

HAVANT BOROUGH COUNCIL

Town & Country Planning Act 1990

Consultation on Planning Application

MEMORANDUM

From:	Environmental Health	To:	Development Control
Our Ref:	CONS/18/01782	Your Ref:	APP/13/00317
EH Case Officer Extn:	44 6677	Date:	19 September 2018
DC Case Officer:	Mrs Emma Chisnall		
DC Case Officer Extn:	6523		
Application Number:	APP/13/00317		
Site Address:	Yacht Haven Development Site, Copse Lane, Hayling Island		
Proposed Development:	Construction of 6No. 5 bed detached houses, 1No. detached boat store and ancillary office building , 1No. detached boat store for sailing charity use with hardstanding, pontoon restricted to 12 berths (6 for house residents and 6 for non residents), improvements to slipway, beach, reposition concrete sea defence to side of slipway, coastal footpath and the creation of one area of coastal meadow and one area of conservation grassland. (Revised application.) (Approved 24.11.15).		

Request to Discharge Condition No.s 8 Appendix 6.1; No.9 Appendix 4.1 & 4.1a; No.20 Appendix 8.1, 8.2 and 8.3 [& Dig-Geotech Reports (Ref 429 R01 Rev1 & 429 R02 Rev0) & EAS Contamination Risk Assessment Report dated August 2018); No.25 Appendix 4.1, 4.2, 4.12, 4.13 and 4.1a; No.28 Appendix 10.1 and 3.2; No.29 Appendix 3.2; No.31 Appendix 7.1 (18.5.17). Request to Discharge Condition Nos 26 and 27 (25.8.17). Request To Discharge Conditions 7, 16-19, 26 and 27 (21.11.17). Request to Discharge Conditions 10, 14, 15, 24,32 and 33 (23.08.18).

A request has been made to discharge the following condition(s) on the above application: Condition 24 [CMS] 23/08/2018 & c.20-22 [Contamination] 18/05/2017.

Observations / Comments:

I have reviewed the supporting documentation in respect of the application(s) to discharge c 20-22, and c24 of APP/13/00317. In considering the contamination submission, reference has been made to the preceding reports dating back to 2002.

c.24 - Construction Method Statement

I am mindful that the reason given for the imposition of c.24 is to "*...minimise any impacts on the intertidal habitat and on Chi. Harbour WFD water body...*". For this reason, comments here will be broadly limited to pollution that may affect environmental receptors. I will leave it to ecologically focussed consultees to comment on the impact of noise upon breeding birds (for example).

Pontoon construction methods are agreed to be likely to represent the lowest environmental impact (risk of mobilisation), and so to be good practice.

It is noted that 'control of mud', and 'material delivery / storage' sections focus upon nuisance and highway impact. Specific provision for-, or even consideration of- escape of materials to the harbour is not made in these sections. I would recommend that consideration be given to the control of runoff from the site (materials in liquid form, or dissolved / suspended in pluvial flows during inclement weather), in particular, interception of sediments and Light non-aqueous-phase-liquids (LNAPL's, e.g fuels, solvents, paints, sealants, and lubricants) up topographic gradient of mean high water. Similarly, sheeting of materials and stockpiles should be observed to prevent aeolian mobilisation of dry particulates. Cutting operations may also need to be controlled (damping procedures, with interception or other control of runoff) in order to prevent excessive escape of dusts that may be harmful to local coastal habitats.

Under the 'waste' section, it will be assumed that the phrase 'this spoil will be classified as non-hazardous' means that the soil heap *"will comprise only material which has been classed- or is likely to be classifiable as- non-hazardous (stable-non-reactive, or inert) waste"*.

Proposed methods for fuel storage, spill control and local dispensing are considered to be appropriate.

I would recommend that the applicant be asked to revise the document to include proposals aiming to directly address the reason for the condition, namely including provisions for the control of runoff, dust, and wind-blown materials to prevent their entering the harbour waters.

c.20 - Contamination

It is acknowledged that a considerable sampling effort has been expended at this site over the period 2002-2018.

Latest sample results

The results of the latest investigation broadly confirm the results of preceding work, identifying similarly elevated concentrations of Zinc, Lead, Copper, and Mercury, alongside other heavy metals, hydrocarbons and Poly-Aromatic Hydrocarbons. The latest report seeks to address previous concerns raised by Environmental Health on the omission of leachate sampling, and sampling for the most harmful trace substances associated with marine anti-fouling products that could plausibly have been associated with the prior industrial use of the site.

All sample locations were sampled for butyl- & phenyl- tin products, including those areas of the site thought to have been used for weathering testing of marine paints for marine use. All samples returned <LOD results except one foreshore sample located at the eastern boundary of the site. My concern with the omission of these compounds was that a significant site-wide impact could be overlooked - I agree that the single result at a foreshore location (and not associated with a process or testing area) is insufficiently associated with the site to justify significant concern. The result could be associated with erosion from a marine vessel rather than the landward facility.

The leach results are however not so easily dismissed. At 6.6 the report concludes that 'minimal contaminant leaching' was shown to be occurring, and that 'contaminants identified were not significantly mobile'. With reference to the Environment Agency operational Environmental Quality Standards, it is apparent that the results show that metals are leachable from soils in concentrations of upto an order of magnitude greater than the annual average EQS (Copper, Zinc), and in the case of Lead, at concentrations which exceed the maximum allowable concentration. Mercury concentrations in leachate also exceeds it's respective annual EQS.

Statistical tests to estimate the 'true' population mean at a 95th percentile confidence interval (the US95) indicate that the average leachate from site soils is likely to exceed EQS values, and this appears to confirm the soils results which demonstrate broadly site-wide elevated concentrations of Zinc, Copper and Lead in particular. It is considered that these likely originate from use of Flake White, and Zinc-Oxide pigment bases, where there may have been a preference for Zinc (over Lead) for its compatibility for both its coating galvanised surfaces and its anti-fouling properties (suggested by its concentrations and relative ubiquity). Similarly, Copper may be present as an additive used for its phytotoxic & anti-fouling properties. These contaminants can (therefore) be plausibly linked to the site history.

Referring back to the 2002 report, it is noted that similar results were obtained from the few groundwater samples collected - with those results confirming that concentrations approximately of 10x (1000%) the EQS are possible for both Copper & Zinc under natural (not laboratory) conditions. This does not appear to be the case for Lead or Mercury* (*- LOD being insufficiently sensitive to confirm this - however tests show that any undetected exceedance would be relatively marginal).

The recent report does not provide any empirical data on leachability of PAH, for which an EQS exists for a limited grouping comprising the sum of concentrations of (predominantly) the Benzo(a/b/k, & ghi)-Pyrene / -Fluoranthene / -Perylene compounds. It is therefore not possible to comment on the likely impact of the site in this regard, although it is noted that the US95 values are heavily skewed by concentrations at the FS1 location at the foreshore, suggesting that PAH mobility may be less of a problem than appears to be the case for metals.

Taking the foreshore sample grouping, and considering the UKSO estimates of normal 'background' concentrations of metals in soils - it is apparent that the foreshore sediments contain levels of Lead and Zinc approximately 300% that expected for this area, suggesting that mobilisation from the site (where concentrations in both soils and leachate are known to be elevated) is at least likely to be contributing to other sources, if not representing the predominant source of this departure from 'natural' levels. The likelihood of a contribution to copper concentrations is less clear, with foreshore sediments containing only around 120% the estimated background. Concentrations in soils are typically somewhat less than estimated in reality however (elevated copper has proven to be relatively rare in local soils at other local sites), suggesting that copper originating from the site may be entering the WFD water body bound to sediments and in dissolved form.

The hydrocarbon results are also interesting, with sporadic results across a number of locations. Broadly speaking, represented groups tend to be >C21 (relatively heavy), with a significant bias to aromatic compounds. Neither of these features are characteristic of common fuels. Trace amounts of light fractions are present, but the general absence suggests a heavily weathered deposit, with the most soluble, volatile, and bio-available compounds (already) stripped out. The significantly elevated result from FS1, immediately adjacent to the boat repair business appears to be of a materially different character, still likely to represent lubricating oils or a residual fuel - but comprising a more balanced aliphatic / aromatic split and greater representation of <C21 compounds, it is likely of younger age.

I would agree that it is appropriate to regard this result as being likely to be from a separate source. I will come back to this result when addressing the recommendations of the report in the sections below.

In summary, I would disagree with the conclusions of the report in some significant areas, namely;

- *'Heavy Metals and PAH Contamination [is] generally confined to made ground and concentrated in areas where burning of waste has occurred'*. The sample depths of results presented are not identified, and whilst some samples are suffixed with annotation which suggests that they represent made ground, these are the minority.

In the absence of any confirmation to the contrary, it must be assumed that results relate to natural soils (beneath made ground). Where a sample position has both an 'a' and a 'b' sample, it is assumed that these refer to the upper & lower units, generally comprising 'made' and 'natural' ground. The spatial association with areas known to have been used for waste disposal by burning is also not particularly apparent from the available data, though it is acknowledged that burning may have been fairly widespread at the site - a fact in & of itself which diminishes the significance of the association.

- *'Leachate testing revealed minimal contaminant leaching', and 'the risk of significant migration of metal contamination in to Chichester Harbour appears to be low'* - for the reasons given above, it is considered that the available evidence supports a conceptual site model where there is transport of either sediment-bound, or dissolved phase metals (or both) to the ecological receptor (the harbour waters). Materials transported are phytotoxic, and a species of material relevance to the ecological quality of the receiving environment is *Zostera* Seagrass - which may be materially affected.

I would agree with conclusions in other areas, in particular the assessment of the (low) significance of the ~5.5% CH₄ concentration from the 2002 report, which is considered to be likely due to natural processes and/or the presence of hydrocarbon contamination which is being naturally degraded. I would similarly agree the conclusions that the TpT result from FS2 is unlikely to be indicative of a significant deposit associated with the site, and that the >16 g/kg TPH result from FS1 should be considered separately to the wider site.

I also agree that the results from the area due to be developed for residential use do warrant mitigation, if only due to the elevated concentrations of Lead, which are around 250% generic screening benchmarks as an area average (i.e. at it's US95 value). Other determinands do not appear to be a significant concern for human health.

Report Conclusions & Remedial Recommendations

The definition of contamination states that contaminants can be those 'in, on, and under-' the ground, and in this sense, the works undertaken to remove deposited waste, and further similar works proposed under 3.3 point 1, can be considered to be 'remedial' measures.

I acknowledge that these measures do represent betterment of the site, but in terms of the proposed works to clear 'superficial waste' in the realm of 'site amenity' - commensurate with local planning policy requiring that developments create desirable places to live and work, and high quality public spaces (etc.). This is especially so where the waste represents a risk 'of injury', rather than 'to health' (i.e. physical contaminants). Similarly, 3.3 point 5 strays into landscaping provisions and ecological enhancement. It is considered inappropriate to treat these steps as remedial measures in the sense of 'contamination', and more appropriate to treat these steps as routine planning matters.

I would also place the proposal at 3.3 point 4 (ensuring no site contaminants are displaced to the neighbouring SSSI) as a matter more appropriately managed through the CMP. This issue is covered by my comments and recommendations in respect of c.24 above.

In this way, the remedial measures proposed in 3.3 as they relate specifically to contamination can be distilled to comprise essentially a strategy of clean cover at residential properties for the protection of future site occupants, and a watching brief for unexpected(-ly serious) contamination that may be identified as works progress (3.3 points 2, and 3). Broadly, both of these measures are agreed - the site is large and deposits are varied - despite the sampling effort already expended, localised deposits of more serious contamination that have not been identified to date are not unlikely to be present. This is a fairly routine provision, which is agreed to be appropriate to the site.

The clean cover proposed within the area of the residential development is comprehensive, and provides for a range of contaminants - it is potentially over-engineered for the principal contaminant of concern for human exposure, but would certainly be adequate and if implemented as proposed, would grant a substantial degree of confidence in the long-term mitigation of exposures provided that the imported topsoil overburden is appropriately validated. Colleagues in other authorities report increasing problems with imported soils - especially those purchased from commercial suppliers of manufactured soils, where significant inclusions of physical contaminants (glass, ceramics & metals) can occur, and where nutrient concentrations and % organic matter can be low. Worst case, imported soils can prove to be chemically higher risk than the contaminated soils removed - so I would urge, and will expect - great care to be taken to ensure that soils selected for use as part of the clean cover system to be suitable for use. This will need to be appropriately documented. I would expect documentation to include:

- Clear identification of areas benefitting from geotextile & capillary break (i.e. over retained made ground) on a site plan,
- Achieved placement depth to be proven 'as placed' (e.g. post placement trail pits on at least a per-plot basis),
- Soil inspection records to be provided (whether this plot post-placement, or inspection of imported loads)
- Soil specification from the manufacturer, or a soil quality report from the source site.
- Soil chemical quality - ideally as placed.

The remedial proposals have a 'human health & unexpected gross contamination' bias, and do not reflect the other significant risk driver for the site - namely the WFD water body and its respective ecological designations.

Whilst I would not suggest that soils require remediation to the point that leachable concentrations from soils meet environmental quality standards, that EQS are exceeded suggests that the site does represent a source, and the foreshore samples suggest that there exists an active pathway. That results have not significantly changed over the past 15 years or so (2002-2018 investigations) suggests that the site soils are capable of impacting the harbour in the medium to long-term (i.e. leach rate relative slow relative to mass of contaminant present). In this way I believe that the harbour waters / sediments / ecology justify a more thorough consideration in terms of risks, and possibly mitigation.

I would acknowledge that clean-up of intertidal, and permanently inundated sediments would be both difficult, and potentially more damaging to the environment than simply permitting the contaminants to remain. Similarly, given the scale of the site, and the widespread elevated concentrations of metals in particular is acknowledged to challenge the feasibility of a full scale remediation of site soils.

This notwithstanding, I would nevertheless recommend that the authors views are sought in respect to the assessment of risk that the site may pose of ongoing contamination of harbour waters / sediments. Such an assessment may comprise a conceptual/qualitative, or quantitative consideration of the source, pathway, and receptor, and need not involve the collection and analysis of additional samples. It may be helpful to seek a professional ecological opinion, or indeed engage the Environment Agency on the perceived degree of risk. If likely to be necessary, mitigation could seek to address mobility (stabilisation, interception, or barrier).

For clarity, an unnecessary remediation of the site is not being sought - rather Environmental Health is seeking an appropriately robust basis upon which a rational decision may be taken as to a way forward to ensure that harms to all receptors that may be affected can be made acceptably low for the lifetime of the development. This is in line with national planning policy and statutory guidance for Contaminated Land.

Report Recommendations for Further Work

At 6.8, the EAS report raises the question of how to appropriately address the contamination identified within inter-tidal mud adjacent to the boat repair business. And considers remediation impractical until such time as that activity ceases.

It is suggested at 7.2 that further investigation could be undertaken, and a remedial strategy implemented following cessation of that activity. There is no indication that this activity is due or likely to cease in the foreseeable future, and I would judge that development of the area (construction of the pontoon, and restoration of the slipway) is likely to help secure the long-term future of a boat repair business.

With reference to the PWP Architects Plan from 2011, I note that the boat repair area is 'excluded' from any proposed development, but is not noted with a blue line indicating that the land is within the control of the applicant. I have not checked the notices served in respect of this application to determine whether this is land under third party control, or not. It is assumed for the time being that this land is under third party control.

The recommendations are somewhat problematic, in the sense that the contamination hot-spot identified on the foreshore falls within the 'red-line' extent of this application, where landscaping works are proposed and contamination conditions apply; but the boat repair business represents a potential ongoing source of contamination (risk or 'recontamination' of land under the applicants control.

The proposal amounts to the applicant allowing continued contamination of their land to occur whilst that business is present, and to voluntarily investigate and remediate the land at their own expense at a later date, when the business ceases at some unspecified future point.

I would be more amenable to such an approach where receptors are human (i.e. where the commercial activity which is the source of contamination is of low sensitivity to contamination, and so it would only necessary to deal with contamination on change of use to something more contamination sensitive). Where the relevant receptor is environmental / ecological, it is less defensible to permit continued pollution / contamination.

At this stage, the provenance of the identified hot-spot is not known, nor is the extent of the contamination. The contamination has been identified on the applicants land, albeit that the source may be 'off-site'. This is not uncommon, and how to deal with this type of occurrence is dependent upon the severity of the contamination (whether the impact on the applicants land could in & of itself represent an unacceptable risk). The applicant can't be held responsible for the pollution / contamination on a third party site, however it may be reasonable to attach responsibility to the applicant for contamination which has already entered the application site, and in addition, for taking steps for ensuring that the application site is protected from further encroachment of contaminated material.

Obviously I am not privy to the land ownership / access arrangements between the development land and the boat repair business, nor the relationship between parties and the feasibility of good cooperative working relationship. It does strike me however as being unacceptable given the receptor in question to accept the proposal of 7.2 without first seeking to characterise the FS1 hydrocarbon result and how this result / source fits within the conceptual model.

From my perspective, the contamination has been identified on land where the planning conditions c.20-22 have effect. Whilst it is assumed that the boat repair activity is the source, this is not necessarily so, and it could represent a hotspot limited to the applicant's land (e.g. a casual disposal, as suggested in 5.7). It is reasonable to require that the contamination at this point be characterised and to consider if &/or how it should be dealt with under this application. This need not be a barrier to commencement - as noted above, this is a large site, and work in some areas of

the site could be permitted to proceed whilst work in other areas to address contamination issues is still required (provided that these activities are not antagonistic).

My recommendation would be to undertake a limited assessment around the FS1 location without waiting for the boat repair activity to cease. It would likely be fruitful to start with a detailed site walkover exercise, and to open discussions with the operator in order to characterise the boat repair activities under a 'source-pathway' type conceptual model, with a view to determining whether the business is likely to represent an ongoing source, and whether simple steps could be taken at source to prevent further contamination of both the applicants land and the harbour direct (to the benefit of the applicant, and the environment).

Further targeted sampling could be undertaken in the vicinity of the FS1 location which responds to the 'source-pathway' model for the boat repair activity, and which seeks to clarify the spatial extent of the impact. This could serve to determine whether any local remediation is necessary, or whether securing a cessation of further inputs is sufficient (e.g. if the impacted area is limited or biodegradation can be shown to be likely to occur, and/or remediation options to be more damaging than allowing extant contamination to remain in situ with further inputs prevented - etc.).

I would be quite amenable to agreed actions being undertaken on third party land (by informal agreement with the controller / owner of that land) either forming part of the scheme of risk mitigation-, or being taken account of in the assessment of risks- to which c.20-22 apply. The objective is to reduce the risks of environmental harm occurring, and I see no reason to be inflexible on how this is to be achieved, provided that environmental betterment is achieved.

Recommendations for discharge of c.20

The recent work serves to clarify the environmental risks posed by the site, and is considered to be very helpful in narrowing the scope of assessment required to ensure that the redevelopment of this site represents a betterment of the area for the benefit of the harbour ecology. There remains unanswered questions however which mean that it would be inappropriate to recommend discharge of c.20 (or related conditions) at this time.

I would accept in principle the commencement of development work whilst some further assessment is ongoing under c.20, provided that site management for construction does not hamper assessment. In order to reach a point where this could be agreed, it would probably be necessary to address the risk (or otherwise) posed by the metals concentrations across the site, and their contribution to ongoing pollution of the harbour waters. This element is considered to be a barrier to commencement, as we do not have sufficient information to hand to determine the need for- or scope of- any related remedial actions. I would consider that understanding this aspect is the critical factor in permitting the commencement of construction groundworks.

Addressing the foreshore contamination in the vicinity of FS1 & the boat repair activity is considered relevant to the development, and to c.20-22, but an aspect that can be treated as a separate phase of works concurrently with construction activity elsewhere on the site.

I would hesitate to offer speculative advice on the way forward in this area as I would not wish to anticipate ownership / occupation arrangements, or pre-judge the outcome of either any assessment or engagement with the operator. It suffices to say that there is a confluence of material planning matters, civil matters and regulatory provisions, and the way forward is certainly unclear at this stage, and in any event dependent upon a conceptual characterisation.

Mr. Jonathan Driver
Environmental Control Officer