Volume 1

LAND AT ROESHOT, CHRISTCHURCH, HANTS

Application 1 to Hampshire County Council

for

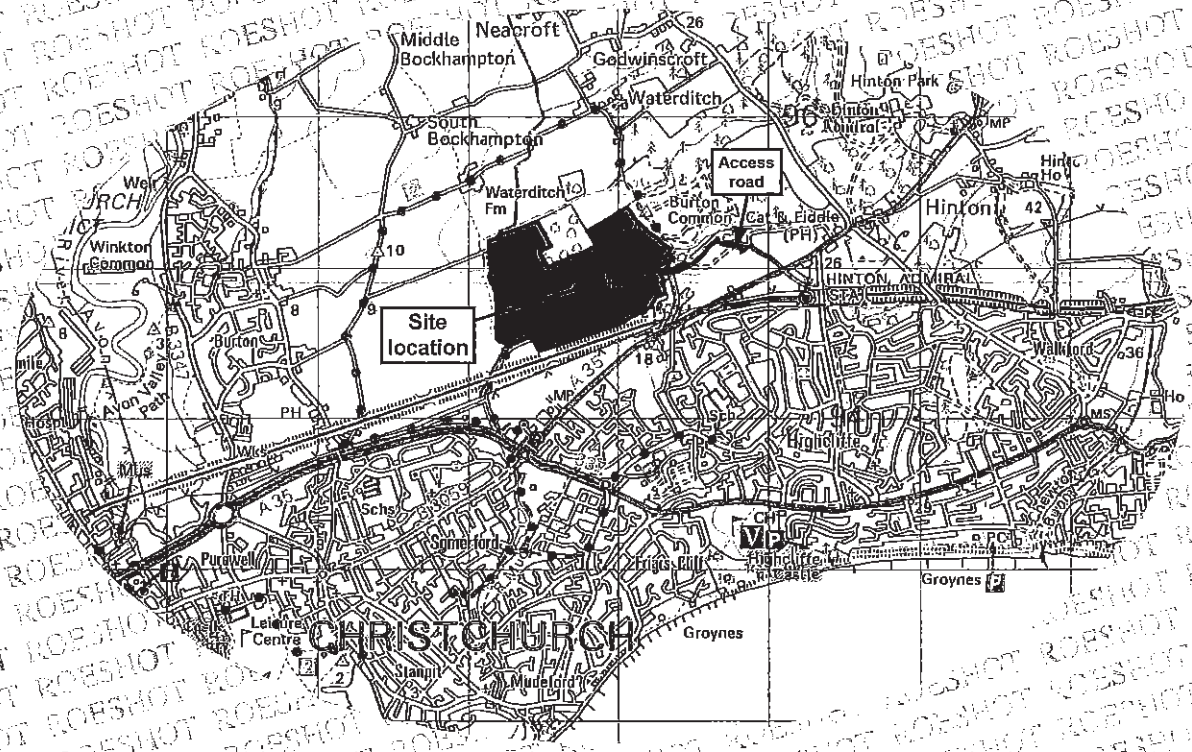
Extraction and processing of minerals, importation and treatment of inert materials, the erection of a concrete batching plant, workshop, offices, weighbridge and internal access road to the A35 with progressive restoration using residual inert materials to agriculture, woodland, and grassland

Application 2 to New Forest National Park Authority

for

Construction of an internal road to the existing access to the A35 to serve the proposed Roeshot Quarry

ENVIRONMENTAL STATEMENT



on behalf of

Bodorgan Properties (C.I.) Limited

D. K. SYMES ASSOCIATES

Mineral Planning & Development Consultants

email: dks@dksymes.co.uk

March 2016

APPLETREE FARMHOUSE, 39 MAIN ROAD,
MIDDLETON CHENEY, BANBURY, OXON OX17 2ND

Tel: 01295 712266
Fax: 01295 712283

the site, the landform and the infrastructure provide a very effective visual and noise buffer such that this residential area will not be affected.

3.9 The site also has a number of utility services. Along the southern boundary parallel to the railway embankment there is an overhead electricity line as well as a buried water main. An oil pipeline cuts across the eastern part of the site with a north west/south east alignment. There is also an 11kv underground cable across the centre of the site in an east west direction with a spur cable heading north to the west of Burton Rough. The routes of these utilities as well as the other features referred to are shown on the Site Context Plan 0617/SC/1.

4. ALTERNATIVES

4.1 Sites

4.1.1 The alternative sites that were considered to ensure that a steady and adequate supply of construction aggregates is provided to meet the local demand were the subject of the Minerals and Waste Plan that was prepared by Hampshire County Council in conjunction with Southampton, New Forest National Park and South Downs National Park.

4.1.2 This was a very thorough and extensive formal process with full public consultation. At commencement a number of alternative sites in this south western part of Hampshire were carefully considered. A detailed appraisal of each site was carried out by the mineral planning team which assessed each site against an extensive range of criteria, as well as inviting public comment at each stage.

4.1.3 The conclusion reached is that the application site at Roeshot represented the best alternative. This choice was included in the Minerals and Waste Plan that was submitted for public examination. The report of the Inspector confirmed the choice of the site was sound and the Plan was adopted in October 2013.

4.2 Rail

4.2.1 The mineral reserve at Roeshot is located adjacent to the Bournemouth to London railway line, so has the potential to move aggregates by rail. This alternative is reviewed under a number of headings.

Need

4.2.2 The reserve at Roeshot has been identified to meet a 'local' need to maintain a steady and adequate supply of construction materials. This is a very relevant factor in assessing the alternative of transporting the mineral by rail, as the quantity moved by rail would not supply the local market.

4.2.3 The concept of rail borne aggregates is to sustainably deliver material to the main centres of demand which are generally built up areas where there is a deficiency of availability of alternative resources, and in particular land won aggregates. In the case of Roeshot the principal market will be the west London area where there is still a reasonable availability of alternative land won sand and gravel. Because of this the 'need' for a rail borne alternative supply is questioned.

4.2.4 Within central London there is a greater need, but the supply from Roeshot would have to compete with other rail located aggregate sources. These are already in place and have a current market share so is it preferable to move Roeshot material to a market that is already well provided with rail delivered aggregate, or to conserve the Roeshot reserve to meet the local demand.

4.2.5 In terms of spatial planning the early conclusion is that the Roeshot reserve would be best developed to meet the local need as the more distant markets are already well supplied by rail aggregates from the very large hard rock quarries in the Mendips and Leicestershire where permitted reserves run into several hundred millions of tonnes.

4.2.6 Despite this initial conclusion, the practicality and cost of installing a rail siding is reviewed below as if feasible it could offer the dual benefit of the reserve serving the more distant market (assuming there is a demand for the product) as well as meeting the local need as currently proposed.

Physical Constraints

4.2.7 This analysis naturally focuses on the despatch siding rather than any receiving facilities as it is assumed that minerals conveyed by rail would be taken to existing receiving sites.

4.2.8 The major physical constraint is the difference in height between the level of the rail track relative to the Roeshot reserve. As can be seen from the plans the track is on a high embankment, some 10 - 12 metres above ground level. If a despatch siding is to be constructed it would require the embankment to be widened to accommodate at minimum a further single track. Loading of stationery rail trucks cannot take place on the existing lines due to disruption to current services.

4.2.9 The single additional track 'concept' design is the minimum practical requirement. It needs to be long enough to accommodate up to 20 'wagons' plus a locomotive which would be some 300 metres with manoeuvring space either end so it is assumed that a practical length is around 500 metres. There needs to be a connection to the main running track each end to allow the locomotive to de-couple after arrival and change ends.

4.2.10 The above illustration shows that the siding will require almost the full length of the southern site boundary. It will need to be sufficiently far away from the running track to allow some support gantries for the loading equipment as it will be too narrow to enable loading by wheeled loaders. If it is assumed that as a minimum it is 30 metres wide at the top, then the base of the embankment would extend by a similar amount.

4.2.11 This can only take place on the 'mineral' side as residential housing is proposed to the south. The increased width of the embankment would impact on the overhead electricity lines, as well as potentially impacting on the underground pipeline. Whilst in practice this infrastructure can be moved, it is a physical constraint that needs to be addressed. It would also have an adverse impact on the proposed SANG corridor.

4.2.12 There is also the requirement for the engineering material required for the embankment. Based on the above estimated dimensions this is likely to require the importation of a minimum of 150,000 cubic metres (or 300,000 tonnes). If this is supplied from the Roeshot deposit it would represent 10% of the identified reserve with high quality material being used for a low quality bulk engineering fill.

4.2.13 The above very high level review of the physical requirements is likely to be an understatement as to load a train using a fixed loading point as needs to be the case here, requires the empty wagons to be moved progressively under the loading point. This means the siding length should be long enough to achieve this indicating a length in excess of the 500 metres assumed.

Connection

4.2.14 Connecting a siding to an existing active main railway line is not straightforward. Whilst the installation of the track and 'points' can be easily done (subject to the fact that it is an active main line) there are technical matters relating to signalling and remote activation of the points.

4.2.15 It is understood that part of this infrastructure is in place due to the historic use of the Hinton Admiral siding which could be upgraded should a new siding be installed. Even so, there will be a noticeable cost in carrying out this upgrade which needs to be put in the viability balance.

Impacts

4.2.16 The obvious benefit of installing a siding is that it will remove the need for mineral lorry traffic to use the local road network. This premise is based on the assumption that the local road network is either unsuitable or does not have the capacity. As referred to at Section 8.5 the Transport Assessment concluded that the proposed number of traffic movements could be readily accommodated on the A35, especially as the operation does not load the network at the peak times.

4.2.17 It is also relevant to the assessment of this alternative that if Roeshot does not supply the local market, it will have to come from somewhere else. The current supply is from the plant at Caird Avenue with the mineral traffic using the A337 through the centre of Highcliffe. In other words the local mineral traffic from Roeshot will 'replace' the existing mineral traffic as it is not 'in addition'.

4.2.18 The above demonstrates that rail movement of the Roeshot mineral will not reduce the mineral traffic levels on the local road network.

4.2.19 The raised design of the siding combined with the loading structure will be very visible as evidenced by the current embankment. It will also intensify the rail activity by having a line of rail wagons on the siding that are being loaded rather than the very short period of disturbance as a train passes by. Also, as the track availability for freight movement is likely to be

limited during the day, there will be activity at night that will inevitably create noise as well as lighting on the embankment.

4.2.20 These environmental impacts can be adequately controlled at the large hard rock quarries as they are generally in a rural location and away from residential areas. This does not apply at Roeshot, especially as the immediately adjacent area to the railway is to be developed for residential use. The operation of a mineral siding is expected to be very strongly resisted by the local community as it will impact on the general amenity of the locality.

Viability

4.2.21 The installation and operation of a mineral siding has to be economically viable. The difficulties of constructing a practical siding have been touched on, albeit at a high level, from which it is plain that it will not be as straightforward as simply putting a rail line into the quarry. The construction costs of installing a 'simple' siding are high, but with the need to first construct a substantial embankment will substantially increase any cost.

4.2.22 The recognised 'business' model falls into two types. The most simple is where an existing siding and adjacent yard can receive minerals (generally delivered by lorry) where they are tipped and then loaded by wheeled loaders into standard 'box' wagons. This is the model used at Wool in Dorset, to move sand (as well as at Marks Tey in Essex). This simple model can also receive minerals, the 'box' wagons being unloaded by hydraulic grab, and the mineral stockpiled on the ground adjacent to the siding (e.g. at Chichester - West Sussex and elsewhere).

4.2.23 The second type is where a quarry has a dedicated loading siding constructed to enable a generally large volume of minerals to be exported annually. This model was developed around the supply of hard rock initially to the South East of England where there are no indigenous reserves, and then extended to the major cities such as Birmingham, Leeds, Manchester due to traffic congestion.

4.2.24 It is widely recognised that the cost of installing rail infrastructure is high. Therefore it is critical to the economic viability that the 'pay back' period is very long. This is not dissimilar to the supply of marine dredged aggregates where the high cost of the purpose built dredgers need long periods, generally at least 20+ years. As well as the long operational period is the annual quantity of minerals that are moved. This second key factor is partly due to the low levels of 'profit' which can be offset by high turnover.

4.2.25 The best known examples of this second type of business model are the Mendip Limestone Quarries. Those that export by rail have large permitted reserves that will last for over 20 - 30 years. The level of export is between 1.0 - 3.0 million tonnes each year, with the distance moved being over 100 miles. These large 'numbers' demonstrate that to be economically viable relies on consistently high annual volumes underwritten by extensive permitted reserves.

4.2.26 The Roeshot reserve compared to the rail connected hard rock quarries is very modest at 3.0 million tonnes or thereabouts. If this is to be moved by rail, a dedicated siding will be required the capital cost of which would make rail movement unviable. The only way it might be viable would be to achieve high annual export levels, which in turn will require a very much larger permitted mineral reserve. Even if the proposed Dorset reserve was included, the overall reserve of circa. 6.0 million tonnes would not be sufficiently large enough when compared to the 60 - 100 million tonnes hard rock reserves on which this business model is based.

4.2.27 The economic viability has focused on export only, but due to the location being close to the Bournemouth / Poole market the importation of 'hard rock' aggregate would also be likely as it would make best use of the proposed rail facility. Therefore the perceived benefits of avoiding mineral traffic in the locality would be negated as imported minerals will then be delivered to meet the local demand.

Conclusion

4.2.28 The adjacent rail line suggests that it would be straightforward to install a siding, move the minerals by rail and reduce the levels of mineral traffic on the local roads. Unfortunately, this mode of transport for the Roeshot site is not suitable because,

mineral traffic will continue to use the local road network to maintain an adequate supply to meet local needs whether supplied from Roeshot or elsewhere,

the environmental impacts of a siding are considered to be unacceptable,

the costs of installation combined with the limited reserve and annual output will not be economically viable,

the need for rail exported sand and gravel by the receiving markets is questioned due to existing supply of similar mineral.

4.3 Access (analysis of alternative options)

4.3.1 A number of different road access options were considered before deciding to use the existing junction at the pick your own farm. Before the options are individually looked at, it is important to note that the principal constraint is the high railway embankment that runs along the southern boundary of the site. The presence of this embankment means that any access either has to be under it via an existing railway arch or around it. There are four railway arches; two accommodate roads and two accommodate drainage channels. The drainage channels are too narrow to accommodate lorries so are subject to no further consideration.

Option 1 - Ambury Lane/Watery Lane

4.3.2 There is a substantial arch under the railway in the south west of the site to accommodate Watery Lane. This lane joins Ambury Lane via a shallow seasonal ford. Ambury Lane is relatively narrow and, if used by lorries, will need to be upgraded by strengthening and widening or putting in passing bays. All these issues could be addressed (albeit at a substantial cost).

4.3.3 However, the whole of the area between the A35 and the railway embankment has been identified in the adopted land use plan of Christchurch Borough to be developed for residential use (the Christchurch Urban Extension). Consequently, directing lorries through this area along Ambury Lane would be unacceptable in terms of amenity and safety. Therefore, this option was not acceptable.

Option 2 - North

4.3.4 This option was ruled out as there are no suitable roads.

Option 3 – West via Hawthorn Road

4.3.5 The application site does not abut any public roads to the west but the land between the site and Hawthorn Road is also owned by the Estate and lies in the County of Dorset.