Technical Note

Comments on the Environmental Impact Statement: Construction of a Destination Port at Hondoq ir-Rummien, Qala, Gozo

11th June 2010 LINO BIANCO

1.0 Terms of Reference

1.1 This note is a response to the invitation of Qala Local Council to evaluate the *Environmental Impact Assessment*, hereafter referred to as EIS, for the construction of a destination post comprising of a hotel, yacht marina and tourist village at Hondoq ir-Rummien, Qala, Gozo. The development proposal subject of this assessment is covered by outline planning application PA 3798/02 and falls within the boundaries of Qala Local Council.

1.2 The EIS, prepared by EMDP, was requested by the Malta Environment and Planning Authority as per Schedule I of the Environment Impact Assessment Regulations, 2001. Comments are to be communicated to the Malta Environment and Planning Authority by not later than Friday 11th June 2010.

2.0 Background

2.1 The EIS states that Malta is currently failing to fully exploit the increasing yachting activity taking place in the Mediterranean which activity is on the increase. This is a major opportunity for the current development proposal for the marina at Hondoq Ir-Rummien. Furthermore, the EIS argues that this project, in its totality, will help further

diversify the tourism sector.[1] Mgarr Marina is the only marina in Gozo and is congested in summer.[2] This study further states that

> The need for more berths in Gozo is readily recognised…The proposed … [project] would increase the berthing capacity of Gozo by more than 50%, to approximately 350 berths.[3]
>
> ... To date, no up-scale, integrated project, specifically targeting the international market has been developed. The closest that comes to this is the Chambray project, but even this has evolved sporadically due to various contractual and shareholding problems.[4]

2.2 According to the study approved by the Malta Environment and Planning Authority entitled *Feasibility and Alternative Site Assessment for the proposed construction of a yacht marina in connection with PA03798/02*, three sites were shortlisted: Mgarr Harbour, Marsalforn and Hondoq ir-Rummien:[5]

- Mgarr Harbour is not favourably considered because it is already a busy marina with an active ferry service; given the "significant depth that the marina's sea defences would be located in", the building of a marina at this site will incur high costs;
- Marsalforn is not favourably considered because it is already a tourist resort and only a small marina can be fit in an area which is ecologically important, supporting endemic organisms, hence carrying high environmental costs. If a marina is built, it will improve the operational activity of the area, but not significantly so; and

[1] EMPD (2009). *Environmental Impact Statement: Construction of a destination port comprising hotel, yacht marina and tourist village at Hondoq ir-Rummien, Qala*. Part1: Coordinated/Technical Report, Non-Technical Summary, p.7, Preamble, p.7.

[2] Ibid., Preamble, p.9.

[3] Ibid., Chapter1, p.17.

[4] Ibid., p.22.

[5] Ibid., Non-Technical Summary, p.9, Preamble, p.10.

- Hondoq ir-Rummien marina would be built in a disused quarry and "the footprint of the marina on the sea-bed is the smallest possible of all the options considered."

3.0 The Project

3.1 A number of alternative design options presented during the course of planning application PA 3798/02 is included in the EIS.[6] With a total capital expenditure of approximately 102.7 million Euros (LM44.1 million), the current development proposal[7] includes a marina, dry storage for boats, a hotel, multi-ownership units, self-catering facilities including villas, underground parking facilities, commercial shops, catering establishments, public facilities, supporting facilities and sea defences. Buildings will occupy 16.7% of the entire site and 26.9% of the quarry[8] "…any building will not spill out onto the valleys… ."[9] The electricity demand of circa 3200KVA will be met via 2 substations.[10] During the operational phase of the project, additional traffic generated will be circa 2000 vehicles per day. "Considering peak hour traffic only, … Junction A will support the highest increase and loading with junctions B and C following suit….".[11] Furthermore, the EIS states[12] that "…the landscaping scheme adopted will respect the cultural, maritime and ecclesiastical heritage of the area."[13] Character will be traditionally

[6] Ibid., Chapter 1, pp.178-191.

[7] Note changes in design layout of project (Ibid., Chapter1, p.47; Figures1.18 and 1.19).

[8] Ibid., Preamble, p.6.

[9] Ibid., Chapter1, p.10.

[10] Ibid., Table 1.22, p.85.
The actual peak power demand is circa 3100KVA (Ibid., Chapter 4, p. 82).

[11] Ibid., Chapter 4, p.89, para.4.11.1.5.
For traffic junctions vide Chapter 4, p.55. Also, Figures on pp. 89-90 are unclear.

[12] Ibid., Preamble, p.5.

[13] Ibid, Non-Technical Summary, p.29.

Gozitan reflecting "the architecture of Qala to achieve the perception that the Qala Marina is part of Qala Village".[14]

3.2 The project includes a 100-150 berth marina in the disused quarry. It "can also include 5 berthing spaces for boat sized of up to 45 metres. This would provide a new dimension for yachting in Gozo, as currently there is no place where large boats can be accommodated."[15] 60% of the berths will be permanent.[16] The dry storage of boats is essentially a boat stacking area on 3 levels for a total capacity of about 30 yachts.[17] The marina basin will cover an area of nearly 15,800m^2 with a cope length of 737m.[18] All servicing of marina will be carried out using electrical buggies.[19]

> Typically, a marina accommodates around 400 boats at any one time….
> Often a marina is part of an overall residential or leisure development, as the costs of constructing a marina may not be justifiable against yachting income alone.[20]

3.3 The 5-star, 170 bedroom hotel with ancillary facilities consists of 110 rooms and 60-hotel-serviced apartments.[21] There are currently two 5-star hotels in Gozo and "current demand for five-star hotel properties in Gozo is weak".[22] The hotel is expected to "double the 5-star room capacity in Gozo … it is evident that such a project would struggle if it had to be developed as a stand-alone hotel."[23]

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[14] Ibid., Preamble, p.5.

[15] Ibid., Chapter 1, p.17.

[16] Ibid., p.18.

[17] Ibid., Chapter1, p.101.

[18] Ibid., Chapter1, p.94.

[19] Ibid., Chapter 1, p.94.

[20] Ibid., Chapter 1, p.14.

[21] Ibid., Chapter 1, p.26.
The EIS makes mention of 60 self-catering facilities. Apparently these are the 60 hotel-serviced apartments.

[22] Ibidem.

[23] Ibidem.

3.4 The project will supply 200 multi-ownership units. With respect to Maltese households, "supply would be nearly twice the local demand"[24] but "…household growth in Gozo in the past years has been above projections."[25] Over a 6-year period, about 203 units are projected to be sold.[26] It will also include 25 self catering villas,[27] 1200 underground car parking facility with a 90 car underground public car park for public using beach, 10 commercial shops and 5 catering establishments. It will provide for a number of public facilities[28] and the following supporting facilities: three sewage treatment plants,[29] boreholes and two reverse osmosis plants.[30]

3.5 The project is self sufficient in terms of water production and sewage treatment.[31] Furthermore, brackish water will be used to cool the complex;[32] both this water and the effluent of the RO will be discharged into the sea after mixing with sea water through a turbine [same] at 250-280m^3/hr. Surface water will be collected[33] and passed through a purification system.[34] This will be used for cleaning external areas, to fill fire fighting reservoirs and to complement second class water; rainwater overflow will be directed to

[24] Ibid., Chapter 1, p.20.

[25] Ibid., p.21.

[26] Ibid., Chapter 1, p.12.

[27] Ibid., Chapter 1, p.94 mentions 20.

[28] These include BBQ facilities, public conveniences and changing rooms, kiosks, upgraded slip-way, diving amenities, jumping platforms all for public (note that these facilities will be available free "with the Local Council possibly managing the operation of these facilities" (Ibid, Non-Technical Summary, p.12, Chapter 1, p.96). Any boats have to be anchored at marina proper since the area is a prohibited anchorage zone as set by Malta Maritime Authority (Ibid., Chapter 1, p.95).

[29] Sludge from sewage treatment plants will be collected twice annually and deposited to Gozo sewage treatment plant. Sewage treatment effluent will be used as second class water that is for irrigation and for flushing of toilets [Ibid., p.82].

[30] Feed water for reverse osmosis plants will be brackish water from borehole.

[31] Ibid., Non-Technical Summary, p.11.

[32] "The main air-conditioning plant will be seawater cooled" (Ibid., Preamble, p.6).

[33] Ibid., Non-Technical Summary, p.19.

[34] Ibid., Non-Technical Summary, p.31, details in Chapter 1, pp.150-151.

the sea 3m below sea level midway between the slipway and the marina entrance to be mixed with marina water.[35] No storm water will be allowed to fall directly into the marina.[36]

3.6 The present sea defences cover an area of 1,500m^2 of reclaimed coastal land only since the sea gate is in the form of a rubber dam.[37] Originally, conventional sea defences were proposed, covering an area of 15,700m^2 but this was discarded.[38] Tests of the original layout of sea defences[39] showed that the beach will not be "adversely affected" through erosion[40] or may inhibit sedimentation; however "…the new structures construction along the beach as sea defences are not likely to impinge on the long shore sediment transport process. The general lack of mobility in the near shore zone … suggests that the beach is not reliant on a significant supply of sediment."[41] Public concern was mainly on visual intrusion and on the effect on *Posidonia*, hence new layouts (2) and (3) were proposed with the latter option having a smaller marine footprint than that of Option 2, "and lies entirely on a disturbed sea bed".[42]

3.7.0 Construction Phase

3.7.1 Inert material excavated from the site will be partly used in the construction of the proposed development and the rest dumped to reclaim[43] (or for stockpiling purposes and

[35] Ibid., Chapter 1, pp.81, 156 &161.

[36] Ibid., Non-Technical Summary, p.31.

[37] Re rubber dam design cfr. EIS, Chapter 1, pp.162-165.

[38] Ibid., Preamble, p.6.

[39] Ibid., Layout 1, Chapter 1, pp.133-137.

[40] Ibid., Layout 1, Chapter 1, p.137, para.1.2.7.5.6.

[41] Ibid., Layout 1, Chapter 1, p.143.
A wave absorbing rubble slope will be set up along the seaward side of the sea defences (Ibid., Chapter 4, p.36 and Chapter 5, Figure 5.3.

[42] Ibid., Chapter 1, p.140.

[43] For volumes of rock to be excavated and method of excavation etc. cfr. Ibid., Chapter 1, pp. 29-40 and Chapter 5, pp. 4-5.

then sold) Ta' Gafan known as Ta' Klement quarry. During the excavation phase, heavy traffic generated amounts to one truckload every 4 minutes:

> Assuming the new 5-axle trucks are used, 146 trips will be required per day … 15 trucks leaving the site per hour.[44]

Cement will be transferred dry using a closed system of pumps and all concrete required will be prepared on site.[45] A crusher and batching plant will be on site to reduce double handling of rock:

> Assuming that 100,000 cubic meters of spalls and sand will be required for the construction … a well designed crushing plant can produce about 800 cubic meters of spalls and sand per day.[46]

3.8.0 Social Perception

3.8.1 Hondoq ir-Rummien is a popular beach in Gozo:[47] "… any development that would obstruct their continued enjoyment is bound to have negative social impacts." Two surveys were carried out: Gozitan residents and residents of Qala, Nadur and Ghajnsielem. Para. 4.14.3.4 of the EIS states that in the Three Villages Survey, 40% did not like the project while in the All Gozo study the figure was 26%.

3.8.2 All those interviewed in the All Gozo survey did not like the idea that the car park would be removed and all were in favour of the idea of removing the present dump; circa 72% liked the idea that a tourist resort would be built, 48% were in favour of a marina, circa 78% were in favour that an underground car park would be built, 80% of those interviewed did not like the fact that the ambience of the locality would be destroyed.[48]

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[44] Ibid., Chapter 1, pp.66 & 93.

[45] Ibid., Non-Technical Summary, p.22.

[46] Ibid., Chapter 1, p.39 and Figure1-77.

[47] Ibid., Chapter 4, p.99, para.4.14.2.4.

[48] Ibid., Table 4.20.

3.8.3 The results of the survey of the Three Villages Survey were the following: circa 54% of those interviewed liked the idea of having a hotel,[49] circa 68% liked an underground car park, 53% liked the idea of having a marina, 61.6% of the respondents supported the idea for more restaurant facilities,[50] and circa 91% liked the idea that dumping would be removed.[51]

3.8.4 Negative outlook by residents to the establishment of a marina range from: impacts on air quality, increased suspended solids effect on perched aquifer, sea birds, construction of marine structures, increased vessel traffic with impacts on bathing water quality and enjoyment of the sandy beach as in the case of Iz-Zewwieqa, l/o Mgarr Harbour.

3.9.0 Benefits

3.9.1 The EIS states that the proposed development involves the improvement of tree spurge (*Euphorbia dendroides*), steppe/garigue with temporary freshwater rock pool habitats to the west of the project which is presently degraded and the creation of a nature park "managed by an independent group of trained biologists."[52]

3.9.2 The EIS states that "The idea that the park would stretch to this area has been taken on board but the commitment to turn into a park cannot be shouldered by the promoters…".[53] However it states that "The developer is ready to fund a project whereby, the rockpool area…[is] enhanced."[54]

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[49] "There exists some concern on the overall size of the development: the hotel featured prominently. It was remarked that a number of hotels were closing down in Gozo … yet, the developers insist that the proposed hotel is an integral service complementing the marina…" (Ibid., Chapter 4, p.104).

[50] Ibid., p.105.

[51] Ibid., Table 4.21.

[52] Ibid., Non-Technical Summary, p.25.
The stated area of the park is 28,603m^2 (Ibid., Chapter 1, p.8, Figure 1.3,) whilst that of the garigue is 26,179m^2 (Ibid., p.41).

[53] Ibid., Chapter 2, p.17, fn 2.

[54] Ibid., Chapter 5, p.25, para.5.2.2.4.

3.9.3 Furthermore, the EIS states the following benefits generated by the proposed development:

1. improvement of agrarian, presently abandoned, fields into an irrigated organic farm covering an area of 14,687m^2,[55]
2. the temporary freshwater rock pool habitats along an unexcavated ridge to the east of the project will be turned into a buffer zone,[56]
3. increased value of cultural heritage in the area "by creating walkways and restoring a number of buildings and locations considered to be important in heritage terms within the environs of Hondoq ir-Rummien…",[57]
4. provide second class water for irrigation and replenish water table,
5. beneficial to the national economy through the generation of skilled jobs – 600 jobs during construction phase and 200 jobs during first five years of operation[58] and will contribute 9.8 million Euros (LM4.2 million) to the country's GDP,[59]
6. remove an eyesore (disused quarry),
7. would provide facilities to the public using the beach,
8. increase the area reserved for swimming
9. improve the slipway present on site and
10. provide covered parking space for the public.

[55] Ibid., Chapter 1, p.41.
A razzett will be constructed to house the Landscaping Section of the project (Ibid., Chapter 1, p.98).

[56] Ibid., Chapter 2, p.27, para.2.2.5.2.2 and figure on p.29.

[57] Ibid., Chapter 1, p.2.
Walkways will be established as per *Gozo and Comino Local Plan* policy GZ-RECR-3 and Map 10.3.3 (Malta Environment and Planning Authority, 2006. *Gozo and Comino Local Plan*, Malta).
This local plan was approved by the Board of the Malta Environment and Planning Authority and endorsed by the Minister for Rural Affairs and the Environment on 20th July 2006 and on 03rd August 2006 respectively.

[58] Ibid., Non-Technical Summary, p.34; vide also Table 4.25 (Ibid., Chapter 4, p.113) Table 4.33 (Ibid., Chapter 4, p.124).
"…Once it reaches a stable level of operations the project will directly generate employment for 386 persons" (Ibid., Chapter 4, p.123, para.4.15.6.7).

[59] Ibid., Non-Technical Summary, p.34.

4.0 The Site

4.1 The site area of the project, which is not consistently stated,[60] forms part of a "multi-faceted cultural landscape" visually a cultic landscape, an agricultural landscape and a maritime landscape.[61] "All five [geological] formations … outcrop in the environs of the site."[62] The area does not hold seabird colonies.[63] Air quality levels are high.[64] The site is flanked by two A valley systems: Tal-Mintuff valley to the west receiving water from Tar-Ruba catchment area to the north (discharges of about 25,000 to 84,000m^3 of storm water annually, partly to site,[65] and Wied tal-Haqjel to the east. At Wied Tal-Mintuff there are abandoned desalination plant and batching plant.[66]

4.2 Limestone from the now disused quarry was used for the Liverpool Lutyens Cathedral, Mgarr break water and Grand Harbour break water.[67] At present, the quarry bed has become a wetland with a watercourse[68] but consists of species of disturbed habitats.[69] Circa 80,000m^3 of surface runoff impacts the quarry per year.[70]

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[60] Various figures are stated for the project footprint: 55 000m^2, 65,071m^2 (Ibid., Preamble, p.5); 65,208m^2 (Ibid, Chapter 1, p.8, Figure 1.3), 66,731m^2 (Ibid., Chapter 1, p.41).
Para 2.3.2.2.1 (Chapter 2, p.55) mentions Table 2.4 which does not exist.

[61] Ibid., Chapter 2, p.118.

[62] Ibid., p.83. Vide also Figure 2.60.

[63] Ibid., p.26, para. 2.2.4.2.

[64] Particulate matter, NO_x, SO_x and VOC were all low (Ibid., Chapter 2, p.129, para 2.9.6.1).
Unnumbered figure in Chapter 2, p.122, apparently used to depict the sampling points for air quality, does not indicate all the sampling points.
The wind rose depicted in the unnumbered figure in Chapter 2 p.124, still assumes that the prevailing wind direction in the Maltese Islands is North West, a conclusion derived from data of the 1970s.
The air quality baseline study was carried out in winter 2007: no comparative study was carried out in summer, a period of higher dust and vehicular traffic levels. There is no mention of how the parameters were tested.

[65] Ibid., Non-Technical Summary, p.15, Chapter 2, p.5.

[66] Ibid., Chapter 2, p.5, para.2.1.1.5.2.2.

[67] Ibid., Chapter 2, p.112.

[68] Ibid., Non-Technical Summary, p.15.

[69] Ibid., Non-Technical Summary, p.25.

4.3 Anthropogenic interference is rampant in the area and

> original vegetation communities were mainly restricted to the south-western quadrant of the AoS [Area of Study] and to a narrow escarpment in the north-eastern quadrant of the AoS;[71]
>
> ... The most ecologically intact areas are the steppes and garigue …to the south and southwest of the AoS…[and] to the northwest of the AoS;[72]
>
> ... The most important ecological resources in the region are therefore the exposed rocky areas with a karstic topography. These support garigue and steppe vegetation on the south and south-western periphery of the AoS and on the ridge that runs in a NW to SE direction along across the AoS in east-central part of the AoS, and in places concentrations of kamenitzas that are filled with rainwater in the wet season. Also important as providing habitat for reptiles and small mammals are the dry stone walls, mounds of dumped rubble, and the quarry waste within the AoS.[73]

Tree spurge *(Euphorbia dendroides)* assemblages are classified as Annex I habitat (Habitats Directive) and the freshwater rockpools as Priority Annex I habitat (Habitats Directive).

4.4 The sea has internationally protected *Posidonia* meadows,[74] which extend up to a short distance from the coastline which coastline supports cliff assemblages.[75] "The topography of this bay is such that the level of dispersion of any released contaminants

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There is no thorough species list of the excavated areas: the only mentioned species is *Capparis orientalis* [Chapter 2, p.11]. Para 2.2.2.2.4 states that these "were colonised by a largely herbaceous mosaic, comprising early-pioneer and late-pioneer stages of ecological succession. Vegetation cover was almost total at the time of survey."

[70] Ibid., Chapter 1, p.122.

[71] Ibid., Chapter 2, p.13, Figure 2.7.

[72] Ibid., Chapter 2, p.25, para.2.2.3.3.

[73] Ibid., Chapter 2, p.27.

[74] Priority habitat in Annex I of the Habitats Directive 92/43/EEC).

[75] Ibid., Non-Technical Summary, pp.15&25.

at the bathing area may be considered to be high."[76] No "significant archaeological remains could be traced,"[77] and most of the bathing area is less than 5m deep.

4.5 The sea is characterised as oligotrophic, low levels of suspended solids[78] with good levels of dissolved O_2 showing exceptionally good water transparencies.[79] BOD levels are below detection limit, hydrocarbon levels and Pb and Cu levels are low. Quality of sediments is "extremely good".

> Inshore waters of the area were free of any sewage pollution…[80] [and]
>
> … the bathing waters at this locality must be one of the safest and cleanest for Gozo.

5.0 Planning Context

5.1 Hondoq Ir-Rummien, as per Key Diagram of the *Structure Plan*, is a Rural Conservation Area and an area of ecological value.[81] Making reference to the *Gozo and Comino Local Plan*, the EIS states that:[82]

> The plan will look favourably on the replenishment of the sandy beach at Hondoq ir-Rummien;
>
> Safe-guard an area close to Qala as a geological and industrial heritage park focusing on the geological and geo-morphological heritage of the area as well as the rich heritage for the quarrying activity; and
>
> MEPA will favourably consider proposals from public agencies to upgrade the beach facilities at Hondoq ir-Rummien.

[76] Ibid., Chapter 2, p.4, para.2.1.1.5.1.6 and vide Fig.2.30 and cfr. Chapter 2, p.46.

[77] Ibid., Non-Technical Summary, p.16 and Chapter 2, p.69, para.2.3.3.

[78] In terms of Total Suspended Solids-TSS.

[79] In terms of Beam Attenuation Coefficients, BAC.

[80] Ibid., Chapter 2, p.67.

[81] Ibid., Chapter 3, p.3.

[82] Ibid., Non-Technical Summary, p.17.

5.2 According to the *Gozo and Comino Local Plan*,[83] no part of the Area of Study is scheduled as an Area of Ecological Importance or as a Site of Scientific Importance, or as a Nature Reserve or as a Special Area of Conservation, or a buffer zone to one, except for the coastal islets ('Il-Hnejja') SE to the study area which are Sites of Scientific Importance[84] but then it states that the Local Plan designates Hondoq ir-Rummien area[85] as

1. a Level 2 Site of Ecological Importance flanked by Level 3 buffer zone, except for the quarried area Malta Environment and Planning Authority;[86]
2. NE part is a Site of Scientific Importance for its geology.[87] These are subject to Policies GZ-RLCN-1. The eastern side of quarry has a Level 3 protection status and the western side has Level 2 protection status;[88]
3. As an Area of High Landscape Value,[89] the site is subject to Policy GZ-RLCN-1 which prohibits new developments in such areas;[90]
4. having Category 'A' valley,[91] the area is subject to *Gozo and Comino Local Plan* Policy GZ-RLCN-2 and to *Structure Plan* Policy RCO29; and
5. a garigue[92] subject to Policies GZ-RLCN-3 (which prohibits development on garigues) and 4 (which prohibits the passing of services through garigue) [Chp3, p.4] Chp 3, p.5 states that the garigue will not be developed except for a part which has to be excavated for the new access road to the beach (this part is Level 2 Site of Ecological Importance and flanked in part by Level 3 buffer zone);

[83] *Gozo and Comino Local Plan*.

[84] EIS, Chapter 3, p.2.

[85] Ibid., Chapter 3, p.4.

[86] *Gozo and Comino Local Plan*, Maps 13.1-A and 14.8-E.

[87] Ibid., Map 13.1-A. Vide also Structure Plan Policies RCO 11 and 12.

[88] EIS, Chapter 1, p.9.

[89] *Gozo and Comino Local Plan*, Map 13.1-B.

[90] Vide also *Explanatory Memorandum of Structure Plan*, para.15.34-15.40.

[91] *Gozo and Comino Local Plan*, Map 13.2.

[92] Ibid., Map 13.3.

5.3 *Gozo and Comino Local Plan* Policy GZ-COAS-2 lists Hondoq ir-Rummien as a beach which the Local Plan looks favourably at regenerating projects. Clause 14.8.4 of the Local Plan states that

> Hondoq ir-Rummien lies in a relatively dilapidated state and there is a dire need for upgrading and rehabilitation of the area…

According to the EIS,[93] this clause "clarifies Policy GZ-Qala-4" which states that the

> ... development project shall seek to provide the impetus for the realisation of Policy GZ-Qala-3 through the imposition of planning obligations.

5.4 *Gozo and Comino Local Plan* Policy GZ-Qala-3 looks favourably at proposals to upgrade the beach facilities at Hondoq ir-Rummien whilst Policy GZ-Qala-4 makes a provision re excavation of mineral reserves.[94] Policy GZ-Qala-3 solicits for the regeneration of the quarry at Hondoq ir-Rummien:

> MEPA will favourably consider proposals from public agencies, which have the endorsement of both the Local Council of Qala as well as Central Government, to upgrade beach facilities at Hondoq ir-Rummien. The upgrade should address the following objectives:
>
> - to rehabilitate the damaged landscape;
> - to provide basic beach amenities (e.g. changing rooms and showers);
> - to encourage unrestricted public access to the beach; and
> - the built facilities provided shall be designed in a manner which is unobtrusive and complement the surrounding environment.

5.5 *Gozo and Comino Local Plan* Policy GZ-TRAN-13 favours the development of "destination ports in specific areas …in order to improve the tourism product. Upgrade the facilities for boating and yachting while protecting the environmental resources…include Hondoq ir-Rummien;" whilst *Gozo and Comino Local Plan* Map 14.8-E marks the quarry for tourism and marine-related uses.[95]

[93] EIS, Preamble, p.5.

[94] Ibid., Chapter 3, p.3.

[95] EIS, Chapter 1, p.11.

6.0 Challenges/Impacts and Mitigation Measures

6.1 The EIS classifies challenges/impacts in two, namely those arising during the Excavation/Construction Phase and those arising during the operational phase. It states that[96]

> Unless the new design of the project and the significant mitigating measures are put in place, the project could not be considered to be environmentally sensitive…

6.2 Excavation/Construction Phase

6.2.1 The site of the proposed development is in a Rural Conservation Area and Outside Development Zone. It occurs in a site of scientific importance (geology).[97] Proposed excavations will have a significant negative impact and will "visibly impair pristine geomorphological features."[98] The site is of high landscape value: as per Map13.1-B of the *Gozo and Comino Local Plan*.[99] As an Area of High Landscape Value, it has to conform to *Gozo and Comino Local Plan* Policy GZ-RLCN-1 which prohibits new developments in such areas. Area to the east of Hondoq ir-Rummien is classified as a Dark Sky Heritage Area in terms Map 13.8 of the *Gozo and Comino Local Plan* and thus, the farm that is being proposed to be developed to the east of the project will not be lit to act as a buffer between the project and the Dark Sky Heritage Area.[100] The project will be lit using "down lighters and more efficient lighting systems."[101]

In section 3 there is no mention of legislation preventing the handling and transport of clay, which will be carried out during the construction phase.

[96] Ibid., Non-Technical Summary, p.5.

[97] Structure Plan Policies RCO11 and 12.

[98] EIS, Chapter 4, p.62, para.4.6.2.6.

[99] Cfr. Ibid., Non-Technical Summary, pp.10,15&17, Chapter 1, p.9.

[100] Ibid., Chapter 1, p.10.

[101] Ibid., pp.11&88.

6.2.2 The disused quarry has further mineral reserves and thus it will be excavated up to -4m below MSL in accordance with Structure Plan Policy MIN 1 in order "to create a seawater inlet at the heart of the quarry."[102] Plant assemblages in quarry have widespread distribution in the Maltese Islands and hence project has low impact on biological diversity.[103] However, rocky escarpment on the eastern segment of the study area and the area immediately beneath it, is "of considerable ecological value … and their obliteration would constitute an irreversible impact of major significance" especially tree spurge assemblages and the freshwater rockpool. A buffer zone has been created between the rock pool and the development.[104] "Therefore, the residual impact of the project on this specific area is …considered to be non-existent… ."

6.2.3 The area to the west between the old and new access road, measuring circa 2529m^2,[105] is listed as Level 2 and 3 area of ecological importance, however, it is disturbed due to fly-tipping and due to the road construction works.

> It is being suggested that the area has to be excavated especially since the project had to move towards the west in order to ensure that no rockpools were affected by the proposed development…[106]

6.2.4 On the eastern extremity of the site there is a wedge of disturbed land measuring 1222m^2,[107] characterized by a significant fault, which supports a main rock-pool with a number of smaller ones. This rock pool will be obliterated by the development.[108]

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[102] Ibid., Preamble, p.5.

[103] Ibid., Chapter 4, p.15, para. 4.3.2.2.

[104] Ibid., pp.15-16, para.4.3.2.3.

[105] Ibid., Chapter 5, p.2.

[106] "It is pertinent to point out that a small part of the site … [for development] lies outside the area earmarked for development. Although extensive studies have shown that the area is disturbed, yet this location to the west of the quarry site and sandwiched between the existing road and the road that in the past led traffic to the lower end of Hondoq ir-Rummien is designated by the … Plan as a Level 2 and Level 3 site of Ecological Importance" (Ibid., Non-Technical Summary, p.17).

[107] Ibid., Chapter 5, p.2.

[108] Ibid., Non-Technical Summary, p.25.

6.2.5 Blue Clay will be exposed during excavation, leading to structural impacts. The EIS states that

> Exposing this clay [at the eastern boundary of the site] by excavating the coralline limestone could lead to structural instability of the clay and unless protected it will tend to slump down the excavation face. This formation [Blue Clay] is also protected by legislation and permission to make any intervention on it may not be easy to obtain.[109]

The faults can have a structural impact especially when in contact with the Blue Clay; exposing the fault-plane by excavations may destabilise the exposed Blue Clay.[110]

6.2.6 The site is in the vicinity of Il-Wardija perched aquifer. The EIS states that

> It is considered that the perched aquifers would be unaffected by the proposed development at Hondoq Ir-Rummien. Any excavations performed within the Lower Coralline outcrop at Hondoq ir-Rummien will not have any direct or indirect impact on the integrity of this aquifer and the cisterns dug therein ….[111]

6.2.7 Although the closest public borehole is located some 3.5km to the west of the site, further excavation of the quarry area impacts on the mean sea level aquifer.[112] Furthermore, although some 15,000m^3 less of fresh water could be contained within the Lower Aquifer, this will not adversely affect water extraction by the WSC.[113] The EIS states that the project

> …will result in a decrease in infiltration and groundwater recharge to the aquifer underlying the site. The groundwater resource at the site is not significant and the extent of recharge is considered to be small anyway since most of the runoff runs into the sea. The groundwater recharge project will recharge the aquifer with a

[109] Ibid., Chapter 2, p.86, para.2.5.1.2.2.7.

[110] Ibid., Chapter 2, p.87, para.2.5.1.3.4.
Although the Blue Clay will not be touched, developments which render the Blue Clay slopes unstable have high negative impact (Ibid., Chapter 4, pp. 60&63).

[111] Ibid., Chapter 2, p.100, para 2.5.2.2.2.5.

[112] Ibid., Non-Technical Summary, p.15.

[113] Ibid., Non-Technical Summary, pp.19&29 and Chapter 4, p.66, Tables 4-9 & 4-10.

> combination of harvested rainwater, pre-treated runoff and treated sewage effluent that would be surplus to the requirements of the development.[114]

It further states that

> The hydrological impact of this change in land use is a decrease in groundwater recharge to the aquifer underlying the site. However, it has been seen that the groundwater resource at the site is not significant. This is more than compensated for by the proposed groundwater recharge project …The overall impact on the project on the hydrology of the area can considered to be of a medium extent and a permanent one.[115]

6.2.8 During construction, a temporary access road has to be constructed for the public using the beach.

> This road passes through some stretches of Euphorbia garigue… Through exact identification it is expected that this will enable the road to be constructed without significantly affecting any pristine habitats;
>
> Intervention in the area is inevitable; even though adverse in nature.

The EIS also states[116] that

> … where the development impinges on the garigue found to the west of the quarry, it is considered that the impact will be significant. It is pertinent to point out that the garigue being impinged upon only measures 0.9% of the total area earmarked for conservation.

6.2.9 The noise and vibrations expected due to quarry activities "will not affect any residential areas [which are 400-500m away] as it will be insignificant."[117] To prevent and/or

[114] Ibid., Chapter 4, p.65, para. 4.6.3.4.

[115] Ibid., Chapter 4, p.65, para. 4.6.3.6; Vide also Tables 4-9 & 4-10 as a summary of above. Groundwater recharge "will take the form of the construction of a number of injection wells at selected points around the periphery of the proposed development through which fresh water will be injected so as to mitigate against seawater encroachment…. The details of the groundwater recharge project will have to be discussed with MRA." (Ibid., Chapter 5, p.23, para.5.1.11.1).

[116] Ibid., Non-Technical Summary, p.26. Chapter 4, p.9 states that this garigue "can be considered to be generally disturbed due to fly-tipping." Para. 4.3.4.2: list of mitigation measures to prevent fly-tipping and dumping during the construction phase.

[117] Ibid., Chapter 4, p.85, para.4.10.4.

minimize transmission of noise and vibrations to the water during the quarrying operation, "it is being proposed that during the quarrying operations a trench will be cut in the rock along the sea-shore and filled with aerated water."[118]

6.2.10 Traffic is one of the major impacts that this project will have.[119] The project plans to widen the Hondoq ir-Rummien road leading to Triq tal-Qasam.[120] The EIS highlights that increased traffic loads would have a negative impact on Qala village and mentions that the Local Council is concerned about this.[121] However (i) a temporary road will be set up during the excavation and construction period; (ii) a batching plant will be set on site; (iii) all surfacing and paving blocks will be dressed on site (iv) tipper semi-trailers will be used as a dust attenuation measure and (v) strict time and day limits when heavy traffic is to be allowed through inhabited zones.

6.2.11 A temporary road will be built for excavation trucks using an ad hoc route through agrarian land – with no historical remains - in order to by pass Qala village and Tal-hamlet. The route will be reverted back to agrarian land after the construction phase and farmers compensated.[122] The construction of the temporary road does not seem to impact significant archaeological materials except some damaged rubble walls which will be repaired post construction phase.[123]

With respect to noise pollution due to vehicular traffic, the EIS states that "If an alternative route is not found, it is actively suggested that double glazing be introduced at the developers cost to all residencies within the hamlet of tal-Kuncizzjoni abutting on the road leading to Ta' Gafan quarries" (Ibid., Non-Technical Summary pp.19&33, Chapter 5, p.28, para.5.2.4.5).
Re vibration mitigation vide para 4.4.2.7.3; it states that an air curtain will be set up during construction phase.

[118] Ibid., Chapter 2, p.93.

[119] Ibid., Chapter 4, p.127, para.4.20.7.

[120] Ibid., p.88, para.4.11.1.3.

[121] Ibid., p.109, para.4.14.8.3.

[122] Ibid., Non-Technical Summary, p.13. Vide also Annex: Alternative Route, Coordinated/Technical Report Part 1 of the EIS.

[123] Ibid., Chapter 2, p.118.

6.2.12 Main impact of dust during excavation will be on the marine environment.[124] "The topography of the site suggests that waterborne particulate would flow towards the shoreline indicating marine assemblages as receptors" namely littoral and benthic communities. Particulate matter suspended in surface runoff will be tackled but "windborne dust is more difficult to control or mitigate against."[125] The EIS states that windborne particles, especially during the construction phase, and material spill over can impact negatively on marine receptors, notably those of conservation significance found on site such as *Cystoseira* species, *Cladocora caespitosa* (a coral), the sea grasses *Posidonia oceanica* and *Cymodocea nodosa* and *Pinna nobilis* (a shell). Increased turbidity will negatively impact the fish fauna.[126]

> The greatest influence would be Hondoq Bay and the offshore areas…[127]

6.2.13 The EIS mentions that the quarry itself would prevent migration of dust particles if the wind is southern or eastern.[128] The prevailing westerly winds would deposit dust to agricultural areas lying at the eastern side. The "…all dust particles … shall be beneficial to the soil surface." !!!

6.2.14 Excavation will use dust attenuation systems through the use of emulsion dust suppressants:[129]

> Dust generation is considered to be the most significant environmental impact if not mitigated against. Significant measures based on converting air-borne dust to sludge will be used.[130]

Fines will be prevented from entering the water column through special methods of construction of sea defences[131]and through a system of dust sludge containment and

[124] Ibid., Chapter 4, p.18, para. 4.3.3.3.

[125] Ibid., para.4.3.3.4.

[126] Ibid., Chapter 4, p.30, para.4.4.2.2.6 & para.4.4.2.3.3.

[127] Ibid., Chapter 4, p.91, para. 4.11.2.4.

[128] Ibid., para.4.11.2.3.

[129] Ibid., Non-Technical Summary, p.22.

[130] Ibid., p.19.

water purification – a system of settling tanks and dams to lead to filter units; effluent to sea will be monitored for turbidity.[132]

6.2.15 During excavation/construction, surface runoff will be diverted to the sea but first passed through a sludge processing facility:

> The initial excavations will clear the way for the construction of a deep sump excavated at the southern end of the site…rainwater runoff and groundwater infiltration will drain to this sump…from where it would be pumped to the sludge processing facility….[133]

During storm bursts, the rainwater run-off will be diverted to troughs.[134] During excavation, trucks destined to Ta' Gafan quarry will be EURO 5 compliant and wheel washed, hence wheel washing facility will be set up on site.[135]

6.2.16 Sea defence works will obliterate the marine habitat and may change water circulation pattern. Boulder beach, which will become the marina entrance, will be permanently obliterated:

> ... marine habitats and biota in the area where the marine constructions will be located will be permanently obliterated.[136]

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[131] Ibid., p.19. Vide also ibid, p.21.

[132] Ibid., Non-Technical Summary, p.21. Vide also Figure 5.8.

[133] Ibid., Chapter 1, p.66.

[134] Ibid., Chapter 1, p.70. Vide also Table1.18 (p.71) for alternative options.

[135] Ibid., Non-Technical Summary, p.22, Chapter 4, p.92.
Wheel washing water will be connected to the sedimentation basin for settling and reused, and not discharged to the storm water outlet (Ibid., Chapter 1, p.130).
EURO 5 standard applies to new vehicles re emission suppression. It is an inherent standard applied to the design of vehicles. Does this mean that contractor engaged by the developer will be using only new trucks during excavation?!!! (Ibid., Non-Technical Summary, p.22).
Note that "the Euro 5 standard will come into force on 1 September 2009 for the approval of vehicles, and from 1 January 2011 for the registration and sale of new types of cars" (europa.eu /legislation_summaries/internal_market/single_market_for_goods/motor_vehicles/interactions_industry_policies/l28186_en.htm).

[136] Ibid., Chapter 4, p.32, para,4.4.2.3.2.
Considering the footprint of the sea defence works "the marine works will not impinge on any fauna and flora…considered …of significant conservation value" (Ibid, p.33, para.4.4.2.3.4).

Of conservation importance are the algal assemblages colonising the hard substrata such as bedrock and larger boulders (algae include *Cystoseira* and *Cladocora caespitosa*).

> Although not expected, construction of the sea defences may change the existing water circulation patterns, possibly resulting in a change in the distribution of benthic assemblages.[137]

6.2.17 According to para.1.5.2.11 of the EIS, Option 3 would:

1. eliminate the visual impact of the sea defence works from the beach area,
2. reduce the marina footprint,
3. satisfy the Habitats Directive,
4. eliminate all impact on the stability of the existing beach, and
5. enhance the safety of the swimming zone.

6.2.18 The EIS notes that the internationally protected *Posidonia oceanica* meadows will not be affected and the views from the bay will not be affected either by the proposed sea defences.[138] This statement is false. A critique of the marine ecological impact study of the EIS will be addressed by Alan Deidun in his technical note.

6.2.19 With respect to the visual impact of the proposed project, the development will not be seen from eastern Comino and will not be seen as obtrusive from the Gozo Malta Channel since it will be built:

> ... below the rim of the excavated depression, and [is] well masked by the outcrops of land to the west of the site…. The development will be primarily be seen from the Gozo Comino channel.[139]

[137] Ibid., para. 4.4.2.3.3.
However para.4.4.2.3.6 (pp.34-5) insists that sea defence works will probably not result in changes in water circulation and hence no probable impact on sandy beach, as predicted from models (Vide also Chapter 1, p.143). Para 4.4.3.3.2.1 (pp.48-9) states that "Therefore the impact of the proposed coastline alterations on the local hydrodynamics will be insignificant … [especially since] the sand…is primarily shore originated and not sea-current dependent."

[138] Ibid., Non-Technical Summary, p.12.

[139] Ibid., p.29.

The visual impact on visitors to the area or people using the beach or farmers is expected to be high since:

> …the immediate scene …will change substantially, not only because of the physical development but also because of attendant increases in the density of people in the area, and of traffic…The significance of the project on those utilising Hondoq ir-Rummien can be considered to be high.[140]

The visual impact on visitors to Comino is expected to be moderate since although there will be a change in the scene it will not be in the immediate vicinity.[141]

6.2.20 The EIS argues that

> …since this [garigue] area will be upgraded, the overall setting of the chapel will be enhanced….[142]

and states that "The features within the area of study fall outside the area to be developed" except for two field rooms occurring within site and will therefore are obliterated.[143] There is another field room close to the chapel which lies on land owned by the developer and which has "features worthy of attention".

> Should one consider the removal of the field rooms being investigated… it is being recommended that the developer is obliged to restore [this] the field room….[144]

[140] Ibid., Chapter 4, p.72, para.4.7.3.

[141] Ibid., Chapter 4, p.73.
According to the EIS (Chapter 4, p.76), a negative visual impact will be from viewpoints 1, 4, 5 and 6 (see p.74):

- Re viewpoint 1: "The development detracts from the cohesiveness and continuity of the landscape…";
- Re viewpoint 4: "The present situation has a certain timeless quality, in that there is nothing specifically and noticeably anthropogenic and/or modern in the landscape; that quality would likely to be lost…";
- Re viewpoint 5: the project will produce a "much 'busier' landscape";
- Re viewpoint 6: "…the area has a semi-natural and rural landscape, quite characteristic of the Maltese Islands. This would, however, be completely altered, … [project] producing a landscape more typical of resorts. The proposed marina, and the surrounding constructions, do not appear to blend in well with the landscape context, as the character of the two is fundamentally different."

[142] Ibid., Chapter 4, p.78, para.4.8.3.

[143] Ibid., pp.80-1, Para.4.8.6 (features 20 and 22 are plotted on map reproduced on p.81

[144] Ibid., p.81.

6.3 Operational Phase

6.3.1 During the operational phase, entities servicing complex have to use the road that passes through Kuncizzjoni.[145] A high risk of vermin is present and no mitigation measures are mentioned nor any comments put forth by the EIS on the impacts on natural areas.[146] The general activity in the area would increase drastically thus "increasing stresses on sensitive biological receptors including vertebrates."[147]

6.3.2 Maritime traffic will increase significantly and the passage and berthing of yachts "will impact the…marine environment" through increased turbidity (due to wave action), general disturbance (especially at marina entrance), shading of the seabed, and leakage. This does not apply to the marina proper since this will be created from dry land, but anchoring blocks will obliterate any biota present underneath.[148] The EIS states that such increased turbidity and possible increased nutrient loading may lead to (i) decreased fish fauna (ii) eutrophication episodes.[149] Increased marine traffic will ward off cetaceans since they are sensitive to noise, however the area is currently being used by two species of dolphins.[150]

6.3.3 Possible metal ion pollution is highest at marina and near the entrance where the more sensitive species will be obliterated. Para states that given the configuration of the marina, pollution of the marina entrance and vicinities is "highly unlikely".[151] The EIS

[145] Ibid., Non-Technical Summary, p.14.

[146] Ibid., Chapter 4, p.27.

[147] Ibid., para 4.3.10.1.
The EIS states that "the construction of pathways using kerb stones should be discouraged as this provides a significant barrier for invertebrates and possibly small mammals such as shrews…" (Ibid).

[148] Ibid., Chapter 4, p.37, para. 4.4.2.5.1.

[149] Ibid., p.38, para.4.4.2.5.4.

[150] Ibid., Chapter 5, p.21, para.5.1.10.1.7.

[151] Ibid., Chapter 4, pp.39-40., para.4.4.2.6.4.

suggests that marina seabed is periodically cleaned to collect sediments to prevent migration to marine environment.

6.3.4 During the operational phase there is an increased risk of operational releases of hydrocarbons into the marine environment. Given the current very low levels of hydrocarbons, the risk is of medium significance. Mitigating measures are basically management in nature through constant patrolling and availability of oil combating systems.[152]

7.0 Some Comments on the EIS

7.1 The following are a few comments of the EIS as submitted. Comments relating to ecology, marine and terrestrial, and socio-economics of the project are not included as they fall within the remit of technical submissions of Alan Deidun and Steve Vella respectively. Also, no comments can be furnished on the traffic generated both during construction and operational phases as the *Traffic Impact Statement* related to the proposed development was not made available. Traffic is a significant parameter of the project and, just on its merits, can be a reason for the project to be unfeasible. This statement should not be read that other parameters are not of sufficient merit to render the project environmentally unacceptable. One such a parameter is the impact on the pristine marine environs.

7.2 "… during the operation of the project it is expected that recharge of the water table will be integral to the water management process of the complex. This is necessary to mitigate against the loss of containment."[153] The EIS states that this will be discussed with MRA.[154] Use of second class water to replenish the aquifer by direct injection is high risk; it is better to utilise the excess water for landscaping purposes in other areas of Gozo as a planning gain, indirectly replenishing the aquifer through percolation, a more

[152] Ibid., p.52, para.4.4.3.3.5.3.

[153] Ibid., Non-Technical Summary, pp.19&29.

[154] Ibid., Chapter 1, p.156, para.1.3.2.3.

appropriate pathway. Polishing of second class water is a high cost and high risk option and it likely to be abandoned after some time.

7.3 All maps presented in EIS are unclear, especially Figure 26 (dry season ecological survey), Figure 27 (wet season ecological survey), Figure 2.7, Figures 1.35-1.39 (excavation scheme), Figure 1.43, 44 (alternative route), Figure 1-77 (batching plant…), Figure 2.26 (physical bottom types), Figure 2.30 (marine benthic), Map 2 (agricultural description) and Map 2 (temporary road), Figure 2.63 (surface hydrology). There is no figure clearly indicating the outline of the project as against say the ecology of the area.

7.4 "The property by Gozo Prestige Holidays Ltd includes the site of the proposed development as well as the agricultural land to the east, the garigue to the west and the coastal area".[155] Are not all coastal areas public, are they not government property?

7.5 The EIS mentions "recycling … clay produced and found on site as a landscaping subsoil."[156] Structure Plan includes a blanket prohibition against the extraction of clay. The EIS states the "clay mounds, previously deposited from other development projects elsewhere in Gozo, to be sent for deposit in quarries estimated at 40,000cu.m." which will be deposited in Ta' Klement Quarry.[157]

7.6 According to Figs 2.26 and 2.30 (unclear) the immediate coastal area of the site is predominantly boulder fields with infralittoral algae with patches of biocoenoses of *Posidonia oceanica* meadows. Will sea defence works affect these? There is no mention how the sea defence works might affect the sedimentation process and hence benthic habitats. All is written in Chp1, p.143 states that "…the new structures construction along the beach as sea defences are not likely to impinge on the long shore sediment transport process. The general lack of mobility in the near shore zone … suggests that the beach is not reliant on a significant supply of sediment."[158]

[155] Ibid., Preamble, p.4.

[156] Ibid., Chapter 1, p.12.

[157] Ibid., p.55.

[158] Ibid., p.143.

7.7 There is no mention on the impact of the new public access road on archaeological features on site.

7.8 An unnumbered figure in the EIS apparently used to depict the sampling points for air quality, does not indicate all the sampling points.[159]

7.9 An air quality baseline study was carried out in winter 2007: no comparative study was carried out in summer, a period of higher dust and vehicular traffic levels. There is no mention of how the parameters were tested.

7.10 In section 3 there is no mention of legislation preventing the handling and transport of clay, which will be carried out during the construction phase.

7.11 The EIS states[160] that

> It is expected that an experiment to re-create the garigue habitat on the roofs of the buildings being built underneath the lip of this…[western] area will be made…in order that actual development will be undertaken. This will enable the seamless continuation of the garigue habitat when viewed from the higher area of the site, especially the Garigue Park…

Is this statement a mere desire/vision or a selling ploy?

7.12 Table 4.21 mentions that during interviews with residents of Qala, Nadur and Ghajnsielem, it was asked whether those interviewed liked the idea that the sandy beach will be conserved and 90% answered in the affirmative: the sandy beach does not form part of the project and so this question is superfluous. Two surveys were carried out: one for all Gozitan residents and another specifically for Qala, Nadur and Ghajnsielem: however these differed: in the three village survey, artistic impressions were shown to those interviewed and the project discussed. Hence one cannot really compare the two surveys.

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[159] Ibid., Chapter 2, p.122.

[160] Ibid., Chapter 4, p.8.

8.0 Critique

8.1.0 Defining Environmental Impact Assessment (EIA)

8.1.1 Hon. Justice La Forest in the case *Friends of the Oldman v. Canada et al.* (1991) defines an EIA as

> ... in its simplest form, a planning tool that is now generally regarded as an integral component of sound decision making... As a planning tool it has both an information gathering and decision making component which provides the decision maker with an objective basis for granting or denying approval for a proposed development.

8.1.2 Alan Gilpin[161] states that the main purpose of an EIA is

> to give the environment its due place in the decision making process by clearly evaluating the environmental consequences of a proposed activity before action is taken. The concept has ramifications in the long run for almost all development activity because sustainable development depends on protecting the natural resources which is the foundation for further development.

8.1.3 In terms of European Union Directive 85/337/EEC on Environmental Impact Assessments, known as the *EIA Directive*,[162] an environmental impact assessment must cover the following seven major areas: description of the project, alternatives, description of the environment, description of the significant effects on the environment, mitigating measures, non-technical summary and lack of know-how/technical difficulties. An EIS is the document including these assessments. Impartiality in the preparation of the EIS is of paramount significance for well-informed decision-making.

[161] Gilpin, A. (1995) *Environmental Impact Assessment - Cutting Edge for the twenty-first century*, Cambridge University Press.

[162] European Union Directive 85/337/EEC was first introduced in 1985 and was amended in 1997 and in 2003, the later amendment following EU signature of the 1998 Aarhus Convention.

8.2.0 Problem Definition

8.2.1 An EIS is neither a means of justifying a development proposal nor a mode of selling one's idea to the general public. Justification is shaped by the way the issue is posted such that the proposed development is believed to be addressing. Although the scope of what is included in an EIS is outlined in the terms of reference issued by the Malta Environment and Planning Authority, what and how it is covered in the study is also a matter of judgement of the entity/ies involved in drafting the EIS. The terms of reference were issued following consultation with entities and other interested parties but the scope was still narrow thus rendering the proposed development more appealing as wider impacts are not included. The terms of reference called for an impact assessment of the project on the cultural assets.[163] The assessment, within the study area defined by the consultants engaged in drafting the respective report, looked at the artefacts and ignored the spirit underlying cultural heritage, namely, memory.[164]

8.2.2 For an informed, less subjective, judgements on types of impacts generated by the development proposal, an imperative decision in the initial preparation of an EIS is the scale of the study. The EIS does not include a definite scale of the study, both in terms of extent and in terms of thoroughness. The study area should have been clearly defined on scientific criteria. Para 7.3 above already highlighted the lack of clarity in the figures and maps presented in the EIS. Furthermore, the various parameters and results derived from the various technical reports were not critically coordinated, so were the resulting links and/or impacts.

8.2.3 Analyses undertaken as part of the numerous technical reports prepared in the course of the environmental impact assessment can be interpreted in various manners. The EIS puts forth blatant interpretations but lacks a general interpretation of the coordinated assessment. A development proposal such as the Hondoq project is, in reality, burdened with uncertainties. The EIS document is formulated such to avoid the notion of

[163] Reproduced as Annex to Coordinated/Technical Report Part 1 of the EIS.

[164] The archaeological survey, undertaken by T. Gambin, E. Azzopardi and F. Theuma, is included as Appendix Volume 1 of the EIS.

uncertainty cropping up once read. The following two arguments, both contained in Chapter 4 of the EIS, help illustrate such logic. The first relates to sea defence works whilst the second relates to operational leakage.

8.2.3.1 The argument put forward with respect to sea defence works and its impact(s) on water circulation pattern reads thus:

> Although not expected, construction of the sea defences may change the existing water circulation patterns, possibly resulting in a change in the distribution of benthic assemblages[165]

In Para. 4.4.2.3.6, the EIS insists that sea defence works will probably not result in changes in water circulation and hence no probable impact on sandy beach, as predicted from models.[166]

> Therefore the impact of the proposed coastline alterations on the local hydrodynamics will be **insignificant** [bold in original text]. This is further reinforced by the fact that the sand regime at Hondoq ir-Rummien Valley is primarily shore originated and not sea-current dependent.[167]

8.2.3.2 The argument with respect to operational leakages commences by the EIS stating that operational leakages of fuel is nonexistent since marina will not have fuelling facilities, but operational leakage of sewage and oils and lubes is possible, although proposed pumps are designed to minimise this.[168]

> The significance of the resultant impact may be estimated to be at least of **medium** [bold in original text] importance.[169]

[165] EIS, Chapter 4, p.33, para.4.4.2.3.3.

[166] Vide also ibid, Chapter 1, p.143.

[167] Ibid., Chapter 4, p.48, para.4.4.3.3.2.1.

[168] Ibid., Chapter 4, p.37.
Given the pristine conditions of the current water quality, risk minimisation is not enough: risk should be eliminated completely.

[169] Ibid., Chapter 4, p.47, para.4.4.43.2.2.2.

Para. 4.4.3.3.5.3 states that

> …the rainwater runoff after passing through the settling tank will be passed through a propriety of oil separator…

to make sure that it is not contaminated with oils.

> In case of a major spill, the rubber dam will be raised to close off the marina to the open sea… It is highly unlikely that the waters outside the marina will be contaminated.
>
> … the likely occurrence of such an eventuality is highly unlikely given that … the walls and edges of the marina will de[s]igned in such a manner so as to be reversed and laid to falls inwards from the water's edge and all storm water passed through proprietary oil separator facilities spread throughout the marina.[170]

8.3.0 Significant Limitations of the EIS

8.3.1 A number of major limitations in the EIA process and in the EIS can be identified. Three main significant aspects which are inadequately addressed in the EIS are the socio-economic assessment, the impacts of the marina on the existing marine environs and assessment of traffic impacts. These aspects are distinct from one another and yet each, on its own merits and independent from any of the other aspects, is sufficient to prove that the development proposal is not environmentally sustainable and should be out rightly refused. This state of affairs becomes more acute given that all these aspects are present concurrently.

8.3.2 The first and the second aspects falls outside the remit of this technical note as stated in Para 7.1 above. The traffic impact statement is not yet furnished by the developer and thus, in the opinion of the author of this technical note, the EIA process and hence the EIS study, which does not include an assessment of traffic and its impacts, is not

[170] Ibid., Chapter 4, p.95.
Surface runoff will end up, after passing through settling tanks, in the marina basin and thence to open marine environment. Given the real possibility that marina basin would be polluted, the marina basin should be by-passed as is currently virtually happening. Confusingly enough para 4.4.2.6.3 (p.39) after stating that "runoff will transport material…into the marina basin and thence, into the sea outside…" later states that "Chemical and biological pollutants transported from the marina into the sea by storm water runoff is not possible, since the storm water system currently entering the site will be directed away from the site and access the sea directly."

complete. Traffic is an integral part of the development proposal and should not be dealt with independently under the guise of recent administrative procedure whereby traffic impact assessments do no longer fall within the responsibility of the Malta Environmental and Planning Authority but instead are the responsibility of the Malta Transport Authority. The EIS does include a discussion on traffic but it is not sufficient and adequate and falls well short of a traffic impact assessment.

8.3.3 Landscape values, whether geocultural or otherwise, are not addressed in the EIS. The natural environs are crucial to the evolution of the history of the site in geological, archaeological and historical time. The EIS, typical of similar studies in Malta, addresses landscaping from the point of view of how the place is seen visually. Topographical landscapes are ignored. The EIS states that the area "constitutes a comprehensive multi-faceted cultural landscape."[171] It actually lists three landscapes: cultic,[172] agricultural and maritime. The approach adopted in drafting the cultural assessment makes an attempt at a holistic approach as expounded by the various international conventions relating to cultural heritage. The site is not just the monument itself; its geo-cultural, anthropological and natural contexts in which it occurs amount to a significant part of the cultural heritage landscape.

8.4.0 Sacredness of the Site

8.4.1 Hondoq ir-Rummien is intimately linked with St. Corrado Confalonieri di Piacenza (1290-1351) who, according to tradition, lived in a small room in the fields adjacent to the church. The location of Hondoq ir-Rummien acquired reverence through its association with San Corrado.

> His cult survives to this day among the locals as the constantly burning candles and visits by the faithful indicate.[173]

[171] Ibid., Chapter 2, p. 118, para 2.7.2.5.

[172] The EIS identifies a "cultic landscape" as "The chapels in and around the area of study have, over the past centuries, provided the locals with a place of worship in what are surroundings of outstanding natural beauty, overlooking what is a unique view over the Gozo Channel" (Ibid).

[173] EIS, Archaeological Survey, p.9.

Other saintly hermits associated with this part of Qala includes Giacomo Romano and Fra Antonio Di San Carlo. The cave under the sanctuary of the Immaculate Conception,[174] a navigational landmark for over seven centuries, had been a centre of pilgrimage for over four centuries. A plea was made by the procurator of the sanctuary in late 1683 to the Grandmaster for land adjacent to the church for the erection of a small house to accommodate pilgrims who, until then, slept over inside the church.

8.4.2 The sacredness of a site manifests itself in the context of the beliefs of the community along tome. Hondoq ir-Rummien and the surrounding environs are not only sacred to the memory of these saintly men. This part of Qala, and further north, forms part of lands belonging to the Abbazzia di San Antonio Abbati, a foundation set up in the later part of the seventeenth century by Cosmana Navarra, a foundation which reinforced staunch Christian beliefs.[175]

8.4.3 The geographical area of Hondoq Ir-Rummien is sacred by virtue of its traditional cultural and religious significance. The proposed development is for leisure tourism and a marina. Such a development is incompatible with the existing environmental significance and impinges directly on this landscape with an adverse and irreversible impact on this sacred site. A scenario, fully compliment with existing local planning and respecting the memory and the sacredness of the landscape, is to re-utilize the existing industrial archaeological site, referred to by the developer as a disused quarry, for religious tourism. Facilities associated with, and supporting, religious tourism is congruent with the spirit of the site.

8.5.0 Final Comments

8.5.1 Sacredness has long been intrinsically associated with Hondoq Ir-Rummien and the surrounding environs, an association which dates back several centuries. Indeed, it is

[174] The church was enlarged in the 1650s and subsequently in the 1880s.

[175] A fraction of the territory of the Abbazzia has been developed over the past recent decades and an enforcement was duly served by the Malta Environment and Planning Authority on December 1, 2006.

the harbour (‘qala’) which gave name to the locality of Qala. Thus, Hondoq ir-Rummien gave identity to Qala; it has been a destination port for several centuries. The development project covered by planning application PA 3798/02 is a secular, hedonist, speculative project. It is a contemporary barbaric attempt to destroy a sacred landscape, to annihilate a site rooted in the memory and the spirit of Qala.

8.5.2 The proposed project for Hondoq Ir-Rummien will have an adverse impact on a sacred landscape. This landscape should be spared from destruction. The case of Hondoq ir-Rummien can be a first for the Malta Environment and Planning Authority if same start considering the protection of sacred sites through scheduling.