



Woodsford Quarry

Two planning applications for Woodsford Quarry

Review of Alternatives

September 2016

v1.

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1 Introduction

1.1 Two planning applications (the planning submissions) have been submitted for Woodsford Quarry, Woodsford near Dorchester, which are titled as follows:

- Full Planning Application for the extension of the quarry to the north to provide additional silt lagoon capacity and for the erection of an aggregate bagging plant; and
- Section 73 Planning Application for the variation of conditions 4, 11, 15 and 21 of planning permission 1/E/2005/0742 for revised phasing and restoration to facilitate the extension of the quarry, including changes to internal layout and amending the permitted noise monitoring scheme.

1.2 Woodsford Castle is a Grade I Listed Building (Designated Heritage Asset) which lies approximately 380m to the north-east of the proposed silt lagoon area. A Heritage Impact Assessment dated May 2016 was provided as part of the planning submissions. The consultation response from Historic England dated 27th July 2016, following a review of this assessment, states that:

'Based on this definition of the term 'setting' it is clear that the proposed extension to the existing quarry site will cause some minor harm through changes to the landscape and the introduction of an industrial process with increased visual, noise and dust factors'.

1.3 Heritage England's position, in this letter, is detailed as follows:

'The proposed extension to the Woodsford Farm Quarry will have some detrimental impact on the setting of Woodsford Castle (Grade I). The information within the 'Heritage Impact Assessment' suggests that due to existing screening around the site the visual impact of this change will be limited, however there will no doubt be some harm to the character of the landscape through other sensory experiences, such as noise and dust levels'; and

'As required by paragraph 134 of the NPPF, this harm must be appropriately weighed against the public benefits of the scheme. It will also be necessary for the West Dorset District Council to ensure that the justification for the extension in this location has been appropriately considered. At present no alternative locations for the scheme have been submitted or reviewed. Where such alternative locations may exist to provide an equal level of public benefit the justification for harm to the setting of the Grade I heritage asset will be reduced'.

1.4 This document provides an assessment of alternatives and their likely impact on Woodsford Castle.

2 Woodsford Quarry & Development Proposals.

Woodsford Quarry

- 2.1 Woodsford Quarry was included in the Minerals and Waste Local Plan as a preferred area for the extraction of sand and gravel as it would provide a significant addition to Dorset's sand and gravel reserves.
- 2.2 Planning permission was granted in 2007 to extract 4.2 million tonnes of sand and gravel, over a 20 year period, in recognition that the quarry could be worked without detriment to the ecology of the area and without having a significant adverse impact on the amenities of the area.
- 2.3 Subject to a tender process, Hills Quarry Products Limited (the current Applicant) were awarded, by the landowner, the right to work the quarry.
- 2.4 Operations commenced in the quarry in 2009 which has included the operation of a concrete plant. Since its commencement, the quarry made an important contribution to Dorset's economy as follows;
- The quarry employs over 20 full time members of staff who are local to Dorset;
 - Over £100,000 per annum goes directly into the local economy through the procurement of fitters and contractors;
 - The quarry provides approximately £300,000 of rates per annum; and
 - The quarry provides a local source of construction materials needed to support the permitted and planned development projects in this area.
- 2.5 The inclusion of Woodsford Quarry as a preferred area in the Minerals and Waste Local Plan and its ongoing contribution to Dorset's Land Bank, demonstrates the strategic economic and environmental importance of this quarry for the supply of sand and gravel in Dorset. For example, in 2014 Woodsford Quarry provided around 10% of total output of sand and gravel in Dorset. It is expected that this output will significantly increase as the nearby quarries at Warmwell Quarry and Trigon are due to close. Once closed, Woodsford Quarry will be the principal supplier of sand and gravel in central Dorset area.
- 2.6 Without Woodsford Quarry, the remaining quarries in Dorset would have to increase their productive capacities to meet this shortfall. It is not a given that these quarries have the extra productive capacity, both physically and in planning terms, to meet this shortfall. Nevertheless,

should inputs at the remaining quarries increase, the concentration of HGVS, noise and dust from these quarries would increase thus potentially impacting communities local to these quarries.

- 2.7 In the absence of Woodsford Quarry or the ability for other quarries in Dorset to increase their productive capacity, sand and gravel would have to be transported from outside of the County. This would increase the costs of mineral products in Dorset and increase distances travelled by HGVs importing mineral into this County. Such a proposal would be economically and environmentally unsustainable.

The Development Proposals

- 2.8 The extracted sand and gravel at Woodsford requires washing to remove any impurities. This produces silt which is removed by utilising on-site silt lagoons, prior to the discharge of the wash water. The impurity content of the mineral is, however, much greater than anticipated when planning permission was first sought. As a result, the silt lagoons are insufficient in size to process the remaining mineral from the quarry. To address this issue, Planning Application Ref: PL\1834\13 (WD/D/15/001057) seeks the extension of the quarry to the north to provide the required additional silt lagoon capacity. This planning application also seeks the erection of an aggregate bagging plant.
- 2.9 The extent of the potential rejects found in the sand and gravel was also underestimated when planning was first sought for the quarry. These rejects can amount to a 10-40% loss of mineral. To reduce this loss, the Applicant has developed methods of processing and marketing products from the rejects. To do so, larger areas of storage are required than those consented by planning. As a result, a Section 73 Planning Application has been submitted which seeks to extend the processing area to provide more storage. This application also includes changes to a noise limit, the restoration scheme, quarry phasing and internal site layout changes.

3 Impact on Woodsford Castle & Scope of Alternatives to be Considered.

Impact on Woodsford Castle

- 3.1 As stated in the letter from Historic England dated 27th July 2016, the likely impacts on Woodsford Castle will be through changes to the landscape and the introduction of an industrial process with increased visual, noise and dust factors.
- 3.2 Consent has already been granted for mineral extraction and its associated activities at a distance of 260m (approx.) from Woodsford Castle. In contrast, the proposed silt lagoon extension area is approximately 380m from Woodsford Castle. Nevertheless, the cumulative impacts of both the existing quarry, silt lagoon extension, bagging plant and the changes proposed in the Section 73 Planning Application have been considered in the current planning submissions.
- 3.3 In terms of noise, adherence to a noise monitoring scheme is required by Condition 11 of the substantive planning consent for the quarry. This requires periodic noise monitoring at defined locations and provides the maximum noise levels at each location. The nearest monitoring location to Woodsford Castle is monitoring point 4a - West Woodsford, adjacent to Castle Dairy. This location lies approximately 150m to the east of Woodsford Castle in closer proximity to the silt lagoon extension area. At this monitoring point, a noise limit of 46dB_{L_{Aeq}}, 1 hour, free field is enforced. The noise assessments which accompany the planning application for the new silt lagoons have demonstrated the existing quarry operations and the proposed new activities will have a cumulative noise level of 46dB_{L_{Aeq}}, 1 hour, free field. It is therefore clear that the development proposals will not increase noise above the limits currently permitted at Woodsford Castle by planning.
- 3.4 In terms of dust, it is widely recognised that sand and gravel extraction operations have a low potential to cause dust. This is due to a combination of the extraction methods adopted and the fact that the mineral is inherently damp when extracted and processed. Dust generation in sand and gravel quarries can occur from the movement of vehicles/plant and stockpiles, although this is not deposited at distances greater than 100m from the source. As the existing quarry and proposed silt lagoons are over 100m from Woodsford Castle, dust will not impact on this Designated Heritage Asset.

3.5 In the absence of noise and dust, the setting of Woodsford Castle can only be affected by visual and landscape impacts. A Landscape and Visual Impact Appraisal was submitted as part of the planning submissions. The views from Woodsford Castle are considered on page 5 of the appraisal as:

“Viewpoint 9, close to Woodsford Castle and a PRow, shows that further to the east views of the proposed quarry extension area are very restricted by intervening elements and distance”.

3.6 On page 19 of the appraisal, the landscape and visual impacts of the development proposals are summarised as follows:

‘It is considered that the Proposed Development could be accommodated in the landscape without causing unacceptable adverse effects on landscape features, character or visual amenity during the operational and progressive restoration stage. The operational stages of the Proposed Development would be temporary and the restoration proposals would be in accordance with the character of the surrounding landscape...’

3.7 In reviewing the development proposals, the Dorset County Council Landscape Officer has recorded a slight to moderate impact on the setting and context of the castle, in an undated consultation response. This response concludes that:

‘Based on my outline assessment I feel that it would be difficult to agree that the proposed works would have a significant adverse and long term impact on the site’s landscape setting and on its visual amenity. This is based on the fact the development would be temporary and it is some distance away from the immediate setting of the castle and its grounds’.

Scope of Alternatives to be Considered.

3.8 The impacts of the bagging plant have been investigated. This plant will not be seen from Woodsford Castle nor will it create noise or dust impacts at this Designated Heritage Asset. An assessment of the alternatives to the bagging plant is therefore not required.

3.9 The proposals to change a noise limit, the restoration scheme, quarry phasing and internal site layout changes have also been investigated and were found to not result in an increase in landscape, visual, noise or dust impacts above those currently permitted. It therefore follows that these proposals will not result in an increase in additional impact at Woodsford Castle. The consideration of the alternatives to the changes proposed in the Section 73 Planning Application is therefore not required.

3.10 In recognition of the landscape and visual impact the proposed silt lagoons (including bunds) will have on the setting of Woodsford Castle, an assessment of the alternatives for this aspect of the development proposals follows.

4 Alternatives

Do Nothing

- 4.1 A 'do nothing' option has been considered. Here the permitted silt lagoons would reach their capacity prior to the extraction of all the permitted mineral. Without silt lagoon capacity, the remaining mineral would have to be taken off-site for processing, using HGVs. This would significantly increase the number of HGVs required to transport mineral from the site which would have a negative impact on the local road network.
- 4.2 This alternative option would significantly increase operational costs in terms of transportation and processing at an off-site location. The right to work the quarry was won by tender with payments to the landowner based on use of lagoons for silt management. As a result, the significant increase in operational costs associated with this alternative would make the quarry commercially unviable.
- 4.3 This alternative would also require the development of Silt Lagoon Area 2, which is insufficient to accommodate the silt from the remaining reserves at the quarry, as consented by the substantive planning consent at the quarry. The current Section 73 Planning Application seeks to incorporate this area into the processing area. Without the use of this area the following scenarios would occur:
- A new storage area would need to be found;
 - The stockpile heights would need to be increased. This would be in breach of planning and would result in significant landscape and visual impact. Such impacts are not uncommon as stockpile heights have, at times, exceeded the height consented by planning. The changes to the processing areas proposed in the current Section 73 Planning Application seek to avoid these impacts. Increased stockpile heights also have the potential to be seen from Woodsford Castle which would impact on this Designated Heritage Asset's setting; or
 - The volume of rejects would be increased, as there would be insufficient storage space. This would result in a greater volume of rejects being used to restore the quarry, thus sterilising mineral. Such an approach would be an unsustainable use of a valuable primary won natural resources.

- 4.4 For the reasons highlighted above, the Applicant does not consider the 'do nothing' option to be a viable alternative to the development of extra silt lagoons.

Alternative Methods of Silt Management

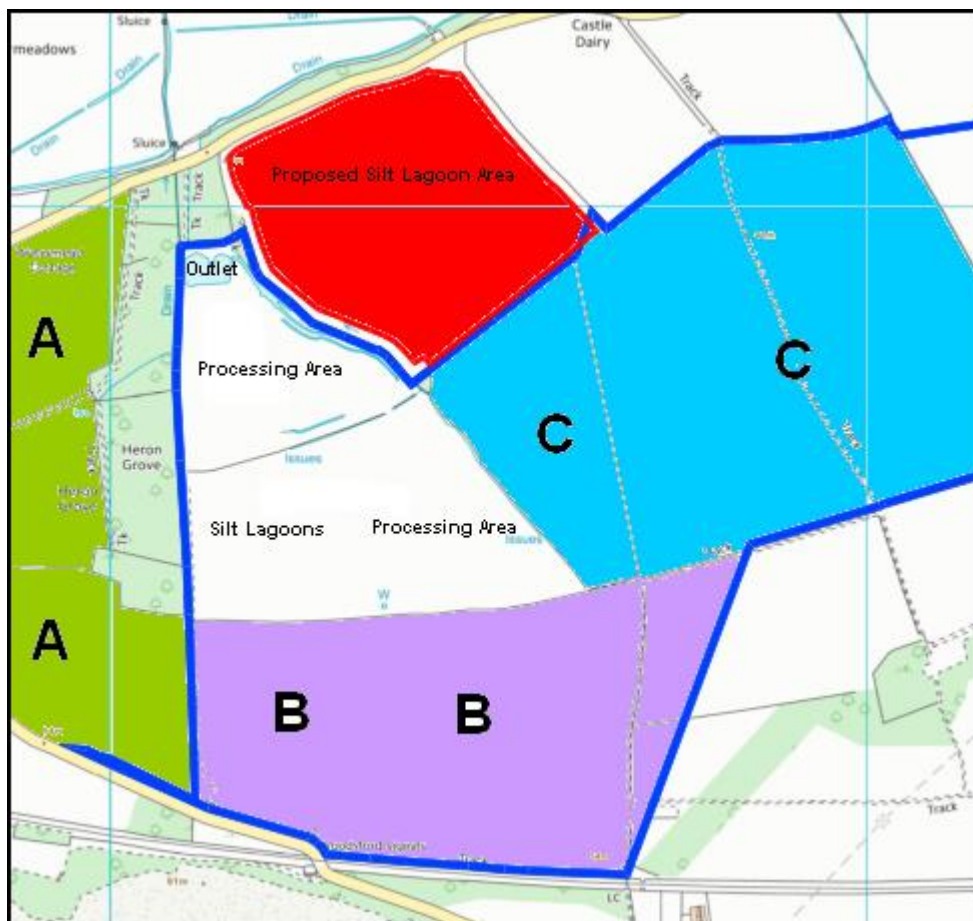
- 4.5 A silt press could feasibly be used as an alternative to developing further silt lagoons. Silt presses of the scale required at Woodsford would be very expensive to purchase and are known for being mechanically unreliable, requiring regular maintenance works. The resulting down time required for maintenance would also significantly reduce the quarry operation's productive capacity, thereby further increasing operating costs and impacting on the ability to meet orders.
- 4.6 The right to work the quarry was won by tender, with payments to the landowner based on the use of lagoons for silt management. As a result, a significant increase in operational costs would make the quarry commercially unviable.
- 4.7 During the silt pressing process, a waste cake is produced by the addition of hydrocarbon based flocculants and hydraulic / vacuum pressure. This material is principally composed of clay and silt which would have to be taken off site for disposal or used on site as a restoration material. This material is, however, an unstable restoration material as it cannot be mixed with other materials due to its thick clayey composition. It also reverts back into a sludge when it comes into contact with water. The inclusion of such impervious materials in the restoration landform could also affect the percolation of surface water or the movement of ground water. As a result, its use has the potential to have a significant negative impact on the ability to restore the site back to its required restoration after uses.
- 4.8 To achieve the restoration treatments required by planning at this site, which are supported by the landowner, the cake would have to be taken off site for disposal. This would further increase operational costs in terms of transportation and disposal at an appropriate waste management site. The transportation off site would be by HGV which would impact the local highways.
- 4.9 The silt press system to handle 200m³/hr would be required. This would include a thickener tank, mixing equipment and press and would occupy the same footprint as the concrete batching plant. The current processing area is, however, insufficient in size to even maintain the quarry's current operations.
- 4.10 The use of the silt press in the processing area would be screened from Woodsford Castle thus not visually affecting its setting. Nevertheless, the use of the silt press would introduce a new noise source into the quarry which has the potential to increase noise at sensitive receptors,

such as Woodsford Castle. An increase in noise could, therefore, negatively affect the setting of Woodsford Castle.

- 4.11 In light of costs, size and the potential off site impacts associated with the operation a silt press at Woodsford, the Applicant does not consider this to be an alternative option to the development of extra silt lagoons.

Develop Silt Lagoons in Alternative Locations

- 4.12 In order to avoid additional costs associated with pumping, further silt lagoons, must be located appropriately to allow for the movement of water by gravity from the lagoons to the point of discharge. Consequently, other than in the proposed silt lagoon area, shown in the diagram below, extra silt lagoons can only be located to the west (Area A), south (Area B) and east (Area C) of the existing lagoons. Consideration of the development of each of these areas follows.



Area A

- 4.13 Due to the distance between Area A and Woodsford Castle and the screening provided by Heron's Grove copse, the development of this site is unlikely to be seen. Therefore any impact to this Designated Heritage Asset, from the development of Area A, would only result in minor harm. Nevertheless, Area A is not owned by the Landowner or the Applicant, nor does it have planning permission for mineral development. This area is also located remotely from Woodsford Quarry, behind Herons Grove copse.
- 4.14 The remoteness of this location, which is away from the existing workings, presents a potential health and safety concern as it would be difficult to visually monitor trespassing. There is a risk that trespassers may fall into a silt lagoon, which could be potentially fatal. In contrast, the proposed silt lagoons are in much closer proximity to the processing area and other active parts of the quarry, thus making trespass easier to monitor.
- 4.15 In light of the landownership restrictions and health and safety concerns, Area A cannot be developed for silt lagoons and therefore does not offer a viable alternative to the proposed silt lagoons. Furthermore, Area A is also in a visually open location, in close proximity to two roads. The development of this site would result in significant landscape and visual impacts which may preclude the grant of planning permission.

Area B

- 4.16 Due to the distance between Area B and Woodsford Quarry and the screening provided by the existing quarry features, it is unlikely that Area B will be seen from this Designated Heritage Asset. Therefore any impact to this Designated Heritage Asset, from the development of Area B, would only result in minor harm do to a potential increase in the visibility of quarry features.
- 4.17 Area B has planning permission for mineral extraction as part of Woodsford Quarry, but not for the development of silt lagoons. In considering the use of this area the landowner's mineral agent, Douglas Symes, who submitted the original planning application, has provided the following statement:

'I am responding to our conversation regarding whether the further silt pond / water management that is needed could be located in the south west of the site in the phases referred to as AA, BB and CC. I raised this with Woodsford Farms who reminded me that the original design which was discussed in some depth with MAFF (now DEFRA) was to ensure that an agreed proportion of the site was restored to high quality agricultural land in order to mitigate against

any potential loss. A key element of achieving high quality restoration is ensuring good surface water drainage and the design included a large block of gently sloping land that drained north towards the swale as part of a detailed design to address both surface and groundwater’.

‘Whilst I anticipate that this view might come as a disappointment there is also the legal difficulties of allowing you access to the south west area due to the contractual terms’. and

‘Please rest assured that Woodsford Farms will always do their best to work with you to achieve a successful operation to the site but for the above reasons they are not prepared to see the south west area taken out of agricultural use’.

4.18 The development of silt lagoons in Area B also raises significant health and safety concerns in terms of trespass by the general public. For example, public footpaths run along the length of the eastern and southern boundaries of Area B and this area is also remote from the existing processing area. Furthermore, Area B is also close to the main road to the south and the quarry access and haul road. The general public are often found parking in the road access or on the side of the haul road.

4.19 In contrast, only 50m of public footpath cross one corner of the proposed silt lagoon area, whilst Area B is in closer proximity to the processing area and other active parts of the quarry.

4.20 In light of the landownership restrictions and health and safety concerns, Area B cannot be developed for silt lagoons and therefore does not offer a viable alternative to the proposed silt lagoons.

Area C

4.21 Area C is to the east of the existing lagoons, within Phases A & B of the quarry, which have now been quarried and / or are subject to restoration. Due to the screening provided by the existing quarry, it is unlikely that Area C will be seen from Woodsford Castle. As a result, the development of Area C would not have an impact on the setting of this Designated Heritage Asset.

4.22 Central to Area C, however, is the field conveyor and haul road. The field conveyor transports the mineral from the working phases to the processing plant. The haul road provides access to the quarry for plant and machinery. Both the conveyor and haul road cannot feasibly be relocated.

4.23 For their safe operation, the conveyor and haul road must be located on solid ground above the water table. As such, they are currently situated on the clay which underlies the extracted

- mineral deposit. Furthermore, for compliance with planning to reduce visual and noise impacts, the conveyor must be located on the base of the mineral workings.
- 4.24 If the extra silt lagoons were to be relocated to the east, in Phases A and B, an engineered platform would need to be constructed of clay type materials to accommodate the field conveyor and haul road. Clay could either be extracted from, or imported to, the site.
- 4.25 The extraction of a quantity of clay from the quarry would have a negative impact on the restoration of the site, since parts of the extraction area would need to be deepened. This would reduce the amount of land that could be restored back to high quality agriculture, leaving a pond of such a depth that it would be of little ecological value.
- 4.26 Waste clays could be imported to the quarry although the existing Planning Permission excludes the importation and use of waste materials. There are also a number of active waste sites in the area (Redbridge Road and Warmwell Quarries, for example) which use materials such as clay. A sufficient quantity of clay could therefore be difficult to source from the local area. Nevertheless, the importation of clay would increase vehicle movements at the quarry which in turn could have a negative impact on the local road network.
- 4.27 To safely use the field conveyor and haul road, bunds would need to be erected either side of the platform, with 1 in 3 side slope angles provided. Such a platform would have a significant footprint resulting in the extra silt lagoons extending into Phases A, B, C & D. The resulting development would therefore have a much larger footprint than just extending the silt lagoons into the proposed silt lagoon area.
- 4.28 The loss of Area A, B, C and D to silt lagoons would result in a much larger area of high quality agricultural land being either unrestored or significantly delayed in its restoration. This would have a negative impact on the agricultural enterprises which farm this land. At present, the quarry development has been specifically designed to minimize the areas taken out of agricultural production at any one time. This was principal reason for the landowner and agricultural tenant agreeing to the consented mineral development.
- 4.29 In light of the operational restrictions and the restoration impacts, the Applicant does not consider that the development of Area C offers a viable alternative to the proposed location of the silt lagoons.

5 Conclusions

- 5.1 At the request of Historic England this document provides a review of the alternative options for the proposed development of the silt lagoons, since the development proposals have a recognised, albeit minor, impact on the setting of the Grade I Listed Woodsford Castle.
- 5.2 It is evident from this assessment that, whilst the alternatives considered may not result in a greater impact on the significance of Woodsford Castle, they are not viable in terms of operational, economic, health and safety and environmental impacts and landownership constraints. For these reasons, planning permission for the development of the proposed silt lagoons is being sought.
- 5.3 When considering the planning submissions, the Mineral Planning Authority must be mindful of Paragraph 134 of the National Planning Policy Framework where the harm to a Heritage Asset must be appropriately weighed against the public benefits of the scheme.
- 5.4 As per section 2 of this assessment, the economic benefits of the continuation of quarrying at Woodsford Quarry and its strategic importance to the supply of mineral in Dorset have been highlighted. In light of the lack of viable alternatives for the silt lagoons and the benefits to Dorset from the continued development of this quarry, it is clear that it is in the public interest to grant planning permission for the extension of the silt lagoons and Section 73 Planning Application.