

IN THE HIGH COURT OF THE
HONG KONG SPECIAL ADMINISTRATIVE REGION
COURT OF APPEAL
CIVIL APPEAL NO. 84 OF 2011
(ON APPEAL FROM HCAL NO. 9 OF 2010)

BETWEEN

CHU YEE WAH

Applicant

and

DIRECTOR OF ENVIRONMENTAL
PROTECTION

Respondent

Before: Hon Tang VP, Hartmann JA and Chu JA in Court

Date of Hearing: 23– 25 August 2011

Date of Judgment: 27 September 2011

JUDGMENT

Hon Tang VP:

The Environmental Impact Assessment Ordinance (Cap. 499) ("EIAO")

1. These proceedings concern the Hong Kong section of the proposed Hong Kong-Zhuhai-Macau Bridge ("the HKZM Bridge") project. The HKZM Bridge runs across the waters of Lingdingyang in the Pearl River Estuary, and will connect the HKSAR, Zhuhai City in Guangdong Province and the Macau Special Administrative Region, as part of the construction project known as the "National High Speed Road Network Planning".

2. The Hong Kong section of the HKZM Bridge project consists of three main parts, namely (i) the HKZM Bridge Hong Kong Boundary Crossing Facilities ("the Boundary Crossing Facilities"), (ii) the HKZM Bridge Hong Kong section and North Lantau Highway Connection (also known as the HKZM Bridge Hong Kong Link Road) ("the Link Road"), and (iii) the Tuen Mun – Chek Lap Kok Link Road ("the TM-CLK Link"). Each of these sections is a designated project under the EIAO. Thus, I will begin with a survey of the provision of the EIAO.

3. EIAO provides a statutory process for the proponent of a designated project to obtain an environment permit without which construction of a designated project may not commence¹.

4. Section 16 of EIAO provides for the issue of:

"(1) ... technical memorandums setting out principles, procedures, guidelines, requirements and criteria for-

- (a) the technical content of a project profile;
- (b) the technical content of an environmental impact assessment study brief or environmental impact assessment report;
- (c) deciding whether a designated project is environmentally acceptable;
- (d) deciding whether an environmental impact assessment report meets the requirements of the environmental impact assessment study brief;
- (e) deciding whether the Director will permit an applicant to apply directly for an environmental permit under section 5(9), (10) or (11);
- (f) resolving conflicts on the content of the environmental impact assessment study brief and the environmental impact assessment report;
- (g) taking advice from other authorities;

¹ Cap. 499, section 9

- (h) deciding what is a material change, addition or alteration to an environmental impact or to a designated project;
- (i) the issue of environmental permits;
- (j) the imposition of environmental monitoring and audit requirements for designated projects as conditions in environmental permits."

5. A technical memorandum ("TM") is subject to negative vetting by the Legislative Council ("LegCo")². It is not subsidiary legislation and only one³ TM has been issued. That was gazetted on 16 May 1997 and came "into operation on the expiry of the period for debate of the technical memorandum in the Legislative Council"⁴. The Director "shall be guided by all applicable technical memorandums when deciding on matters under sections 5, 6, 8, 10, 12, 13 and 14."⁵

6. The process commences with the proponent of a designated project applying to the Director for an environmental impact assessment study brief⁶, by submitting, *inter alia*, "a project profile that complies with the technical memorandum"⁷ which is required to be advertised "in a Chinese language daily newspaper and an English language daily newspaper"⁸. The Director is also required to "inform the Advisory Council on the Environment (ACE) on the receipt of a project profile and forward a copy of the project profile to it"⁹.

² Cap. 499, section 16(6)

³ It is relevant to note that on 29 January 1997 at the second reading of the bill, Ms Christine Loh said "the real heart of the Bill is in the Technical memorandum" and "if you want to know how much noise, air or water pollution ... we are prepared to tolerate ... - you will have to turn to the Annexes appended to the Bill's forthcoming (TM). That is where you will find the specific, technical criteria ... and guidelines that answer such questions" (page 70). It is worth noting that she said the draft TM "generally seems to have set appropriately detailed and rigorous environmental standards". Later in the same speech, she pointed out the Director "is legally bound to observe the specific environmental standards contained in the all-important Annexes in the (TM)".

⁴ Cap. 499, section 16(10)

⁵ Cap. 499, section 16(4)

⁶ Cap. 499, section 5(1)(a)

⁷ Cap. 499, section 5(2)(b)

⁸ Cap. 499, section 5(2)(c)

⁹ Cap. 499, section 5(3)

7. Within 14 days of receipt of the application the Director may request the applicant "to give further information concerning the project profile or notify the applicant of any defects in the application"¹⁰.

"(5) If the Director requires further information, the Director may also require the applicant to advertise the availability of the additional information or details relating to the information.

(6) The Advisory Council on the Environment and any person may comment on a project profile to the Director on environmental issues covered by the technical memorandum relevant ... within 14 days of its being advertised. ...",

whose comments, if any, shall be considered by the Director "in drawing up the study brief for the designated project"¹¹.

8. The Director is then required

"(7) ... within 45 days of receiving the application or further information under subsection (4)-

(a) issue to the applicant an environmental impact assessment study brief;"¹²

9. The Director is taken to have given his consent for an applicant to apply directly for an environmental permit if he has not given notice in writing refusing permission within 45 days¹³.

10. When a study brief has been issued, the applicant has to prepare an environmental impact assessment report in accordance with the study brief and the TM, which shall be delivered to the Director who has to decide within 60 days whether the report "meets the requirements of the environmental impact

¹⁰ Cap. 499, section 5(4)

¹¹ Cap. 499, section 5(6)

¹² Under certain circumstances, for example, where "the environmental impact of the project is adequately assessed in an environmental impact assessment report in the register", and remained relevant, the Director may permit an applicant to apply directly for an environment permit. This has no relevance here. (Cap. 499, sections 5(9) and 5(11))

¹³ Cap. 499, section 5(8). Such default provision is found throughout the process, see sections 6(5), 8(4) and 10(4).

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assessment study brief and the technical memorandum", in which event¹⁴, the Director

"(4) ... shall advise the applicant when the report must be exhibited for public inspection, whether the advertisement is to contain any specific material and whether a submission to the Advisory Council on the Environment or its subcommittee is required."¹⁵

11. If he decides that the report does not meet the requirements, "he shall advise the applicant of the reasons why the report is unacceptable". (Section 6(6))

12. Section 7 deals with "Public inspection of reports" for a period of 30 days, as well as advertisements of the availability of the report once every 10 days during that period, as well as the content of the advertisement¹⁶.

13. Section 7(5) goes to provide that:

"(5) The Advisory Council on the Environment may give any comments it has on the report to the Director within 60 days of its receiving a copy of the report."

14. Section 8 deals with the approval of the environmental impact assessment (EIA) report. Section 8(1) and (2) provide that:

"(1) The Director may, within 14 days of the expiry of the public inspection period or the receipt of comments from the Advisory Council on the Environment, whichever is later, ask an applicant in writing to give him the ~~information~~ he requires to decide whether to approve an environmental impact assessment report. The Director shall supply the applicant with one set of written comments received from members of the public and the Advisory Council on the Environment free of charge where comments have been received.

(2) The Director shall not make a request for further information where comments have not been submitted to him on the report as a result of the public consultation or from the Advisory Council on the Environment."

¹⁴ In default, the Director is taken to have decided that the report meets the requirement. (Cap. 499, section 6(5))

¹⁵ Cap. 499, section 6(4)

¹⁶ which includes information that comments by members of the public may be given before the expiration of the period of public consultation expires (Cap. 499, section 7(2)(c)).

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15. The Director is given 30 days of the later of

(a) the expiry of the public inspection period;

(b) the receipt of comments from the ACE; or

(c) the receipt of information under subsection (1)

within which to "approve, approve with conditions or reject" the report. He is taken to have approved without condition a report if he has not given notice within the relevant period. (Section 8(4))

"(6) If the Director rejects an environmental impact assessment report, he shall give the applicant the reasons for the rejection."
Section 8(6)

16. After the approval of the report, the proponent may apply for an environment permit under section 10.

17. Section 10(2) provides:

"(2) In granting or refusing an environmental permit, the Director shall have regard to-

(a) the approved environmental impact assessment report on the register;

(b) the attainment and maintenance of an acceptable environmental quality;

(c) whether the environmental impact caused or experienced by the designated project is or is likely to be prejudicial to the health or well being of people, flora, fauna or ecosystems;

(d) any relevant technical memorandum;

(e) any environmental impact assessment report approved under this Ordinance or any conditions in an approval; and

(f) the comments, if any, submitted to him under section 7 on the report."

18. Section 10(3) gives the Director 30 days¹⁷ to reject the permit or approve it with conditions, of the later of:

- "(a) the receipt of the application;
- (b) the expiry of the public inspection period of the environmental impact assessment report under section 7;
- (c) the receipt of comments from the (ACE) on the environmental impact assessment report; or
- (d) the receipt of information under section 8(1).

19. However, the powers of the Director are limited by the following provisions:

"10(5) The Director may issue an environmental permit subject to the conditions, if any, as the Director thinks fit and specifies in the permit.

(6) Without limiting the general nature of conditions which the Director may include in an environmental permit, he may include conditions relating to the matters set out in Schedule 4 but shall be guided by the relevant technical memorandum.

(7) A condition specified in an environmental permit may be subject to a qualification, restriction or requirement concerning the location, time or period of the condition's application.

(8) The Director shall not specify in an environmental permit conditions that might be included in approval of any nature under another pollution control Ordinance unless-

(a) the conditions are necessary to meet the requirements of the technical memorandum or the environmental impact assessment study brief; and

(b) the environmental impact assessment report approved for the project or the conditions on which the applicant was allowed to apply directly for an environmental permit under section 5 specified expressly that the environmental permit may include the conditions.

(9) If the environmental permit is refused, the Director shall advise the applicant and give the reasons why the permit is refused."

¹⁷ Failing which he is deemed to have taken to have granted a permit without conditions (Cap. 499, section 10(4)).

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20. The project proponent is the Highways Department ("the HD") who submitted the project profile for the Link Road in October 2003, the project profile for the TM-CLK Link in November 2007 and the project profile for the Boundary Crossing Facilities in March 2008. The respective study briefs were issued in November 2003, December 2007 and April 2008. The contents of the study briefs are materially the same.

21. The EIA report for the Boundary Crossing Facilities ("the BCF EIA Report") and the EIA report for the Link Road ("the Link Road EIA Report") (collectively "the EIA Reports") were delivered to the Director on 15 June 2009. The EIA Report for the TM-CLK Link ("the TM-CLK Link EIA Report") was delivered to the Director in August 2009. The Director advised the HD that the reports were suitable for public inspection on 13 August 2009.

22. During the consultation period for the BCF EIA Report and the Link Road EIA Report from 14 August 2009 to 12 September 2009, the Director received a total of 1,353 sets of public comments on the former and 1,362 sets of public comments on the latter. Following a meeting on 21 September 2009, the Environmental Impact Assessment Sub-committee ("the EIA Sub-committee") of the ACE requested further information on various aspects of the air quality assessment in the EIA Reports, which was provided by the HD.¹⁸ At its meeting on 12 October 2009, the ACE considered the report of the EIA Sub-committee and endorsed the EIA Reports with conditions.

¹⁸ Report on the 110th EIA Sub-committee Meeting paras. 22 and 23.

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23. The HD then submitted further information, including a paper entitled "Supplementary Information on Further Elaboration of the Key Assumptions for Regional Air Quality Emission Inventory".¹⁹

24. The Director approved the BCF EIA Report, the Link Road EIA Report and the TM-CLK Link EIA Report on 23 October 2009.

25. The Director issued environmental permits for the three projects on 4 November 2009.

26. The Applicant challenged the Director's decision to approve the Boundary Crossing Facilities ("the BCF EIA Report") and the environmental impact assessment report for the Link Road ("the Link Road EIA Report"), and his subsequent decisions to issue environment permits pursuant to section 10²⁰.

First Instance

27. On 18 April 2011, Fok JA (sitting as an additional Judge of the Court of First Instance) quashed the decision of the Director in approving the relevant reports as well as the related permits, on the basis of the first of the seven issues raised in the proceedings. The issues were summarized by the learned judge in his judgment ("Judgment") as follows:

"33. First, the applicant contends that (the TM and) SBs require the EIA Reports to provide a quantitative 'stand-alone' analysis of the projected environmental conditions without the Boundary Crossing Facilities and Link Road projects but the EIA Reports fail to do so and erroneously conclude that these projects would have no cumulative residual air quality impact.

34. Secondly, the applicant contends that the TM and SBs require the EIA Reports to explain how the input data used in the PATH model used in the assessment of air quality was compiled and verified and to disclose the results generated by it but this is not done in the EIA Reports.

¹⁹ Letters from the HD to the Director dated 20 October 2009.

²⁰ The applicant did not challenge the TM-CLK Link EIA Report and the environmental permit for the TM-CLK Link to avoid complicating this application: see Re-Amended Form 86A Notice at §59.

35. Thirdly, the applicant contends that the assessment year selected by Ove Arup in the EIA Reports, namely 2031, does not represent the reasonably worst-case scenario for background air quality as required by the SBs and has failed to demonstrate how the AQOs will not be breached as a result of the HKZM projects going into operation before 2031.

36. Fourthly, the applicant contends that the EIA Reports failed properly to assess ozone as required by the TM and SBs.

37. Fifthly, the applicant contends that the EIA Reports failed to assess sulphur dioxide (SO₂) as required by the TM and SBs.

38. Sixthly, the applicant contends that the EIA Reports do not provide a quantitative or qualitative assessment of the projects' impact on public health as required by the TM and that the omission of such an assessment means that the Director could not perform her statutory duty under s.10(2)(c) of the EIAO.

39. Seventhly, the applicant contends that the EIA Reports should have but failed to assess the health risk posed by pollutants outside the AQOs, such as toxic air pollutants (TAPs) and fine suspended particulates (PM_{2.5}) and hence, the Director did not perform her statutory duty under s.10(2)(c) of the EIAO."

28. This is the Director's appeal. Mr Benjamin Yu SC (together with Mr Paul Shieh SC and Ms Eva Sit) appear for the Director on appeal. Fok JA rejected the Applicant's complaint in relation to the 2nd – 7th issues. Issues 3, 4, 6 and 7 are the subject of a cross-appeal by the Applicant, who is represented by Mr Philip Dykes SC and Mr Dennis Kwok.

The 1st Issue

29. The first issue turns on the construction of the TM and SBs. The approach to their construction is governed by *Shiu Wing Steel*²¹, which is authority that the construction of the TM and SBs,

"... is a question of law for the court if the Director's decision is being judicially reviewed. ..." ²²,

²¹ *Shiu Wing Steel Ltd v Director of Environmental Protection & Airport Authority* (No. 2) (2006) 9 HKCFAR 478. Court of Final Appeal (Bokhary, Chan, Ribeiro PJJ, Mortimer and Sir Gerard Brennan NPJJ).

²² *Shiu Wing Steel*, para. 23

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"... the question of the EIA report's meeting the requirements of the SB and TM is for the Court to determine. It is a question of construction, albeit the TM and the SB are to be construed not as legislative instruments but as they would be understood by an expert risk assessor. ..."23

as well as in a "practical down-to-earth way"24.

30. I am in complete and respectful agreement with the following observations by the learned judge:

"30. ... In addition, this judicial review does not concern a debate about the wisdom of the decision to construct the HKZM Bridge and the related projects including the Boundary Crossing Facilities and the Link Road. Nor is it a debate about the adequacy of the criteria laid down in the TM and SBs to protect public health. Neither the TM nor the SBs are the subject of challenge in this judicial review. ...

31. Nor is this case a debate about the adequacy of the air quality objectives ('AQOs') currently in force in Hong Kong under the Air Pollution Control Ordinance, Cap. 311 ('APCO'). That is a matter of policy and, so long as lawfully determined and executed, policy is not a matter for the courts. No one can seriously question that air quality in Hong Kong is a matter of concern. But, as Reyes J said in *Ng Ngau Chai v The Town Planning Board*, HCAL 64/2007, unrep., 4.7.07 (§28):

'I fully sympathise with Mr Ng's concerns about the deteriorating quality of the environment around Tai Kok Tsui, where he lives. But the Court can only apply law. The Judiciary cannot manage the environment. That is the role of the Executive. ...'

.....

42. The purpose of the EIAO as declared in its long title is 'to provide for assessing the impact on the environment of certain projects and proposals, for protecting the environment and for incidental matters' and this purpose so declared governs the interpretation of the EIAO: *Shiu Wing Steel* at §7. In interpreting the TM and the SBs, the EIAO's purpose of protecting the environment must inform the meaning attributed to the instruments created under the EIAO's authority: *Shiu Wing Steel* §25. This is reinforced by section 1.3.1 of the TM which deals with interpretation of the TM and provides that, where the EIAO defines a term, that term applies."

²³ *Shiu Wing Steel*, para. 30

²⁴ "... the observations of Sir Thomas Bingham MR (as he then was) in *R v Director of Passenger Rail Franchising, ex p. Save Our Railways* [1996] CLC 589 at p. 601, cited with approval by the Court of Final Appeal in *Shiu Wing Steel* (at §23)." Judgment, para. 44

31. As the learned judge said, the TM is a document which applies generally to all designated projects. "A study brief, on the other hand, is project-specific."²⁵ The study brief "sets the agenda for the rest of the process", and that:

"There are two main matters of public interest involved. Both are important. The first is the public interest in the protection of the environment upon which the quality of life in Hong Kong will increasingly depend. The second is the public interest in ensuring that major designated projects are brought to fruition in a timely and efficient manner. The time constraints put upon the Director for steps in the process and for his decisions show that the Ordinance aims to satisfy both interests. It is necessary in the implementation of the process that both should be kept in mind. This is so especially when major infrastructural projects (roads, railways, tunnels, reclamation works and the like) which may cause a variety of adverse environmental impacts are proposed."²⁶

32. In support of the 1st issue, the Applicant relied on paras. 74-80A, 86(a) and (b) and 89 of the Re-Amended Form 86. The 1st issue as stated in the Re-Amended Form 86 reads:

"1. They failed to provide the required 'with/without' analysis of the projected environmental conditions without the HZMB project in place as required by §4.31(c) and 4.42(g) of the TM. ..."

33. There is no challenge to either the TM or the SB. What Fok JA had to decide was whether the TM and/or the SBs required a stand-alone assessment to be provided in the EIA report.

34. The Applicant relies on the following diagram which provides a simple illustration of the concept of the environmental impacts of a project, namely, environmental changes as a result of a proposed activity or project, compared with what would have happened had the project not been undertaken:

²⁵ Judgment, para. 46

²⁶ See: *Kowloon-Canton Railway Corporation v Director of Environmental Protection*, EIA Appeal Board Appeal No. 2/2000, unrep., 20 July 2001. Cited by Fok JA. Judgment, para. 47.

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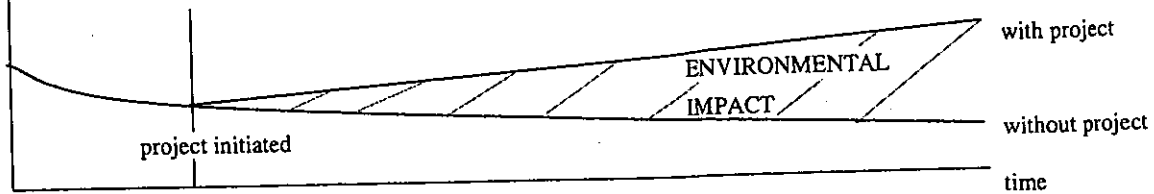
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Source: Introduction to Environmental Impact Assessment (Routledge, 3rd edition)

See: also explanation of the diagram in *Introduction to Environmental Impact Assessment 3rd Ed. Glasson, Therivel and Chadwick* at §1.5.3"

35. The Applicant's skeleton submissions went on to explain:

"13. The 'stripe zone' represents the 'environmental footprint' of a project. It is a 'stand alone' analysis in the sense that it specifically measures the environmental impact of a given project."

36. It is not disputed that the EIA reports do not contain a stand-alone assessment. Fok JA concluded as a matter of construction of the TM and the SB that a stand-alone assessment was required to be provided in the EIA report. He accordingly quashed the decisions of the Director approving the relevant reports as well as granting the permits.

37. The learned judge, in deciding that the TM and the SB require a stand-alone analysis, relied principally on²⁷

(1) TM 4.1.1, 4.3.1(c) Annex 20 para. 4.6;

(2) SB clause no. 2.1(iv), (v), (vi) and (vii); and

(3) the definition of environment impact on the EIAO.

38. Since this issue turns on the correct construction of the TB and the SB it will be necessary to consider them in some detail. However, before

²⁷ Judgment, paras. 77 and 78

doing so, I will deal first with how the issue was argued before Fok JA because of its bearing on his decision.

39. The learned judge recorded Mr Philip Dykes SC's submissions in these words:

"56. ... the absence of an analysis of the conditions without the projects in place meant that it was not possible to ascertain the environmental footprint of the projects. He submitted that it also meant that it was not possible to ascertain the residual impacts of the projects. Without knowing this, it was impossible to know what mitigation measures ought to be required. In respect of the residual impact and mitigation, he referred to TM section 4.3.1(d) and to SB clause 2.1(v)."

40. Fok JA went on to describe the parties' respective submissions:

"73. ... fundamentally, the debate between the parties on this issue boils down to whether environmental protection under the EIAO adopts a scheme whereby the Director is obliged to measure the cumulative impact of a particular project against benchmarks of environmental objectives (the Director's position) or whether it adopts a scheme whereby any change which has an environmental impact is to be identified and measured and then an assessment made as to whether that change is adverse so that measures for mitigation should, if possible, be drawn up (the applicant's position). Put crudely (and to adopt Mr Dykes' analogy), is the environment to be treated like a bucket into which pollutants may be introduced so long as there is still space within the bucket to accommodate them? Or, is it the case that any pollutant introduced into the bucket must be identified and measured and then, if possible, mitigated? If the former, it would be understandable that there would be no requirement for the EIA Reports to present the baseline conditions without the project in place. On the other hand, if the latter, this would lend weight to the applicant's contention that the TM and the SB, properly construed, require the baseline conditions without the projects in place to be presented."

41. Fok JA explained that there are two approaches to the control of pollution. One approach (which was described by Mr Dykes as the bucket approach) is to impose limits on the quantities of polluting matters which a given activity may emit, into which pollutant may be poured so long as there is still space in the bucket. Another is to provide a framework for specific directives imposing quantitative limits on the extent to which the environment

may be polluted, and to require proponents to satisfy the Environment Agency that they are using the best available technique to prevent or minimize pollution.

42. The learned judge referred to the case of *R (on the application of Edwards) v Environment Agency (Cemex UK Cement Ltd, intervening)* [2009] 1 All ER 57 which showed that:

"72. ... the relevant regulations (the Pollution Prevention and Control (England and Wales) Regulations 2000) use a combination of two distinct approaches to the control of pollution. One approach, based on European Council Directive (EC) 96/61, is to impose limits on the quantities of polluting matter which a given activity may emit. The other approach, based on Council Directive (EC) 96/62, is to provide a framework for specific directives imposing quantitative limits on the extent to which the environment may be polluted. A specific regulation (Regulation 11(2)) gives effect to the former approach by requiring applicants for relevant permits to satisfy the Environment Agency that they are using the best available techniques calculated to prevent, or at least to minimise, the emission of polluting matter irrespective of whether the emission would cause a breach of an overall pollution limit: see per Lord Hoffmann at §§4 to 6. As the guidance notes issued by the Environment Agency state, the regulations:

'[require] us not to consider the environment as a recipient of pollutants and waste, which can be filled up to a given level, but to do all that is practicable to minimise the impact of industrial activities'.

As Lord Hoffmann observed (§6), the remarks of Buxton LJ in *R (on the application of Rockware Glass Ltd) v Chester CC* [2007] Env.L.R. 32 at §§33-39 are to similar effect. In that case, Buxton LJ said (at §34):

'To put it bluntly, those who for their commercial purposes introduce potentially polluting operations have to be closely controlled, and cannot freeloader on non-polluting local citizens by simply claiming that the EQS [i.e. Requirements of Environmental or Air Quality Standards] to which we all contribute has not yet been damaged.'

43. Fok JA went on to observe:

"73. Does the EIAO incorporate the first approach or does it simply adopt the latter or does it too adopt both approaches? This is a relevant question because, ..." (continues as quoted in para. 40 above)

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44. Fok JA concluded that:

"75. ... the EIAO is to be understood as incorporating the two approaches referred to in *Edwards* and is not to be construed as if the only relevant yardstick is whether particular benchmarks are exceeded. ..."

45. He then went on to observe:

"80. In my view, it is highly material for the Director and public to know, for instance, what levels of NO₂ (one of the main air pollutants resulting from a road project) are predicted for the future at the ASRs relevant to these projects with and without the projects in place so that the Director can determine whether those increases in NO₂ levels are acceptable and the public can be made aware of the extent to which the proposed project will change the environmental conditions in the locations in question. If, as I consider the EIAO contemplates, the environment is not to be treated simply as a bucket to be filled up over time, ascertaining that the increases in a particular air pollutant do not exceed applicable guidelines, e.g. the AQOs, cannot be the sole determining factor in a decision whether to grant an environmental permit. Thus, for example, if for a particular road project the predicted levels of NO₂ without the project (i.e. the starting point) would be at 30% of the current maximum under the applicable AQO, a project that would result in those levels reaching 90% of the maximum would, in my opinion, fall to be considered differently to another project in which the starting point is 80% of the maximum. In other words, the footprint of the former (90%-30%) is much greater than that of the latter (90%-80%) and it is only by knowing the starting point (or baseline or stand alone position, to use other terms to describe the same thing) that one is able to measure that footprint."

46. Mr Yu SC submitted that EIAO is only concerned with a process, it does not embrace any particular environmental philosophy or approach. He submitted that the learned judge had overlooked the fact that the minimization of air pollution is dealt with in other legislations, for example, the Air Pollution Control Ordinance (APCO) (Cap. 311) which regulates the grant of licenses for specified processes set out in Schedule 1 of that ordinance, for example, section 7 under which air quality objections may be set, and section 12(1), which requires:

"The owner of any premises used for the conduct of any specified process (to) use the best practicable means for preventing the emission

of noxious or offensive emissions from such premises, and for preventing the discharge, whether directly or indirectly, of such emissions into the atmosphere, and for rendering such emissions where discharged harmless and inoffensive."²⁸

47. Mr Yu submitted that three European Council Directives are relevant to a correct understanding of *Edwards* and *Rockware Glass*²⁹. First, Council Directive 85/337/EEC, Article 2 of which required Members States to:

"1. ... adopt all measures necessary to ensure that, before consent is given, projects likely to have significant effects on the environment by virtue inter alia, of their nature, size or location are made subject to a requirement for development consent and an assessment with regard to their effects. These projects are defined in Article 4."³⁰

48. Article 3 required the environmental impact assessment to:

"... identify, describe and assess in an appropriate manner, in the light of each individual case and in accordance with the Articles 4 to 11, the direct and indirect effects of a project on the following factors:

- human beings, fauna and flora;
- soil, water, air, climate and the landscape;
- material assets and the cultural heritage;
- the inter-action between the factors mentioned in the first and third indents;"

49. Second, the directive which was issued on 24 September 1996, directive 96/61/EC, Article 3 of which required the member states to:

"... take the necessary measures to ... ensure that installations are operated in such a way that:

(a) all the appropriate preventive measures are taken against pollution, in particular, through application of the best available technique;

(b) no significant pollution is caused;"

²⁸ Cap. 311, section 12(1)

²⁹ Cited by Lord Hoffmann in *Edwards*, see para. 42 above.

³⁰ European Council Directive 85/337/EEC, Article 2

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50. The third is European Council Directive 96/62/EC of 27 September 1996 on ambient air quality assessment and management. Article 7(1) dealing with improvement of ambient air quality required a Member States to:

"... take the necessary measures to ensure compliance with the limit values".

51. Mr Yu submitted that the learned judge's reliance on *Edwards* or *Rockware Glass* was misplaced because they concerned Directives 96/61/EC and 96/62/EC, which Mr Yu submitted have their equivalent in APCO. He submitted that the equivalent of EIAO is Directive 85/337/EC.

52. Unfortunately, counsel overlooked the fact that both the TM and SBs require a project proponent to minimize pollution. It is clear that the project proponent is obliged to ensure that measures would be taken to reduce pollution to a minimum, as well as to satisfy the criteria of TM Annex IV. For example, TM 4.2.1 requires a typical study objective to:

"(f) to propose the provision of infrastructure or mitigation measures to minimize pollution, environmental disturbance and nuisance during construction, operation (or decommissioning) of the project(s);

(g) to investigate the feasibility, effectiveness and implications of the proposed mitigation measures;"

TM 4.3.1(d) requires the methodology to be adopted to be capable of:

"(i) identifying and evaluating mitigation measures in order to avoid, reduce or remedy the impacts;

(ii) assessing the effectiveness of mitigation measures;"

SB clause no. 2.2.1(v) requires proposals relating to "the provision of infrastructure or mitigation measures so as to minimize pollution".

53. When such requirements were examined, neither Mr Yu nor Mr Dykes disputed that both the TM and the SB required the project proponent to

minimize pollution. Indeed Mr Dykes agreed that minimization of pollution is required whatever the baseline condition, contrary to his initial submission that what mitigation measures and what conditions the Director might impose may vary according to whether a baseline study shows the footprint of a project is 90-30% as opposed to 90-80%³¹.

54. I believe Fok JA's construction of the TM and SB was influenced by the submissions made on behalf of the Director that EIAO was not concerned with the minimisation of pollutants from a designated project, a submission repeated by Mr Yu (who did not appear at first instance).

55. With respect, I agree with the learned judge the EIAO incorporates both of the two approaches referred to in *Edwards*. I am further of the view that the duty to minimise pollution would not depend on the extent of the pollution footprint of a designated project. Whatever the footprint of a project ((90%-80%) or (90%-30%)) a proponent must minimize pollution. Furthermore, unlike the learned judge, I do not believe it is necessary to construe the TM or the SB as requiring a stand-alone assessment in order that the Director can decide what mitigating measures should be adopted.

TM

56. The TM is divided into 12 sections addressing the various steps of the EIA. There are specific provisions dealing with the different types of environmental media (e.g. water, noise, air, etc) in the Annexes to the TM. Annexes 4-10 set out the criteria for evaluating the impacts on different environmental media; and Annexes 12-19 set out the guidelines for assessment of such impacts. Annexes 4 and 12 concern air quality and are particularly relevant. Annex 20 sets out the "Guidelines for the Review of an EIA Report".

³¹ Mr Dykes agreed that it cannot be that when the environment is pristine, less reduction of pollution would be required.

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57. TM 3.1 requires the study brief to set out, *inter alia*, "the requirements that the EIA study shall need to fulfil".

58. Section 4 deals with the "Objectives and Contents of an EIA Report". TM 4.1.1 provides:

"4.1.1 An EIA report shall comprise a document or series of documents providing a detailed assessment in quantitative terms, wherever possible, and in qualitative terms of the likely environmental impacts and environmental benefits of the project. The requirements for the EIA report shall be set out in accordance with this technical memorandum. The EIA report shall be produced in accordance with the EIA study brief issued by the Director to the applicant."

59. TM 4.3.1(b)(vi) and (c) specifically required the prediction and evaluation to be made with respect to the criteria described in Annexes 4-10.

60. TM 4.3.1(c) and (d) provide:

"(c) Impact Evaluation: an evaluation of the anticipated changes and effects shall be made with respect to the criteria described in Annexes 4 to 10 inclusive, and in quantitative terms as far as possible. The methodologies for evaluating the environmental impact shall be capable of addressing the following issues:

- (i) the existing or projected environmental conditions without the project in place;
- (ii) the projected environmental conditions with the project in place and the sum total of the environmental impacts taking into account all relevant existing, committed and planned projects;
- (iii) a differentiation between the environmental impact caused by the project and that caused by other projects, and to what extent the project aggravates or improves the existing or projected environmental conditions;
- (iv) the environmental impact during different phases of construction and development of the project; and
- (v) the evaluation of the seriousness of the residual environmental impacts (see Section 4.4.3).

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(d) Impact Mitigation: the methodologies proposed for mitigation shall give priority to avoidance of impacts. The assessment methods shall be capable of:

- (i) identifying and evaluating mitigation measures in order to avoid, reduce or remedy the impacts;
- (ii) assessing the effectiveness of mitigation measures; and
- (iii) defining the residual environmental impacts, which are the net impacts remaining with the mitigation measures in place."

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61. TM 4.3.2 stipulates that for the issues described in Annexes 12-19, the Director shall evaluate the assessment approaches and methodologies in accordance with the guidelines in those Annexes, unless otherwise stated in the SB, and it is only where the issues are not fully covered in those Annexes that the Director shall apply the general principles in section 4.3.1.

62. TM 4.5.1 provides:

"... the EIA report shall be approved with or without conditions if

- (a) the requirements in the (SB) have been met;"

63. Section 7 of the TM covers "Issuing Environmental Permit", and reads:

"7.1 The Director will grant an environmental permit to the applicant if an EIA report covering the project has been approved with or without conditions under this Ordinance. ...

7.2 The Director will use the following criteria in determining the conditions to be imposed in an environmental permit:

- (a) the mitigation measures set out in the project profile or the findings and conclusions of the approved EIA report, whichever is applicable;
- (b) the conditions of approval of the EIA report;
- (c) the conditions of approval for proceeding directly with the application for environmental permit;

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(d) the advice given to him by other relevant authorities on matters within their jurisdiction as listed in Section 9 of this technical memorandum, or

(e) the measures that are necessary to meet the guidelines, standards or criteria laid down in this technical memorandum; and

the Director will follow any advice received from the Secretary under Section 10 of this technical memorandum.

7.3 In addition, the following principles shall be followed when setting the conditions:

(a) conditions which would be imposed through other applicable ordinances or regulations shall not normally be imposed in environmental permits issued under the Environmental Impact Assessment Ordinance;

(b) conditions may be imposed in addition to the requirements laid down in other applicable ordinances upon the advice of the relevant authorities, but this must be in accordance with section 10(8) of the Ordinance. There shall be adequate justification in the EIA report to demonstrate the need for such conditions to reduce the cumulative impacts of the project to avoid the violation of other applicable ordinances or exceedances of any applicable criteria, standards, guidelines or principles as defined in accordance with this technical memorandum."

64. Annex 4 sets out the criteria for evaluating air quality impact and hazard to life as follows:

"ANNEX 4 : CRITERIA FOR EVALUATING AIR QUALITY IMPACT AND HAZARD TO LIFE

1. Air Quality Impact

1.1 The criteria for evaluating air quality impact include the following:

(a) meet the Air Quality Objectives and other standards established under the Air Pollution Control Ordinance;

(b) meet hourly Total Suspended Particulate concentration of 500 microgrammes per cubic metre measured at 298°K (252°C) and 101.325 kPa (one atmosphere) for construction dust impact assessment;

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(c) meet 5 odour units based on an averaging time of 5 seconds for odour prediction assessment;

(d) for air pollutants not established under the Air Pollution Control Ordinance nor above: meet the standards or criteria adopted by recognized international organizations such as WHO or USEPA as to be agreed with the Director of Environmental Protection.

2. Hazard to Life

2.1 The criterion for hazard to human life is to meet the Risk Guidelines, as shown in Figure 1."

65. Annex 12 sets out "Guidelines for Air Quality Assessment", section 3.4 of TM 12 requires a baseline study of "the existing air quality":

"3.4 Baseline Study

It involves the description of the existing air quality based on, but not limited to, existing air quality monitoring on-site or quality assured measured data which can be obtained from government agencies, companies or instructions. The baseline study involves a discussion of background air quality value due to uninventoried sources and contributions from outside the study area and description of the method used for determining this value."

66. TM Annex 20 sets out the "Guidelines for the Review of an EIA Report" where under "Baseline Conditions" (sections 4.4 to 4.9), TM Annex 20 4.6 states:

"4.6 Has a prediction of the likely future environmental conditions in the absence of the project been developed?"

The SB

67. SB clause no. 2.1³² sets out the "Objectives of the EIA Study":

"2.1 The objectives of the EIA study are as follows:

.....

³² Extracts from the SB No. ESB-183/2008 for the HKBCF have been supplied and the submissions proceeded on the basis of these extracts. As noted in para. 20 above, the SBs are materially the same.

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- (iv) to identify and assess air quality impact, ...
- (v) to propose the provision of infrastructure or mitigation measures so as to minimize pollution, environmental disturbance and nuisance during construction and operation of the Project;
- (vi) to identify, predict and evaluate the residual (i.e. after practicable mitigation) environmental impacts and the cumulative effects expected to arise during the construction and operation phases of the Project in relation to the sensitive receivers and potential affected uses;
- (vii) to identify, assesses and specify methods, measures and standards, to be included in the detailed design, construction and operation of the Project which are necessary to mitigate these environmental impacts and reducing them to acceptable levels;"

68. SB clause no. 3 covers "Detailed Requirements of the EIA Study".
SB clause no. 3.2(ii) requires the EIA report to address:

- "(ii) the potential air quality impacts from the construction and operation of the Project to sensitive receivers near the Project, taking into account the cumulative impact from the construction and operation of existing and planned/committed projects in the vicinity of the Project, ..."

69. SB clause no. 3.3 deals with "Consideration of Alternative Options", including (clause no. 3.3.1) "Need of the Project"; (clause no. 3.3.2) "Consideration of Project Locations, Size of Reclamation and Layout Options"; (clause no. 3.3.3) "Consideration of Alternative Construction Methods and Sequences of Works" and (clause no. 3.3.4) "Selection of Preferred Construction Method(s) and Sequence(s) of Works".

70. SB clause no. 3.4 "Technical Requirements" requires:

"... The Applicant shall clearly state in the EIA report the time frame and work programmes of the Project and other concurrent projects, and assess the cumulative environmental impacts from the Project with all interacting projects as identified in the EIA study, including any phased implementation of the Project and the associated works."

71. "Air Quality Impact" under SB clause no.3.4.1, SB clause no.3.4.1.1 states:

"The Applicant shall follow the criteria and guidelines for evaluating and assessing air quality impact as stated in Annexes 4 and 12 of the TM, respectively."

72. SB clause no. 3.4.1.4 states the air quality impact assessment shall include the following:

"(iv) Operational Phase Air Quality Impact

(a) The Applicant shall calculate the expected air pollutant concentrations at the identified ASRs based on an assumed reasonably worst-case scenario under normal operating conditions. The evaluation shall be based on the strength of the emission sources identified in sub-section 3.4.1.4(ii)(b) above. The Applicant shall follow sub-section 3.4.1.4(v) below when carrying out the quantitative assessment.

(b) The air pollution impacts of future road traffic shall be calculated based on the highest emission strength from the road within the next 15 years upon commencement of operation of the proposed road. The applicant shall demonstrate that the selected year of assessment represents the highest emission scenario given the combination of vehicular emission factors and traffic flow for the selected year. The Fleet Average Emission Factors used in the assessment shall be agreed with the Director. If necessary, the Fleet Average Emission Factors shall be determined by a motor vehicle emission model such as EMFAC-HK model to be agreed with the Director. All the traffic flow data and assumptions that are used in the assessment shall be clearly and properly documented in the EIA report.

.....

(v) Quantitative Assessment Methodology

(a) The Applicant shall apply the general principles enunciated in the modelling guidelines in Appendices B-1 to B-3 while making allowance for the specific characteristic of the Project. This specific methodology must be documented in such level of details, preferably assisted with tables and diagrams, to allow the readers of the EIA report to grasp how the model has been set up to simulate the situation under study without

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(vi) Mitigation Measures for Non-compliance

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(vii) Submission of Model Files

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referring to the model input files. Detailed calculations of air pollutants emission rates for input to the modelling and a map showing all the road links shall be presented in the EIA report. The Applicant must ensure consistency between the text description and the model files at every stage of submissions for review. In case of doubt, prior agreement between the Applicant and the Director on the specific modelling details should be sought.

- (b) The Applicant shall identify the key/representative air pollutant parameters (types of pollutants and the averaging time concentrations) to be evaluated and provide explanation for selecting such parameters for assessing the impact from the Project. Ozone Limiting Method (OLM) or Discrete Parcel Method (DPM) or other method to be agreed with the Director shall be used to estimate the conversion ratio of NO_x to NO_2 if NO_2 has been identified as a key/representative air pollutant.

- (c) The Applicant shall calculate the cumulative air quality impact at the ASRs identified under sub-section 3.4.1.4 (ii) above and compare these results against the criteria set out in section 1 of Annex 4 in the TM. The predicted air quality impacts (both unmitigated and mitigated) shall be presented in the form of summary table(s) and pollution contours, to be evaluated against the relevant air quality standards and on any effect they may have on the land use implications. Plans of a suitable scale should be used to present pollution contours to allow buffer distance requirements to be determined properly.

The Applicant shall propose remedies and mitigating measures where the predicted air quality impact exceeds the criteria set in section 1 of Annex 4 in the TM. These measures and other associated constraints on future land use planning shall be agreed with the relevant government departments /authorities and be clearly documented in the EIA report. The Applicant shall demonstrate quantitatively that the residual impacts after incorporation of the proposed mitigating measures will comply with the criteria stipulated in section 1 of Annex 4 in the TM.

All input and output file(s) of the model run(s) shall be submitted to the Director in electronic format."

73. SB clause no. 3.4.1.1 requires the applicant:

"... shall follow the criteria and guidelines for evaluating and assessing air quality impact as stated in Annexes 4 and 12 of the TM, respectively."

74. SB clause no. 3.4.1.4(vi) under "Mitigation Measures for Non-compliance" requires a proponent to:

"... propose remedies and mitigating measures whether predicted air quality impact exceeds the criteria set out in section 1 of Annex 4 in the TM, its measures and other associated constraints on future land use planning shall be agreed with the relevant government departments/authorities and be clearly documented in the EIA report. The applicant shall demonstrate quantitatively that the residual impacts after incorporation of the proposed mitigating measures will comply with the criteria stipulated in section 1 of Annex 4 in the TM."

EIA Report

75. There is no dispute that the EIA report has dealt adequately with the existing conditions. Nor that the EIA report contained an assessment of the cumulative impact of the HKZM Bridge. It is accepted that the EIA report has provided an analysis of the future with the HKZM Bridge, together with committed and planned projects. The objection is that there was no stand-alone assessment in the sense that it had not been assessed what the future air quality might be without the HKZM Bridge but with committed and planned projects.

76. Fok JA said that such an assessment is essential because it would:

"79. ... provide the Director with relevant information so that she can make a fully informed decision on whether or not to grant an environmental permit. ..."

77. It is however important to note that it was not the learned judge's decision that even if the TM and/or SB had not required such a stand-alone assessment, the Director's could or should nevertheless have refused to approve

the EIA report or issue a permit. Nor was it the learned judge's view that section 10(2)(c) of EIAO, under which the Director shall have regard to:

"(c) whether the environmental impact ... is or is likely to be prejudicial to the health or well being of people ..."

requires a stand-alone assessment.

78. On appeal, Mr Dykes sought to rely on section 10(2)(c) in support of the argument that a stand-alone assessment is required so that the EIA reports should not have been approved or permits issued. That was not how the Applicant's case on the 1st issue was put in the Re-Amended Form 86³³. The 1st issue as framed in the Form 86 requires this court to decide whether as a matter of construction the TM or SB requires a stand-alone assessment as explained above.

79. Mr Yu submitted and I agree that we should not decide whether the Director has a discretion, under section 10(2), to refuse a permit even when the Air Quality Objectives ("AQOs") have not been exceeded and the report being otherwise compliant.

The appeal

80. Mr Yu submitted that the requirement for a prediction of cumulative impact is prescribed specifically in SB clause no. 3.4.1.4(iv)-(v) (especially (v)(c)). There is no equivalent stipulation for a "stand-alone analysis". Thus, the court should reject the Applicant's invitation to perform a "cut and paste" exercise in drawing together words and phrases from different instruments (or different parts of the same instrument) with a view to constructing such a requirement. He submitted had it been the intention of the

³³ See: The Summary of Applicant's case at pages 5 and 6 of the Re-Amended Form 86. Non compliance with the TM and SB (paras. 68-101E)

Legislature (and the draftsman of the TM and SB) to incorporate the requirement of a "stand alone analysis", one could legitimately expect it to:

"27.1. Use language equivalent to that used for the stipulation for cumulative assessment to stipulate such a requirement (in particular, setting the various parameters for conducting the predictions - see the various possible meanings as to 'stand alone' analysis discussed in para.4 above); and

27.2. Stipulate by reference to what yardsticks or criteria the Director is required to judge or test the 'net' figures derived from such analysis; or test the project proponent's efforts at mitigation.

The ELAO, TM and SB, however, are silent on the above. It is submitted that this is a clear, common sense, pointer against the requirement to conduct a 'stand alone analysis' contended by A.³⁴

81. Mr Yu also submitted that:

"16.5 ... when one ascertains what is required to be included in the EIA specifically for air quality, one should look at the SB to see if there are any specific provisions governing it, and it is only where the SB is silent that one turns to the more general instrument namely the TM. Even when one looks at the TM (in the context of air quality), one should first look at Annexes 4 and 12, and it is only where these specific provisions are silent that one falls back onto the general provisions in the TM. But where the SB (or the Annexes to the TM) had already dealt in detail with a particular subject matter but was silent on a particular point in that subject matter (the prediction of cumulative impact), generally worded provisions in the TM cannot operate to introduce a specific requirement in an area where the draftsman had already elaborately dealt with by specific language - *generalibus specialia derogant* (Bennion on Statutory Interpretation, 5th ed., p.1164)." ³⁵

82. There is force in such submissions.

83. Fok JA has rightly accepted:

"69. ... that Mr Shieh is correct in his submission that SB clause.3.4.1.4(v)(c) is an express requirement for the EIA Reports to set out the predicted air quality impacts of the projects and that this clause does not require the predicted air quality impacts over time without the projects to be set out. I also accept that Mr Shieh is correct in his submission that SB clause 3.4.1.4(vi) only refers to

³⁴ Skeleton Submissions of Counsel for the Director dated 5 August 2011 at page 15

³⁵ Skeleton Submissions of Counsel for the Director dated 5 August 2011 at page 8

mitigation measures being required where the criteria in of TM Annex 4 paragraph 1 are exceeded. It follows also that TM section 4.5.1(d) is to be understood as referring to the cumulative residual environmental impact with the projects in place. I therefore accept that these provisions do not assist the applicant and, on the contrary, appear to limit the required air quality assessment to be presented in the EIA Reports to the position with the projects in place."

84. With respect, had counsel informed Fok JA, as they have accepted before us, that both the TM and the SB require the project proponent to minimize pollution such that had the proponent failed to do so, the EIA report would not have been approved, I do not believe the learned judge would have found it necessary to read a requirement for a stand-alone assessment into the TM and/or SB. Moreover, although it is a matter of construction for the court to decide what is required by the TM or SB, it is often a question of professional judgment what information is required to be contained in an EIA report to enable the Director to perform her duties. In that case unless the judgment is *Wednesbury* unreasonable, the court is not entitled to interfere.

85. I turn to the specific provisions relied on by Fok JA.

86. The learned judge relied on the first sentence in TM 4.1.1³⁶, which does not in terms require a stand-alone assessment. Nor does it state what is the assessment that has to be done in the case of air quality. I agree with Mr Yu that the second and third sentences of TM 4.1.1 in fact support the Director's construction, for they require the EIA report to be set out in accordance with the TM (i.e. Annex 12) and produced in accordance with the SB (i.e. SB clause no. 3.4.1.4(v)(c)).

87. The specific requirements for air quality assessment are set out in Annexes 4 and 12³⁷. TM 4.3.2 specifically provides that "for issues described in

³⁶ Para. 58 above.

³⁷ See paras. 64 and 65 above.

Annexes 12 to 19, the Director shall evaluate the assessment approaches and methodologies in accordance with the guidelines in these annexes, unless otherwise stated in the study brief." Annex 12 para. 3.6 specifically requires the project proponent to do an assessment of the cumulative impacts only. The same specific requirement i.e. cumulative assessment was stipulated in the SB for this project, see SB clause no. 3.4.1.4(v)(c)³⁸.

88. TM 4.3.1(c)³⁹ - the focus of this provision (specifically, sub-paragraph (i)) is on the capability of the methodologies of evaluating the environmental impact and not on the contents of any EIA report; the unchallenged evidence is that the methodology employed by the project proponent was capable of addressing the projected environmental conditions without the project in place. When TM 4.3.1(c) is read together with TM 4.3.2⁴⁰, Annex 12 para. 3.6⁴¹ and SB clause no. 3.4.1.4(v)(c)⁴² which explicitly called for only a prediction of cumulative effects, I do not believe TM 4.3.1(c) enables one to conclude that a stand-alone assessment is also required.

89. TM Annex 20 para. 4.6⁴³ - Annex 20 sets out the general guidelines for review, but TM 4.4.2 stipulates that the quality of the EIA report is to be reviewed against not just Annex 20 but also TM 4.3; and 4.3.2 explicitly requires the Director to look at Annex 12 and the SB.

90. As for SB clause no. 2.1(iv), (v), (vi) and (vii)⁴⁴, the learned judge observed⁴⁵ that they require the project proponent "at the first stage (to identify) the change in the quality of the air", but thought that these provisions also

³⁸ Para. 72 above.

³⁹ Para. 60 above.

⁴⁰ Para. 61 above.

⁴¹ §3.6(a) requires "Assessment results (to) provide information on ... cumulative impacts ..."

⁴² Para. 72 above.

⁴³ Para. 66 above.

⁴⁴ Para. 67 above.

⁴⁵ Para. 77 of the judgment.

support the view that a stand-alone assessment is required for "the identification and mitigation of the residual environmental impacts and cumulative effects, which may call for further mitigation".

91. The learned judge probably had in mind TM 7.3⁴⁶ which covered situations where the Director may impose "... conditions to reduce the cumulative impacts of the project to avoid the violation of other applicable ordinances or exceedances of any applicable criteria, standards, guidelines or principles as defined in accordance with this (TM)".

92. With respect, I am unable to agree they support the view that as a matter of construction, a stand-alone assessment is required.

93. Mr Dykes submitted that there are six reasons why a stand-alone analysis is required, otherwise the EIAO scheme would not achieve its purpose of minimising pollution. I will not deal with the reasons specifically. I do not agree with any of them. Mr Yu has correctly explained why they are unsound⁴⁷.

94. The essence of Mr Dykes' submission is that:

"8. The EIAO/TM/SB reduces or minimizes impact using a 2-stage approach (identified by the learned Judge at §77):

(I) one tries to mitigate all impacts from the project whenever practicable; and then

(II) one measures cumulative impacts against the applicable standards (e.g. AQOs). And if the cumulative impacts exceed the benchmark - PP must mitigate again to reduce it to acceptable levels.

⁴⁶ Para. 63 above. Possibly also SB 2.1(vii) (para. 67 above), and TM 4.4.2(i) which concerned whether the EIA report "has sufficiently defined ... measures necessary to avoid or reduce the adverse environmental impacts to within the applicable standards or criteria".

⁴⁷ See, for example, Para. 18 of the Director's skeleton submissions.

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The Director/PP did not and cannot perform Stage (I) in this case because the impact of the Project is not known nor presented in the EIA report."⁴⁸

95. With respect, I do not agree that without a stand-alone assessment the Director could not perform Stage (I). It is clear from the TM and SB discussed above that minimization of pollution was clearly required. Thus, one may proceed on the basis that there is a sufficient description or analysis of the proposed project, together with mitigation measures, to enable the Director to perform Stage (I). As for Stage (II), this does not arise because the cumulative impacts do not exceed the benchmark.

96. I also note that despite the large number of comments received from the public there was no suggestion that a stand-alone assessment was necessary. Of course, this cannot decide the construction of the TM or SB. But since the TM and SB are to be construed as they would be understood by an expert in the relevant field and in a practical down to earth way, I would be slow to discover from them something which had escaped the attention of the public (which presumably included well established environment concern groups) the Director, and the ACE. Again, I bear in mind that what information may be required by the Director to make an informed decision maybe and often is a question of professional judgment.

Issues 3, 4, 6 and 7

The 3rd Issue

97. With respect, I am in complete agreement with the judgment and will deal with the point briefly. As the learned judge pointed out in para. 113 of the Judgment:

⁴⁸ Case Summary of the Applicant on Issue 1

"113. This issue turns on the construction of SB clauses 3.4.1.4(iv)(a) and 3.4.1.4(iv)(b). ..."⁴⁹

98. SB clause no. 3.4.1.4(iv)(a) requires the project proponent to:

"(a) ... calculate the expected air pollutant concentrations at the identified ASRs based on an assumed reasonably worst-case scenario under normal operating conditions. ..."

99. It then goes on to state that "the evaluation shall be based on the strength of the emission sources identified in sub-section 3.4.1.4(ii)(b)" and should be done in a quantitative manner.

100. SB clause no. 3.4.1.4(iv)(b) requires the calculation of "(the) air pollution impacts of future road traffic ..."

101. The learned judge concluded that:

"123. ... The reasonably worst case scenario referred to in SB clause 3.4.1.4(iv)(a) does not require the identification of another year of assessment that may be different to that identified under SB clause 3.4.1.4(iv)(b)."

.....

125. I therefore do not consider that the EIA Reports proceed on a misinterpretation and misapplication of SB clauses 3.4.1.4(iv)(a) and 3.4.1.4(iv)(b)."

102. With respect, I agree.

Issues 4: Failure to assess ozone

103. Ozone was excluded from the EIA report. The Director accepted the project proponent's explanation for not including ozone as a key pollutant in the EIA reports. Stated briefly, the project itself would not generate O₃, indeed the direct effect of the Project is the reduction of O₃ in the immediate vicinity of

⁴⁹ Para. 72 above.

the roads by the reaction of O₃ with NO_x emission directly from vehicles, which apparently will combine with O₃ to form NO₂.⁵⁰

104. The learned judge was of the view that:

"136. ... The language of clause 3.4.1.4(v)(b) is very clear: the choice of key pollutants is left to the project proponent, although he must justify his choice. ..."

105. He then went on to hold that:

"137. ... given the project proponent's explanations for not identifying ozone and SO₂ as key pollutants as set out above, I do not consider that irrationality or *Wednesbury* unreasonableness has been established."

106. He rejected Mr Dykes' submission in para. 142:

"142. I return to address Mr Dykes' submission that the omission to assess (ozone) as a key pollutant was the same error as that committed in the *Shiu Wing Steel* case by the project proponent in that case failing to carry out a hazard assessment in respect of a 100% loss scenario. However, the answer to that submission is that the relevant provision in the relevant study brief in the *Shiu Wing Steel* case was very different to SB clause 3.4.1.4(v)(b) under consideration in the context of the present issue. In the *Shiu Wing Steel* case (see §55), clause 3.3.10.1(i) of the study brief required a hazard assessment of the 'risk to the life, including the workers of nearby plants, due to ... tank farm storage and pipeline transfer of aviation fuel' to be assessed and to identify 'all hazardous scenarios associated with ... tank farm storage and pipeline transfer of aviation fuel, which may cause fatalities'. Thus, the fact that a 100% loss scenario was very unlikely did not affect the fact that a hazard assessment for that scenario must be undertaken. There was no element of judgment to be made in deciding which scenarios required a hazard assessment. Here, in contrast, the choice of key pollutants is expressly left to the project proponent to identify and justify."

107. With respect, I am in complete agreement.

⁵⁰ See Confirmed minutes of the 164th meeting of (ACE) held on 12 October 2009 at para. 65.

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Issues 6 and 7⁵¹

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108. Mr Dykes relied on section 10(2) under which the Director has to consider, amongst others,:

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"(b) the attainment and maintenance of an acceptable environmental quality;

(c) whether the environmental impact caused or experienced by the designated project is or is likely to be prejudicial to the health or well being of people, flora, fauna or ecosystems;"

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⁵¹ See para. 27 above.

112. I believe, rather than to deal with Mr Dykes' submission on a high level of generality, it is useful to consider the Applicant's specific complaints.

113. On appeal, Mr Dykes relied on the fine particulates (PM_{2.5}).

114. Under the existing AQOs, there is an AQO for PM₁₀ (PM_{2.5} is subsumed within PM₁₀). There is no separate AQO for PM_{2.5}.

115. As the learned judge has explained in para. 170 of the Judgment, "the Government's own Air Quality Objectives Review ... has proposed that more stringent AQOs be introduced but those proposed AQOs are still at the consultation stage". Mr Dykes submitted that the existing AQOs represent the minimum standard of acceptable air quality or the "lowest common denominator".

116. It is not for the court to decide matters of policy. Under Annex 4 which sets the criteria for evaluating air quality status, for pollutants established by the APCO, the standards, in effect, are "the Air Quality Objectives and other standards established under the Air Pollution Control Ordinance".

117. The learned judge concluded:

"173. There is clearly considerable room for reasonable disagreement as to the standards to be adopted for air quality and, in the circumstances, I am not persuaded that the Director's application of the current AQOs in considering her decision under s.10(2) of the EIAO was irrational or *Wednesbury* unreasonable.

174. I do not consider this conclusion is affected by the applicant's reliance on various provisions in the TM, including: TM section 3.4 which requires that the assessment shall be based on the 'best available information at the time of the assessment'; the TM section 4.4.3(a)(x) requirement to apply the precautionary principle where adverse environmental impacts are uncertain; and the requirement in TM section 4.4.2(f) to consider whether adverse environmental effects are avoided to the maximum practicable extent. In my opinion, those provisions are too general to override the provisions of TM Annex 4 paragraph 1.1(a) stipulating the requirement to meet the AQOs."

118. I am in full agreement with the reasons given by the learned judge.

119. Mr Yu submitted that it is unnecessary for us to decide, whether, notwithstanding that the AQOs would not be exceeded and EIA report was satisfactory, the Director has a discretion to refuse a permit.

120. I agree it is unnecessary to decide this point. Nor have we had sufficient assistance from counsel to decide this point.

Disposition

121. For the above reasons I would allow the Director's appeal and made an order *nisi* that the Applicant pays the Director's costs here and below.

122. The Applicant also appeals from Fok JA's order regarding costs whereby the Applicant was awarded only one-third of her costs. This is now academic. It fails in any event because the order was within the wide discretion of the learned judge. So that appeal is also dismissed with a costs order *nisi* that the Applicant pays the costs of the Director.

123. The Applicant's own costs on the Director's appeal and her appeal are to be taxed in accordance with Legal Aid Regulations.

Hon Hartmann JA:

124. I am in full agreement with the comprehensive judgment of Tang VP and do not think that I can usefully add anything to it.

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Hon Chu JA:

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125. I have the benefit of reading in draft the judgment of Tang VP. I agree, for the reasons given, that the Director's appeal should be allowed and the Applicant's appeal against the costs order should be dismissed.

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(Robert Tang)
Vice-President

(M.J. Hartmann)
Justice of Appeal

(Carlye Chu)
Justice of Appeal

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Mr Benjamin Yu SC, Mr Paul Shieh SC and Ms Eva Sit, instructed by Department of Justice, for the Respondent

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