.1 KPF Surveys – GPS Quad Bike Survey

A monthly quad bike survey of the whole beach was completed on Good Friday 2nd April. Once more all data was collected in a single session because low water was not until 08:30, allowing the majority of mid-foreshore work to be done before the tide turned. Observations below -2.0mOD were limited but generally reached to -2.5mOD.

4.2 KPF Surveys – GPS Quad Bike Volumes

Given the weather immediately preceding April's survey it hardly surprising that there was a fall of almost 10,000 m³ in all three comparative volumes contained in Table 3.

Month	December	January	February	March	April
Above 0 + Stockpile (m ³)	2,046,828	2,084,232	2,069,876	2,077,928	2,068,128
Above KPF (m ³)	-36,773	+631	-13,725	-5,673	-15,473
Above -1.5mOD (m ³)	2,994,099	3,015,370	3,007,302	3,006,342	2,997,658
Above -2.0mOD (m ³)	3,396,989	3,411,607	3,411,318	3,408,360	3,394,098

Table 3 – Beach Volumes December 2009 to April 2010



The survey provided suitable information to undertake reparatory works, and the summer-like weather for the remainder of the month suggested that the next survey would see continued improvement.

4.3 KPF Surveys – Required Actions

Even though the end of March had seen a 1:5 year event, much of the erosion was absorbed by defences bolstered during recycling and bypassing works earlier that month. Even so there were still a couple of areas that required attention;

- 569/570 Revetment & Scour Hole. Bypassing and recycling saw an increase of 6,000 m³ on March's total, with 569 close to its ideal volume. Despite an increase at 570, it remained below its required amount, but on a par with volumes usually seen at this time of year. With the highest spring tides now past, this area will now remain unchanged until the annual recharge later in the summer. Total Sector 1 volumes are currently higher than at the same time last year, but as there is still time for volumes to change, no decision has yet been made as to how much shingle will be provided by 2010's renourishment.
- 573 Sector 1. Despite values rising to their highest for more than 12 months, they still remained 500 m³ below those needed. As this is a low risk area and there seems to be some gradual improvement it has been agreed that no specific works other than reprofiling are necessary here for the time being.
- 596 Beachlands. Adjacent sections continue to remain well within normal ranges. With 1,600 m³ needed, it was determined that this would be tackled by two days of recycling, which added over 3,000 m³.
- 612 Herbrand Walk wall. Erosion here at the end of March saw a fall of 1,700 m³ and a 575 m³ shortfall. Reprofiling and a day's recycling saw 600 m³ being added to the profile.

4.4 Groyne GP16 – Plastic Panel

The panel of recycled plastic, installed as part of a re-planked groyne GC16, has now been in place almost five years. Allister Humby's visit (see section 6.4 below) provided a good opportunity to examine the material and see how it has fared next to new greenheart planks added alongside.



The plastic panel on groyne GC16



The first thing to be noticed was an apparent deformation of the top element in the panel. Despite there being a metal plate between layers and bolts vertically holding each layer in place, sand and other small diameter sediments have forced their way between the top two 'planks' causing the upper one to bulge upwards, as illustrated by the detail of the photograph (right). Whether this will be a problem in the long term remains to be seen.



Deformation caused by sediment ingress

On the other hand, the plastic seems to be abrading more slowly than adjacent hardwood. Details at either end show there to be less rounding on the updrift edge of the top plastic plank and increased timber abrasion where planks abut each groyne pile.



Comparative abrasion of plastic and wood at each end of the panel.

5. Stakeholder & Landowner Liaison

5.1 Residents

A relatively recent arrival at 10 Herbrand Walk visited the office to discuss local management of the beach, but equally interested in the new wind turbine in Salt Haven depot and information in its output and effectiveness.

Nick Munro, a Normans Bay West resident, telephoned to report five 'teenagers' sharing use of a small-wheeled motor cycle on the beach at the Camping & Caravan Club. A call was made to the Club asking them to stop their guests – or anyone else for that matter – using the beach in this way as it is not permitted without the prior written consent of the Agency under Sea Defence Byelaws.

The following emails were received as machines left the beach for the final time before summer;

From Simon and Abigail Sargent of 436 Coast Road

We have read your interesting articles in The Pump magazine over recent issues, many thanks, but never so keenly as this spring addition. The loss of shingle from the beach



immediately in front of our property was markedly greater this year than I recall in the previous 2 winters we have been here. We are so very grateful for your team's efforts recently in reinstating "our" beach in the past week or two, and hope you will pass on our thanks to the hardworking crew who have accomplished this work. It's a pleasure and a privilege to live here on the beach, and we don't take your efforts in maintaining the integrity of our coastline on our behalf for granted.
Many thanks.

From Robbie Schulte, 410 Coast Road.

Ian, thanks again for your organising work in planning an executing the reloading of the shingle. A lot more was brought in front of us this time, which is of course welcome. The drivers were good, just thought I would let you know. Will drop in soon when we are down to have a chat, really about nothing, but just to catch up.
Thanks and regards.

From David and Rose Durban, 15 Herbrand Walk (after Annual Forum)

It was good to meet you in person. Thanks for the photo – appreciated – Really interesting to see the changes – it certainly looks better now!
Do hope you and your family have a good summer
Our thanks for all you do and especially for the helpful updates.
With our best wishes.

6. Meetings & Other Liaison

6.1 Environment Agency

6.1.1 Environment Agency – Project Managers

PCDL and Agency project managers met several times during the month to view and discuss ongoing matters of interest. A record of issues discussed has been included as Appendix B of this report.

On Wednesday 7th April, new regional director Toby Willison visited Pevensey and included a discussion on the success of the PPP contract, culminating in a brief visit at the Public Forum that afternoon at SHYC. He expressed his interest in lessons learnt from the scheme that could be carried forward to other Agency projects and hopes to make more time available to gain a more complete picture in the near future.

6.1.2 Environment Agency – NCPMS/NRG

Through consortium members' independent involvement with the Agency's "Strategic Framework Board" it was arranged that Richard Nunn, the new head of NRG (National Review Group), would visit Pevensey on 20th May. Richard has been doing a review of the Agency's procurement approach and has just produced a draft proposal for future procurement strategy. The review looked at some "Pathfinder" projects, of which Pevensey was one of four active schemes, but a further four possible variations were also considered, one of which was the proposed format for a unified Sussex Coastal Strategy.



6.1.3 Environment Agency – Environmental Management

KES Environment Officer, Jamie Benton, visited PCDL in response to a Herbrand Walk resident who had reported workmen, representing Steve Hall, were pushing shingle away from the road either side of the flagpole and adding hardcore to a narrow strip of beach alongside the road. He was concerned that this was a pre-cursor to huts being placed on the beach despite planning consent not being granted by Rother DC earlier in the year.

6.2 Considerate Constructors Scheme (CCS)

April 22nd saw the first visit of another scheme monitor who is new to the Pevensey scheme. John Ogle-Skan is one of the senior monitors and used his visit to acquaint himself with the site and the project as by the end of April all work had essentially finished for the winter. Both PCDL and Agency project managers met with him to emphasise the partnership element of the project and to answer any questions he may have had.

6.3 Balfour Beatty Capital (BBCap)

As owners of Dean & Dyball, senior managers from BBCap have at varying times visited Pevensey to learn about the project. On April 26th it was the turn of their Sustainability Manager, Nicola Williams. In the company of Brian Walker she had a tour of the defences and discussed how PCDL's evolution of best practice could be utilised elsewhere with the Balfour Beatty group.

6.4 Dean & Dyball/Westminster Dredging JV

Dean & Dyball's Regional Framework Manager, Allister Humby, visited site representing the D&D/WDCo JV. Currently acting as ECI contractor for the Agency on the forthcoming Broomhill scheme, he wanted to learn more about dealing with vegetated shingle and how to minimise the impact of any works. He was also keen to hear about potential use of recycled plastic as a replacement for tropical hardwood in groynes, as well as the Agency's research programme into the use of alternate hardwood species.

7. Media Contact

7.1 Annual Public Forum, Sovereign Harbour Yacht Club

The scheme's annual public forum was held in Sovereign Harbour Yacht Club's conference room on the afternoon of 7th April. It is now traditional to hold the forum on the Wednesday or Thursday after Easter so as to catch a proportion of the non-permanent residents who often use their properties over school holidays.

It was again held in the afternoon, between 14:00 and 18:00. As media coverage is handled by the Agency's press office – from where a press release was issued – there is little that can be done to ensure it is taken up by the various local radio stations and papers. Eastbourne Herald journalist Keith Belcher did this year include news of the event in his weekly "Down Your Way" column focussing on Pevensey Bay and posters



were accepted for display in the library, the post office and the more popular local shops.

It is also difficult to gauge when to issue information; too soon and it is forgotten by the time the day comes around; too late and residents may have made other plans for the day. The one piece of information going to all households is the “What’s On” content in the Parish Pump. The Spring 2010 edition was well-timed, being distributed about two weeks prior to the event.

All the organisations who attended last year at St. Wilfrid’s Hall, Pevensey Bay expressed an interest in displaying this year, with the RNLI returning to be joined by SHRA and the Rotary Club. Hastings & Bexhill Wood Recycling Project again had to drop out as some of their volunteer staff didn’t show up for work and all available hands had to be used on collection duties to which they were already committed.



A resident engrossed in the information displayed on the PCDL stand

Although the turnout was not huge there was a steady stream of visitors, particularly for the first three hours. Because numbers were not too high, most attendees managed to spend 15 minutes or more discussing those issues most relevant to them.

One resident of Sovereign Harbour was particularly upset by the noise generated during harbour bypassing works – the engine of the D6 bulldozer and the clanging of road lorry tail-gates as they tipped every few minutes. Whilst there is every sympathy for residents exposed to inevitable noise nuisance, this operation is one that was integral with the original planning consent for Sovereign Harbour to be built at all. It is



essentially the one work phase that is ‘cast in stone’ and that has to be undertaken in the specified manner. On the other hand he did comment that hi-track bulldozers create more vibration than the more traditional flat-track machines. This is one area where resident’s comments can be acted upon, so the intention for winter 2010-11 will be to use only flat-track machines for day-to-day maintenance, although all machines will remain acceptable during weather events.



Left; a “hi-track” bulldozer. Right; amore traditional flat- tracked machine

7.2 ICCCM Conference, Estoril, Lisbon

The International Conference of Coastal Conservation & Management (ICCCM) was held in Portugal on 12-14th April. It incorporated an afternoon workshop as the final event of the ConScience project. PCDL made two presentations over the three days, one to the main conference on “Derivation of Best Practice in Management of Mixed Shingle Beaches”, with the second at the ConScience workshop. The second one, entitled “Good Governance in Effective Coastal Erosion Management” examined how in 1999 the Pevensey scheme had been established – and has been subsequently managed – with reference to later EuroSION (2002-4) and ConScience (2007-10) ideology. Essentially both projects recommend four concepts for managing coastal erosion in harmony with natural processes;

- the coastal sediment cell – a coastal compartment that contains a complete cycle of sedimentation, including sources transport paths and sinks.
- coastal resilience – the ability of a coast to accommodate change
- favourable sediment status – the availability of coastal sediments to support the objective of promoting coastal resilience and preserving dynamic coastlines
- strategic sediment reservoir – a supply of appropriate sediment available to replenish the coastal zone, from offshore, in the coastal zone or from the hinterland



7.3 CIWEM Annual Conference, Olympia

In order to maximise the number of presentations over the two-day conference, several sessions consisted of five minute slots rather than the usual 15 or 20 minutes. PCDL's abstract submitted early in the New Year had been allocated one of the shorter time periods on Thursday 29th April, the conference's second day. As is often the case in this type of event, coastal presentations were few and far between as fluvial flooding issues dominated.

8. Short Term Programme

No works are currently planned before the annual summer replenishment.

RECORD OF PEOPLE ENTERING SITE

Attachment	No. of visits to site
PCDL Project Manager	17
Agency Project Manager	6
Environment Agency Staff	15
Westminster Dredging	0
Dean & Dyball/Balfour Beatty	4
Mackley Construction	2
Mouchel	2
Sub-contractors	25
Local Residents/Landowners	52
Other Third Parties	4
Universities/Colleges	0
Total visits	127

- ❖ A single site visit includes any work-related visit or meeting attendance at the PCDL site offices or on the beach.
- ❖ A full working day (e.g. by the PCDL Project Manager) equates to one visit to site. No more than one visit per day per person is recorded.
- ❖ Attendance at a ½ hr meeting by 10 people counts as 10 visits to site.



APPENDIX A: ENVIRONMENTAL INSPECTION CHECKLIST

DATE: 4th May 2010

CONDUCTED BY: Ian Thomas

PERIOD COVERED: April 2010

Number	Item	Yes/ No	Corrective Action Required?	Comments
1	HEALTH & SAFETY			
1.1	Is there any shingle cliffing making public access to and from the beach dangerous?	No		
1.2	Are there any loose, sharp or protruding parts of groyne that are a potential hazard to the public?	No		
1.3	Have any voids in shingle opened up over the Sovereign Harbour revetment?	No		
1.4	If yes, how were they made safe?			
2	NOISE AND VIBRATION			
2.1	Has pile driving been used on site?	No		
2.2	Are compressors acoustically silenced?	N/A		
2.3	Is equipment powered by mains electricity?	No		
2.4	Is all mobile plant fitted with exhaust silencers?	Yes		
2.5	Are reversing alarms set to the minimum safe level?	Yes		
2.6	Have there been any complaints about noise or vibration?	No		
3	AIR POLLUTION AND DUST			
3.1	Is all plant machinery correctly adjusted and maintained with respect to emissions?	Yes		
3.2	Is there visual evidence of dust on roads around the site?	No		
3.3	Is there visual evidence of wind-blown dust in the vicinity of properties around the site?	No		
3.4	Have there been any complaints about dust?	No		
4.	HAZARDOUS MATERIALS			



Number	Item	Yes/ No	Corrective Action Required?	Comments
4.1	Have any known or suspected explosive materials been found on site?	No		
5.	WATER POLLUTION AND LIQUID WASTE DISPOSAL			
5.1	Have shingle recharge methods been discussed with the Fisheries Liaison Officer.	N/A		
5.2	Are materials, vehicles or equipment stored within 3m of the beach crest?	No		
5.3	Are all fuel and oil tanks adequately bunded?	Yes		
5.4	Is there any evidence of spills or leaks which have not been reported?	No		
5.5	Has the Contractor prepared and maintained a spill management plan?	Yes		
6.	SOLID WASTE DISPOSAL			
6.1	Is there an adequate supply of litter and waste receptacles, are they labelled and are they being emptied sufficiently frequently	N/A		
6.2	Is all waste being treated in accordance to the Duty of Care regulations?	Yes		
7.	NATURE CONSERVATION			
7.1	Are areas of vegetated shingle being marked off prior to works and staff briefed?	N/A		
7.2	Are access points clearly marked and respected?	Yes		
7.3	Is there any evidence of damage to established shingle vegetation and the saline lagoons?	No		
8.	ARCHAEOLOGY and HISTORIC MONUMENTS			
8.1	Have there been any archaeological finds?	No		
8.2	If there have been any archaeological finds, was the Contractor's Environmental Manager informed, and was work stopped in that area pending investigation?	N/A		
8.3	Has Tower No 55 at NBW sustained any damage?	No		Currently being renovated
9.	TRANSPORTATION			



Number	Item	Yes/ No	Corrective Action Required?	Comments
9.1	Is transport of construction materials being carried out in accordance with the Contractor's Method Statement?	Yes		
9.2	Have any complaints been received relating to construction traffic?	No		
10.	COMMUNITY LIAISON			
10.1	Have notices been issued to statutory bodies and the public covering the present phase of works?	Yes		
10.2	Is the log book of complaints received and action taken up to date?	Yes		
11.	EMERGENCY INCIDENTS			
11.1	Have there been any emergency incidents?	No		
11.2	If there were any emergency incidents, were the correct procedures followed?	N/A		
11.3	Are emergency planning and training procedures in place?	Yes		
12	ADDITIONAL COMMENTS/CONCERNS			



Pevensey Bay Sea Defences

Notes from Monthly Project Manager's Meeting

April 2010

Items	Comment	Action
H&S Moment & Issues	Still considering permanent small signs at regular beach access points to inform of beach maintenance activities.	
Inspection & Current Condition of Defences	Drive through of defences completed. No areas of particular concern were identified. Next survey to be 18 th May	
Work Done This Month	Final reprofiling & recycling completed.	
Programme For Next Month	Nothing planned	
Medium Term Planning	Nothing planned before annual recharge	
Enquiries from the Public	No response from any Cooden Drive residents to letter on recycling.	
	EBC forwarded email from resident at Sovereign Harbour for Agency reply. PCDL reported dealing with what was obviously the same enquirer at the Public Forum.	
	PCDL and Agency agreed to jointly participate in PevFEST with variety of flood related displays, all-day Saturday 24 th July	
Media Contact	Updating of PCDL website virtually complete.	
	Public Forum successfully held with full Agency participation on 7 th April	
	PCDL made two presentations at ICCCM conference in Estoril, Portugal. One to ICCCM, other in final meeting of ConScience.	
	PCDL also made presentation at CIWEM annual meeting in London (29 th April)	
	Both project managers met with new CCS monitor John Ogle-Skan on 22 nd April	
Contractual Issues	Delivery of ABMS information still outstanding. CCO reported Jon Clarke (CCC) intends to visit.	Agency



Items	Comment	Action
Emergency Response	Main equinox spring tides now passed. Maintain watching brief.	
Other Related EA Projects	<p><u>Pevensey Outfalls</u> No change</p> <p><u>L.A. frontages</u> No change</p>	
Any Other Business	<p>Both project managers and Ian Nunn met with Agency Southern Regional Director to discuss PPP contract and potential expansion to LA frontages. Subsequently visited Public Forum to see community liaison at work.</p> <p>Suggested contacting Paul Mustow (Head of Flood Forecasting Centre) with comments on dissemination of forecasting data to FIDO level.</p>	
Next Meetings	Friday 29 th June	

PEVENSEY COASTAL DEFENCE LIMITED

Monthly Report - April 2010



APPENDIX C

Quad Bike Survey Results 2nd April 2010

Calculations for 5m Crest Recession by Volume															Allowed Recession	Current KPF		Min Vol Req.
Above	0	Min	KPF	2009	2009	2009	2009	2009	2009	2009	2009	2010	2010	2010		2010	cu.m	
ABMS	KPF	KPF	May	Jun	July	August	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr				
569	30,000	11,236	10,012	10,004	9,636	22,075	18,796	17,352	11,642	8,556	8,936	8,100	8,310	11,344	10,112	108	1.0	
570		29,392	20,999	21,328	20,462	24,224	23,952	24,168	21,547	18,132	19,811	19,059	18,133	21,124	22,192	-8,268	-28.1	
571	34,000	35,373	34,862	34,711	34,342	34,688	34,665	33,999	33,554	35,625	36,203	35,322	34,661	32,768	31,602	-2,605	-7.4	
572		42,840	39,383	39,032	39,178	39,563	39,509	39,892	41,984	44,716	43,584	42,856	41,762	42,058	39,424	-781	-1.8	
573	34,000	36,774	32,412	32,540	31,881	32,082	31,835	31,193	30,263	31,688	32,001	32,557	32,320	32,715	33,271	-4,060	-11.0	
		155,615	137,668	137,615	135,500	152,633	148,756	146,604	138,990	138,717	140,534	137,894	135,186	140,009		-15,606		
574	34,527	36,812	34,330	34,422	34,082	34,057	34,195	33,588	33,739	32,909	33,281	33,480	33,581	34,437	33,958	-2,375	-6.5	
575	43,189	43,719	40,082	39,907	39,648	39,674	39,681	39,513	39,794	37,763	40,388	40,777	40,257	40,611	40,287	-3,108	-7.1	
576	22,980	27,266	26,804	26,515	26,215	26,529	26,745	26,230	27,435	28,206	28,396	28,014	28,252	27,111	24,217	-155	-0.6	
577	21,049	21,623	21,370	21,658	21,320	21,408	21,818	21,973	18,848	20,189	22,115	21,671	21,727	20,657	18,887	-966	-4.5	
578		37,435	35,984	35,707	35,582	35,827	35,753	35,832	36,174	34,178	34,640	35,872	36,242	36,075	34,516	-1,360	-3.6	
579	25,979	26,928	25,664	25,434	24,920	25,132	25,183	24,719	24,938	25,111	25,888	25,566	25,153	24,391	23,641	-2,537	-9.4	
580	29,238	32,687	32,147	31,959	31,568	32,125	32,152	31,808	32,061	31,162	32,279	32,735	32,875	32,542	29,245	-145	-0.4	
581		49,427	48,712	48,707	48,040	48,464	48,994	48,530	48,461	47,287	47,833	48,453	48,567	48,169	45,975	-1,259	-2.5	
582		38,200	39,007	38,657	38,442	38,961	38,849	38,676	38,384	38,209	38,773	38,821	38,938	38,853	35,129	652	1.7	
583		17,145	17,999	17,339	16,962	17,351	17,185	16,851	18,345	17,613	18,213	17,826	17,902	16,741	14,759	-404	-2.4	
584	35,900	41,205	41,436	41,545	41,401	41,781	41,860	41,643	38,006	35,250	36,933	38,649	38,856	38,790	37,106	-2,416	-5.9	
585		27,549	28,801	28,862	28,754	28,940	29,013	28,642	28,692	28,148	28,292	27,643	28,055	27,632	24,070	83	0.3	
		399,996	392,337	390,712	386,935	390,249	391,429	388,004	385,876	376,024	387,032	389,508	390,405	386,008				
586	32,379	34,546	36,279	35,854	35,694	36,173	36,198	36,197	36,799	37,274	38,103	37,624	38,090	37,813	30,682	3,267	9.5	
587	45,333	46,771	45,022	44,931	44,621	44,949	44,621	44,782	45,510	46,662	47,383	47,079	47,577	46,918	42,874	147	0.3	
588		64,914	63,254	62,479	62,090	62,802	62,343	62,102	62,267	62,947	63,849	63,118	63,556	62,894	60,781	-2,020	-3.1	
589	40,269	41,485	40,613	40,328	39,830	39,832	39,513	39,058	37,843	39,352	40,177	40,050	39,626	39,130	37,132	-2,355	-5.7	
590		35,402	34,690	34,752	34,583	34,695	35,475	35,404	35,251	32,528	32,860	33,460	34,049	34,112	31,620	-1,291	-3.6	
591	31,043	36,663	37,401	37,197	37,061	37,484	37,861	37,767	37,994	38,547	39,386	39,255	39,542	39,409	32,202	2,745	7.5	
592	26,661	37,101	36,997	36,952	36,433	36,420	37,523	37,102	37,321	38,687	39,666	39,525	39,975	39,675	33,087	2,574	6.9	
593	29,285	42,401	37,999	38,188	37,842	38,240	38,910	38,779	39,737	41,000	42,044	41,655	41,842	41,752	38,360	-650	-1.5	
594	45,157	48,646	46,388	46,008	45,319	45,886	46,238	45,957	45,932	45,503	46,447	46,081	46,195	45,607	44,680	-3,039	-6.2	
595	46,231	46,736	47,207	46,756	45,932	46,309	46,542	46,319	45,393	45,428	46,283	45,178	45,358	44,638	41,957	-2,098	-4.5	
596		38,170	36,439	35,527	34,750	34,753	34,982	34,716	32,752	29,866	32,782	32,028	32,788	32,406	34,073	-5,764	-15.1	
597		35,810	33,561	33,349	33,120	33,632	34,185	33,868	33,905	32,107	32,822	31,876	33,002	32,667	32,056	-3,144	-8.8	
		508,646	495,849	492,322	487,274	491,174	494,392	492,050	490,705	489,902	501,803	496,929	501,599	497,020				
598	37,979	44,849	52,490	52,054	51,196	51,316	51,297	51,053	50,137	50,887	50,790	51,588	50,216	49,902	40,632	5,053	11.3	
599	63,364	66,985	71,581	71,748	71,411	71,531	72,456	72,335	71,617	71,487	70,968	71,275	71,280	70,847	63,171	3,862	5.8	
600	73,655	76,520	78,226	77,893	77,465	77,418	78,100	77,870	76,729	76,076	75,795	75,588	76,008	75,507	73,008	-1,013	-1.3	
601		35,674	41,196	40,779	40,322	40,389	40,556	40,527	38,992	38,311	38,135	37,078	37,013	36,395	32,146	721	2.0	
602		42,491	47,060	47,113	47,033	47,249	47,745	47,842	46,294	44,986	44,909	44,334	44,357	44,410	39,289	1,918	4.5	
603		32,943	33,122	32,748	32,768	32,971	33,627	33,476	33,362	32,855	33,416	32,969	33,224	33,226	29,146	2,833	0.9	
604		41,774	38,648	37,590	37,831	37,791	38,593	39,034	39,199	39,022	40,152	39,587	40,715	40,326	37,949	-1,447	-3.5	
605		30,794	28,323	27,107	27,079	27,098	27,766	28,890	27,634	27,017	28,655	27,657	28,977	29,057	26,763	-1,738	-5.6	
606		35,158	34,213	33,291	33,248	33,160	34,345	34,477	35,026	36,048	37,739	37,460	37,534	37,591	31,125	2,433	6.9	
607		38,585	39,347	38,950	39,338	39,575	41,109	41,656	43,712	43,946	44,036	42,349	41,144	42,171	35,292	3,586	9.3	
		445,773	464,206	459,272	457,692	458,499	465,593	467,157	462,703	460,635	464,594	459,885	460,470	459,432				
608	37,594	39,897	36,676	35,736	34,899	34,686	34,559	36,479	34,811	36,730	38,808	38,703	38,072	36,966	36,843	-2,931	-7.3	
609		57,229	57,532	57,128	56,948	56,902	57,348	56,930	56,007	52,288	54,738	55,612	56,758	56,707	53,269	-522	-0.9	
610	48,989	53,839	51,710	50,652	50,614	50,812	52,269	52,040	53,613	54,636	53,374	53,144	54,095	54,525	49,227	686	1.3	
611		57,442	55,918	55,625	55,258	55,613	55,998	56,052	55,643	55,113	54,113	53,228	54,063	54,079	53,353	-3,363	-5.9	
612		37,765	35,334	34,968	33,889	33,799	32,860	36,584	34,331	33,473	34,491	34,198	35,202	33,573	34,148	-4,192	-11.1	
613		32,202	33,843	33,681	33,272	33,505	33,393	33,350	33,109	33,899	34,107	32,851	33,456	33,446	29,371	1,244	3.9	
614		50,105	49,506	49,604	49,377	49,574	50,080	49,707	49,271	47,750	47,646	47,939	47,850	47,390	46,648	-2,716	-5.4	
615	48,897	55,547	52,820	52,892	52,444	52,764	54,054	52,664	54,021	52,723	52,749	52,236	53,575	52,183	50,291	-3,365	-6.1	
616		36,118	36,231	35,860	35,441	35,496	36,386	34,532	34,869	34,846	35,755	35,458	36,354	35,636	31,848	-483	-1.3	
617	29,381	34,489	36,507	36,530	36,372	36,639	37,477	35,651	36,587	35,785	36,534	36,704	37,537	36,388	30,303	1,898	5.5	
618	20,388	20,684	24,145	24,166	23,654	23,850	24,968	24,685	24,724	24,698	25,728	25,211	25,435	24,222	17,188	3,538	17.1	
619	20,769	26,393	29,589	29,910	29,327	29,592	30,607	29,230	30,051	31,556	32,180	31,787	31,920	29,433	22,731	3,040	11.5	
620	30,849	32,870	35,254	35,673	35,256	35,785	36,836	34,074	36,432	36,665								