

# The Hurlstone Partnership

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PROPOSED EXTENSION TO SWANWORTH QUARRY, EASTINGTON ROAD,  
WORTH MATRAVERS, SWANAGE, DORSET, BH19 3LE

Transport Statement

January 2018

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## PROPOSED EXTENSION TO SWANWORTH QUARRY, EASTINGTON ROAD, WORTH MATRAVERS, SWANAGE, DORSET, BH19 3LE

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Transportation Planning, Highway Design and Environmental Assessment

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## 1 INTRODUCTION

- 1.1 Swanworth Quarry is located approximately 0.5km to the northwest of Worth Matravers and 1.7km southeast of Kingston within the Purbeck District of Dorset. The site has a long history of mineral extraction and was historically operated by Tarmac which supplied crushed limestone rock aggregates to the main conurbations of Poole and Bournemouth in quantities of up to around 1,000,000 tonnes per annum at peak production levels.
- 1.2 Extraction at Swanworth Quarry, which is now operated by Suttle Stone Quarries, is controlled under planning permission reference 6/2013/0187, which was granted on 24 June 2013 by Dorset County Council (DCC). A separate planning permission was granted on the same date under reference 6/2013/0186, which covers the importing and recycling activities at the site.
- 1.3 Swanworth Quarry continues to supply the neighbouring areas with crushed rock aggregates, albeit at significantly lower rates than historically occurred, together with secondary recycled aggregates arising from the importing/recycling of inert materials for restoration purposes.
- 1.4 Current output levels of new, crushed aggregates are typically between 110,000 – 125,000 tonnes per annum, which equates to just 11 – 12.5% of the historic peak production. The site is being progressively restored with inert fill, which is imported to the site predominantly on a back-haul basis, whereby having tipped inert material, the HGV would be loaded with rock or recycled aggregate for the outbound journey from the site (or vice-versa), thereby reducing travel distances and HGV movements on the network.
- 1.5 The current Waste Permit allows up to 75,000 tonnes of inert material to be tipped within the quarry void whilst the planning permission for the recycling activities allows up to 30,000 tonnes to be recycled per annum, effectively capping inert imports at 105,000 tonnes annually.
- 1.6 The aggregates produced at Swanworth Quarry are an important resource for the Purbeck/Poole/Bournemouth area. In the event supplies cease from Swanworth Quarry, it would be necessary to import materials to those areas from much further afield within Dorset from the Portland area, or from neighbouring Counties, resulting in additional journey lengths. This would be contrary to the fundamental principle of sustainable transport which seeks to reduce the need to travel and associated travel distances.
- 1.7 In order to avoid unnecessary additional travel, which increases fuel consumption and vehicle emissions, Suttle Stone Quarries is promoting a proposed extension to the northwest of the existing Swanworth Quarry through the Bournemouth, Dorset and Poole Draft Mineral Sites Plan. Within the Mineral Plan process, the proposed extension is known as Site PK16 Swanworth Quarry.

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- 1.8 The proposed extension is believed to contain approximately 1.7 million tonnes of stone, which would allow the continued supply to the existing established markets for around 14 to 15 years based upon market demand and the existing range of annual production, with restoration continuing for a further period of up to 10 years beyond the completion of extraction.
- 1.9 The existing site access would be retained, as would the method of working and distribution of processed stone in HGVs by road. The established haul route would continue to be used with the majority of material travelling along the B3069 West Street to Kingston then continuing north along the B3069 Kingston Hill to the A351 Valley Road / East Street junction, to the south of Corfe Castle. The majority of vehicles then continue through Corfe Castle along the A351, bypassing Wareham en-route to the A35 Bakers Arms Roundabout, although some traffic does head to/from the west of Wareham on the A352. Approximately 5 – 7% of vehicles currently travel via an alternative route to/from the east along the B3069 West Street towards Swanage in order to supply the more local demand in that area.
- 1.10 The Hurlstone Partnership Limited was instructed to consider the implications of the proposed extension in terms of highway impact, relative to the existing situation. The remainder of this report details the findings of the initial review undertaken.

## 2 EXISTING SITUATION

- 2.1 The permitted and ongoing activities at Swanworth Quarry are controlled by a number of conditions imposed upon the extant planning permissions. In terms of the extraction operations, these include condition 1 requiring the development to accord with the approved details of the planning application and condition 2 which requires all extraction to be completed by 26 June 2024 with restoration complete by 26 June 2025 unless otherwise agreed in writing by the Mineral Planning Authority. However, at present, the residual reserves are predicted to be exhausted in around 3 years assuming the current production rates are maintained, resulting in extraction ending in 2020.
- 2.2 Planning condition 6 restricts the stone extraction, processing and transport to between 06:30 – 18:00 hours Monday to Friday and 06:30 – 16:00 hours on Saturday, with no working on Sundays or Public Holidays.
- 2.3 Planning condition 7 states: *“Unless otherwise agreed in writing by the Mineral Planning Authority, vehicular movements:*
- (i) *shall not exceed 75 HGV movements per day on 90% of the working days within any 13 week period (and 96 movements in any one day); and*
  - (ii) *shall not exceed 13,200 HGV movements during any period of 12 calendar months.”*
- 2.4 Condition 13 requires best practicable means to be taken at all times to ensure that all vehicles leaving the site are in a condition such as not to emit dust or deposit mud, slurry or other debris on the highway; and condition 14 requires vehicles leaving the site laden

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with excavated material to be sheeted and/or covered to ensure no material is spilled on the public highway, unless the material being carried has an average dimension in excess of 500mm.

2.5 In terms of the inert fill material being imported to the site for restoration purposes, the current Waste Permit allows importation of 75,000 tonnes per annum for infilling and the site is permitted to recycle 30,000 tonnes of inert material for supply as secondary aggregate. As previously advised, the majority of the inert material is transported on a back-haul basis in order to reduce costs associated with running HGVs unladen and limit the number of HGVs travelling along the road network.

2.6 The recycling permission contains similar planning conditions to those imposed upon the extraction operation, noting that the HGV limit applies to the cumulative extraction/infill/recycling activities.

## Traffic Flows

2.7 Based upon the existing planning conditions, an average of 75 HGV movements on 90% of working days over a 13 week period with a peak of 96 HGV movements per day and 13,200 HGV movements per annum are permitted.

2.8 To place these HGV trips in context, traffic survey information has been obtained from the Department for Transport database on the A351 and A35. The traffic flows provided within the DfT database are Annual Average Daily Traffic (AADT) i.e. the total flow in a 24 hour period averaged over 365 days per year and give an indication of what is and has historically been accommodated on the highway

2.9 There is a Count Point on the A351 at the junction with the B3069, to the south of Corfe Castle. Traffic data for the site at Corfe Castle (Site 56995) provides data (counted and estimated) on the A351 corridor. Since 2000, based upon counted surveys only, the AADT HGV flow has reduced from 365 per day (in 2000) to 215 (in 2012) within overall traffic flows of 7,796 and 8,156 respectively.

2.10 The highest total vehicle flow was recorded in 2008 (10,061 including 318 HGVs). The most recent estimate for 2016 was 8,536 vehicles including 231 HGVs.

2.11 There is also another count site on the A351 (Site 26991), just south of the A35 trunk road junction and north of Woodlands Drive. This reveals an estimated 2016 flow of 17,033 vehicles per day including 536 HGVs. The most recent count in 2013 recorded 16,516 vehicles including 489 HGVs. The highest counted flow at this location was 21,187 vehicles including 716 HGVs in 2000, whereas the highest counted HGV flow was in 2005, with 822 HGVs being recorded within a total flow of 20,343 vehicles.

2.12 In terms of traffic on the A35 itself, a count site immediately to the east of the A351 roundabout provides a count from 2015 (35,179 including 1,292 HGVs), with a highest counted value of 36,720 including 1,376 HGVs in 2011. The highest counted HGV flow

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was in 2007 (1,609 within a total of 34,624). The 2016 estimated flow was 35,769 including 1,317 HGVs.

- 2.13 It is therefore apparent that current traffic flows, which include the HGV trips associated with the ongoing activities at Swanworth Quarry, are significantly below the levels that have historically been accommodated on the local road network both in terms of overall volumes and HGV activity over the last 17 years.
- 2.14 As the activities at Swanworth Quarry take place over 300 days per annum, for direct comparison with the daily AADT flows referenced above, it is necessary to factor the HGV movements per working day associated with the site by  $300/365 = 0.822$ . Based on 13,200 HGV movements per annum over 365 days, the HGV traffic associated with Swanworth Quarry equates to an AADT flow of 36 movements per day.
- 2.15 The lowest HGV flow identified at the DfT Count Points was 215 AADT to the south of Corfe Castle in 2012. Based upon this lowest AADT flow, the equivalent HGVs associated with Swanworth Quarry represents approximately 16.75% of the overall HGV volume, which confirms that at least 83.25% of the HGV activity on the network is associated with other activities.
- 2.16 Given the Swanworth Quarry traffic remains generally consistent along the route corridor assessed, as the baseline HGV flows increase, the proportion attributable to the site reduces accordingly.

## Highway Safety

- 2.17 In order to review the safety performance of the local highway network, Personal Injury Accident (PIA) data was obtained from DCC for the most recent 5 year period available (01/08/2012 – 31/07/2017) extending from the access to Swanworth Quarry along Eastington Road to the B3069 West Street then along the B3069 and A351 up to the A35 Bakers Arms Roundabout. The data was interrogated to identify any involvement of goods vehicles of 7.5 tonnes maximum gross weight and over, as these are the larger HGV typically used to service quarry sites.
- 2.18 It was found that over the 5 year period considered, there had been a single PIA involving a HGV over 7.5 tonnes, which occurred in September 2015 when the load shifted in a cement mixer, causing it to overturn at the Nordon Roundabout, which is on the A351 to the northwest of Corfe Castle, resulting in slight injury to the driver.
- 2.19 In the event there is a particular feature of the road network that results in compromised safety for its users, it is normal to find a number of accidents at that location which share similar characteristics. In this case, notwithstanding the apparent use of the road network by HGV traffic over 7.5 tonnes, there has been only a single PIA recorded over the most recent 5 year period. This suggests that HGVs associated with the site and other similar vehicles are able to safely negotiate the local highway network and other road users.

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## 3 PROPOSED DEVELOPMENT

- 3.1 The proposed development would release an additional 1.7 million tonnes of crushed rock aggregate from an extension area to the northwest of the existing quarry area. The rock would continue to be extracted and processed at a rate of between 110,000 – 125,000 tonnes per annum in accordance with the existing/historic activities, resulting in an additional working life of 14 – 15 years beyond the exhaustion of the currently permitted reserves. Restoration of the resulting void would continue for a further period of up to 10 years beyond the completion of extraction.
- 3.2 The proposed extension would be worked after the existing reserves and would therefore not result in any increase in traffic movements on a daily, weekly or annual basis when compared with the existing planning permission.
- 3.3 The site would continue to operate in accordance with the controls imposed by the existing planning permissions in terms of restrictions on vehicle numbers, sheeting, vehicle management etc. The development would also be served by the existing, established access to Swanworth Quarry.
- 3.4 Effectively, in terms of traffic and highway matters, the proposed development would simply continue the existing extraction activities for an additional period of time beyond the current permitted end date of 26 June 2024.
- 3.5 When allowing for the 3 years of supply within the permitted working area, adding up to an additional 15 years of extraction followed by up to 10 years for restoration results in an end date of up to 2045 for all operations within the site.
- 3.6 Based on TEMPro traffic growth predictions, between 2016 and 2045 an increase of 15.18% is predicted within the relevant area of Purbeck (Middle Super Output Area 005). Between 2025 and 2045 the traffic growth prediction is 9.51%.
- 3.7 By applying the higher increase to the 2016 traffic flows recorded on the A351 corridor at Corfe Castle (8,536 vehicles including 231 HGVs) and south of the A35 Bakers Arms roundabout (17,033 vehicles including 536 HGVs), the predicted 2045 traffic volumes are calculated to be 9,832 vehicles including 266 HGVs and 19,619 vehicles including 617 HGVs respectively.
- 3.8 When comparing the predicted 2045 flows with those historically identified, it is apparent that the predicted traffic flows remain 229 vehicles and 52 HGVs below the counted 2008 flows of 10,061 vehicles including 318 HGVs in 2008 on the A351 to the south of Corfe Castle. Similarly, on the A351 to the south of the A35 Bakers Arms roundabout, the predicted 2045 flows remain 1,568 vehicles and 99 HGVs below the counted 2000 peak of 21,187 including 716 HGVs, and also 724 vehicles and 205 HGVs below the counted flow of 20,343 vehicles including 822 HGVs in 2005, which represents the highest HGV AADT flow at this Count Point.



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- 3.9 It is therefore apparent that the continuation of activities at Swanworth Quarry as proposed would not result in traffic volumes which exceed those that have historically been accommodated on the A351 corridor.
- 3.10 On the A35, the predicted growth results in AADT flows of 41,199 vehicles including 1,517 HGVs. The overall traffic volume would therefore exceed the highest counted flow identified on the route within the DfT database of 36,720 vehicles including 1,376 HGVs, by 4,479 vehicles and 141 HGVs per day, but the HGV flow would remain 92 per day below the counted peak of 1,609 within a total flow of 34,624 vehicles recorded in 2007.
- 3.11 It is therefore apparent that the predicted HGV volumes on the A35 in 2045 would be lower than have historically been accommodated. Whilst the overall traffic volumes would be higher, it is apparent that the Swanworth Quarry traffic (36 HGV movements AADT) represent just 0.09% of the overall daily traffic flow predicted in 2045 on the A35, which represents an insignificant proportion.
- 3.12 Having considered the foregoing, in terms of the operational capacity of the local road network, the proposed extension at Swanworth Quarry is considered to be acceptable.
- 3.13 In terms of highway safety, when considering the good safety record and the ongoing operations which are permitted to occur until 2024/2025, based upon the continuation of HGV activity associated with Swanworth Quarry for an extended period at the levels currently permitted, there is no reason to conclude that the proposed development would result in an unacceptable impact on highway safety.
- 3.14 In its review of sites for the Bournemouth, Dorset and Poole Draft Mineral Sites Plan, DCC comments under the heading 'Criterion C25 – Are the access proposals acceptable': *"Access proposed is via the adequate existing Swanworth Quarry access onto the C135. From here vehicles will travel a short distance north onto the B3069 and onward to the A351 through Kingston. While the trip numbers are relatively high at around 60 movements per day, the extension is not expected to be worked concurrently with the existing Swanworth Quarry operations. Therefore there will be little increase in traffic over the current situation. The route passes a small number of properties on the edge of Kingston but by-passes the main part of the settlement on the B3069. This site has therefore been given a C (Less Significant Adverse Impact) rating."* (DCC 29 October 2013). It also states *"Extension to existing quarry. Access unchanged and continuation acceptable"*. (DCC January 2017).
- 3.15 The Highway test imposed by The National Planning Policy Framework (The Framework) is provided at paragraph 32 of the document:
- "All developments that generate significant amounts of movement should be supported by a Transport Statement or Transport Assessment. Plans and decisions should take account of whether:*
- the opportunities for sustainable transport modes have been taken up depending on the nature and location of the site, to reduce the need for major transport*

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*infrastructure;*

- *safe and suitable access to the site can be achieved for all people; and*
- *improvements can be undertaken within the transport network that cost effectively limit the significant impacts of the development. Development should only be prevented or refused on transport grounds where the residual cumulative impacts of development are severe."*

3.16 This test has been reiterated in the Planning Practice Guidance (revised 06 March 2014) which advises in paragraph 005 within the "*Overarching principles on Travel Plans, Transport Assessments and Statements*" section, "*Transport Assessments and Statements can be used to establish whether the residual transport impacts of a proposed development are likely to be "severe", which may be a reason for refusal, in accordance with the National Planning Policy Framework*".

3.17 A severe impact is a high threshold to breach. In circumstances where an existing access has safely served an operational site for a number of years onto a network that has satisfactorily accommodated a comparable number of vehicle movements, which would simply continue for an additional period along routes which could demonstrably accommodate the continued activity in order to satisfy an established market whilst reducing the need to travel, it cannot be concluded that the proposed development would have a severe residual cumulative impact. As a result, in accordance with the national transport policy test imposed by The Framework, development should not be prevented or refused on transport grounds.

3.18 Having considered the foregoing, it is concluded that DCC's judgement that the proposed extension to Swanworth Quarry is acceptable in terms of highway / transport is appropriate and robust.

## 4 SUMMARY

4.1 The Hurlstone Partnership Limited was instructed to review the acceptability, in terms of highway matters, of the proposed extension to Swanworth Quarry, which would release an additional 1.7 million tonnes of crushed rock limestone aggregate in order to maintain supplies to existing, established markets, for a period of up to 15 years beyond the current permitted reserves.

4.2 The review considered the conditions imposed upon the existing planning permissions which would, as far as highway matters are concerned, continue to be applied to the proposed extension.

4.3 Effectively, in terms of highway matters, the proposed extension would result in a continuation of the existing activities at the site for an additional period of time. Other than the fact that the activities would continue for an extended period beyond the current

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permitted end date, there would be no increase in traffic on a hourly, daily, weekly or annual basis when compared with the current situation.

- 4.4 A review of historic traffic data revealed that even when taking into account predicted traffic growth, the traffic flows on the A351 corridor, along which the majority of site vehicles travel, would remain below the volumes previously accommodated on the route. It was also found that the proportion of development traffic on the A35 trunk road, to which the A351 connects, would remain insignificant in the future design year of 2045, representing just 0.09% of the overall flow.
- 4.5 The safety performance of the site access and local road network was reviewed with reference to personal injury accident data obtained from Dorset County Council. It was found that the existing HGV activities at the site had not led to injury accidents on the network.
- 4.6 In reviewing the proposed extension for the purposes of the Bournemouth, Dorset and Poole Draft Mineral Sites Plan, the Council confirmed that the existing site access is adequate and the continuation of activities as a result of the scheme would be acceptable in terms of highway impact, awarding the site a rating of *"Less Significant Adverse Impact"*.
- 4.7 Taking into account the foregoing and the transport policy test imposed by paragraph 32 of the National Planning Policy Framework, which advises: *"Development should only be prevented or refused on transport grounds where the residual cumulative impacts of development are severe"*, it is concluded that the proposed extension to Swanworth Quarry would be acceptable in terms of highway and transport matters.